

The Northern Forest Forum
POB 6
Lancaster, NH 03584
Address Correction Requested

The Northern Forest Forum

Working for Sustainable Natural & Human Communities

Nonprofit Organization
U.S. Postage
PAID
Lancaster, NH
Permit No. 6

\$3.00

Autumn Equinox 1995

Volume 4 No. 1

\$BILLION\$ in Tax Breaks Proposed for Clearcutters

'Family' Forestland Preservation Tax Act of 1995 (S. 692) Benefits Absentee Landowners

There's No Requirement that Beneficiaries Practice Sustainable Forestry

S. 692 Will Cost U.S. Treasury \$800 MILLION a Year



Inside

- Senator Leahy on the Northern Forest Stewardship Act
- David Publicover on New Hampshire's Presettlement Forests
- Mitch Lansky on Demand Reduction - The Ups & Downs of the Maine Forest
- "Chasing Chances" - An Excerpt from *The Northern Forest* by David Dobbs & Richard Ober
- REFERENDUM to Stop Clearcutting & Promote Forest Rehabilitation in Maine

(see back cover)

No Common Ground Deep in the Heart of Taxes

by Mitch Lansky

The answer, of course, is lower taxes for large forest landowners, but what is the question? The question, apparently, doesn't really matter as long as the answer remains the same.

The Northern Forest Lands Study and then the Northern Forest Lands Council tried to justify a cornucopia of landowner tax breaks with the following logic:

- 1) The large landownerships have served the region well;
- 2) Large landownerships (such as the former Diamond Lands) are threatened by development and subdivision;
- 3) The reason for the "fragmentation" of these large landownerships is rising taxes;
- 4) Therefore, we must find ways to lower taxes (both income and property taxes).

More than 42% of the Council's budget went into studies on taxes. Nine Council recommendations suggested tax breaks. The most detailed federal legislation to arise from the Council's recommendations is Senator Gregg's tax bill, which is now before Congress.

Despite all the warm and fuzzy talk about "finding common ground," the Council, which had a majority contingent of large landowners, representatives of large landowners, or former representatives of large landowners, was primarily concerned with promoting benefits for the one percent of the landowners who owned the 80% of Northern Forest in large parcels (500 or

more acres). The Council assumed that what's good for these owners (many of whom are corporate and absentee) is good for the forest and the local communities. The Council, by definition, asserted that maintaining the status quo of large landownerships was the equivalent of "conservation." Opinions to the contrary were considered "extreme" and were mostly ignored because they did not lead to "common ground."

While the Council's logic was based on countering supposed threats to the status quo (such as high taxes), it avoided any substantive discussion of threats from the status quo (such as heavy-handed cutting, declining timber inventories, pollution, increased mechanization, declining employment, and raw log exports). Forest industry income and property taxes are already low, and to some people, that is a problem. To the extent that big landowners pay less, others, who may not be as well endowed, must pay more.

The Council not only ignored critiques of its mission and its logic, it ignored its own findings. A Council land-conversion contractor concluded, for example, that "The majority of landowners indicated that federal tax policies are not a significant driver of land sales." The prime reason for the

sale of the Diamond Lands, for example, had little to do with income or property taxes and more to do with a desire to make a lot of money fast. Indeed, thousands of acres of this land are still being bought and cut over by timber contractors because the value of the wood is greater than the value of the land.

Despite a major land boom during the 1980s, and despite the lack of the Council's "solutions" in place, the big land conversion that so concerned the Council did not happen. According to the Council, "the final disposition of the bulk of these lands was, ultimately, not much different than the past..." This did not prevent the Council from still promoting tax breaks. It stated that its recommendations "are not a response to an imminent crisis," but are an example of "new, imaginative thinking and doing."

Although the Council insisted on scientific accuracy in regards to biodiversity concerns, it accepted assertions, with little in the way of rigorous analysis, as sufficient to justify tax breaks. The Wilderness Society economist Spencer Phillips, for example, cited numerous works in the economic literature that raised serious questions about the efficacy of federal tax policy as a means to fix ill-defined problems relat-

ing to development or timber management. These questions were ignored.

In an article in 1993 (vol. 2, #1), I wrote: "We urge the subcommittee and Council to provide reliable data that proposed tax changes will achieve the goals of the Council, and that these proposed tax changes are the most effective way of achieving these goals. This will require reasonable estimates of how much government revenues will be foregone with each tax-change option, accompanied by a credible analysis of whether or not these goals can be better met with less cost using alternative approaches..."

The Council, despite its stated position that "public funds are scarce, the greatest public benefit must be secured for the investment," refused to respond to this request. It also refused to recommend more specific remedies to unwanted development such as a land-gains tax, zoning or regulations. The timber industry was opposed to these remedies, so they were dropped. No common ground.

The "coerced harmony" of the Council process is now reaping benefits to industry. Perhaps hundreds of millions of dollars of tax revenues will be forgone every year on timberlands across the entire United States based on the unproven notion that this will either prevent unwanted development in specific locations around lakes and rivers in the Northern Forest or lead to better forest management in this region. There are no guarantees, however, that these tax breaks will not simply lead to higher individual profit for the already wealthy or ease the ability for the wealthy to pass on inherited wealth undiminished. And where will tax revenues come from to replace these lost revenues?

The language of the bill is so arcane that only legislative legal scholars (and timber industry lawyers and accountants) can understand it. Yet despite the lack of adequate justification, despite the lack of a tangible quid pro quo, and despite the impenetrability of the legalistic jargon there are environmental groups getting on the tax break bandwagon. If these groups do not display a clear vision or a sense of critical thinking, they should not be surprised at the consequences.

In Memoriam Helen Nearing

Helen Nearing, who, along with her husband Scott, inspired thousands of people to go back to the land to live the "good life" died, at age 91, from a car accident near her home in Brooksville, Maine on September 16. She had just completed a book, *Light on Aging and Dying*, and had also chosen the Trust for Public Lands to act as a steward for her land and stone buildings at Harborside.



In the Raspberry Villages, September

In the raspberry villages
strung out along the alleys,
the news is mostly bad.
There is rumor of storms from the north,
more disappearances.
Even the birds, those summer enemies,
have fled, and all who come to pick.
Neighbors watch each other fall
but are helpless.
Yet out of the ground comes a hum like a river,
word of a warm red cave in some place of roots
where strength is building. Some even say,
Now, let us go. It is time to enter the earth.

Sheila Nickerson

From Poems for the Wild Earth, Edited by Gary Lawless, Blackberry Books, 617 East Neck Road, Nobleboro, Maine 04555, Gulf of Maine Bioregion. Price \$8.95

Editorial Staff This Issue

- Jamie Sayen—Editor
- Mitch Lansky—Assistant Editor
- Andrew Whittaker—Assistant Editor
- Kit Kuntze—Cover Design
- Dawn Styles—Photographs
- Mary Stinehour—Circulation

Contributing Writers

- Steve Balckmer, William Butler,
- David Dobbs, Ron Huber,
- Senator Patrick Leahy, Richard Ober,
- Stephen Perrin, David Publicover,
- Charles Restino, Carmelo Ruiz,
- Jym St. Pierre, Lance Tapley

Photographers

- David Dobbs, Stephen Gorman,
- John McKeith, Richard Ober,
- Ron Paula, Gary Randorf

Artists

- Fife Hubbard, Jon Luoma,
- Rachel O'Meara, Suzy Restino,
- Robert Shetterly, Susan Szwed

Maps

- Cartographic Associates,
- Northern Forest Alliance

The Northern Forest Forum is published six times a year by The Northern Appalachian Restoration Project of Earth Island Institute

Maine Woods Watch

by Jym St. Pierre



The Maine Woods is the greatest remaining wildland east of the Rockies. However, today this region is under siege. Maine Woods Watch is devoted to documenting the good, the bad, and the ugly affecting the Maine Woods today, with an emphasis on opportunities for citizen action to protect and restore the essence of the region, its wildness.

***Stumping for Trees:** The Maine Woods has become a tinderbox, and not just for lack of rain. After years of failing to get the Maine Legislature to enact meaningful forestry regulations activists are going directly to the people. Led by the Maine Greens, a campaign is being launched this fall to collect the 51,131 voter signatures required to put a citizen referendum on the ballot statewide next year. The proposed law would stop clearcutting and promote forest rehabilitation in Maine's unorganized areas. Volunteers are needed to help collect signatures on election day, November 7, 1995. Contact Jonathan Carter, Green Institute, 620 Back Road, North New Portland, ME 04961, (207) 628-5741.

As a separate effort, hundreds of citizens signed petitions circulated by Citizens for a Livable Environment in Alliance with Nature (CLEAN) forcing the state to hold public hearings in late September on a proposed ban on aerial spraying of pesticides. Contact CLEAN, PO Box 186, Jonesboro, ME 04648.

***Cutting Campaign Costs:** Another referendum campaign underway would take comprehensive campaign finance reform to the voters. The Congress and the Maine Legislature have been shy about capping the dominant influence of money in elections. Guess why. If successful, the campaign reform initiative would put a crimp in the pipeline of contributions to candidates from the forest industry and other business interests. Contact Maine Voters for Clean Elections, PO Box 7692, Portland, ME 04112, (207) 773-3274.

***Paper Money:** In the meantime, the forest industry will have even more cash to spend on candidates if profit trends continue. Last winter financial analysts were predicting a blisteringly hot year for forest products companies. *Forbes* projected 70% profit growth. In fact, results for the first six months were way up for many firms. In a reversal of the past few years, the boom was in the pulp and paper side, not lumber. The historic high prices loggers were getting for both sawlogs and pulpwood during the winter dropped sharply as the market became flooded. Nevertheless, paper prices remained in the stratosphere and profits soared for most forest products companies. Net income for the first half of 1995: International Paper, \$562 million; Georgia-Pacific \$497 million;

Boise, \$163 million; Bowater, \$99 million.

***GNP:** Employees are happy that Bowater, parent of Great Northern Paper, signed six-year contracts with the trade and paperworkers unions at its Maine mills. However, a lot of Millinocket residents are upset over rising property tax bills. Great Northern won a \$35 million drop in valuation on its facilities this year and will get another \$50 million decrease over the next two. Cuts in the town and school budgets have not plugged the gap. While the company is paying less locally, it is making more globally. For the first time in ages, Bowater Inc. has climbed back into the black. Earnings may be up, but the company is still staggering under huge losses from previous years (\$82 million in 1992, \$79 million in 1993). Under new CEO Arnold Nemirow Bowater is "going back to square one," to look for more places to make or save money. As part of its restructuring Bowater is eliminating hundreds of positions companywide, including 390 in Maine, has put its business forms division up for sale, has been repurchasing some of its own stock, will start selling some of its lease lots in Maine, and is looking into unloading other non-strategic lands.

***Beam Us Up, Scotty:** On May Day, Albert Dunlap, the rambunctious chairman of Scott Paper Company, announced that Scott would sell off 1.5 million acres of timberlands, as well as its pulp operations, as part of a "planned divestment." By mid-July, following through on his scheme to save Scott Paper Company by dismantling it, Dunlap had sweet talked Dallas-based Kimberly-Clark Corporation into a \$6.8 billion stock trade merger. The acquisition of Scott will allow K-C to challenge industry giant Procter & Gamble in a global disposable diaper and toilet paper war. Dunlap leaves Scott with a deal that will double his personal wealth to about \$200 million. But the 450 workers at Scott's century old mill in Winslow, Maine, are left only with nagging questions about the future of their jobs. During the past few years Scott and K-C together have laid off about 30,000 employees and the *Wall Street Journal* reported that Dunlap had convinced K-C management to move swiftly to cut another \$400 million/year. K-C has already said it will spin off its cigarette papers business.

***IP Upping the Stakes:** International Paper, the largest paper company in the world, became even larger with the billion dollar acquisition of a controlling interest in Carter Holt Harvey Ltd. CHH is the biggest timber plantation owner in New Zealand (800,000 acres of radiata pine) with

mills in that country as well as in Chile. IP was unable to get approval to take over a Swiss papermaker recently because of concerns over loss of local control. The big news in Maine this past summer was the failure of workers to reinstate the paperworkers union at the IP mill in Jay, the approval by Jay voters of a property tax break for the mill, and announcement of a \$100 million upgrade in high quality coated freesheet paper production.

***Pulp Friction:** Chief Operating Officer for the King Administration, Chuck Hewett, has projected a three-quarter billion dollar expansion and modernization effort by the pulp and paper industry over the next three years. Maybe, but the news so far is mixed. Like IP, Georgia-Pacific plans to invest in its Maine mill. G-P will pump nearly \$50 million into a modernization project at Woodland. Fraser Paper, Madison Paper and James River each have announced investments of about \$12 million. Bowater, on the other hand, after talking up installation of a new \$550 million lightweight coated paper machine, has sidelined upgrade plans. For now Bowater is only pursuing a preliminary study of hardwood pulping opportunities. A \$47 million expansion at the Scott Paper mill in Winslow is on hold in the wake of the purchase of Scott by Kimberly-Clark Corp. J.L.J. Recycling Contractors Corp., a large New York City firm is interested in buying the Statler Tissue mill in Augusta which has been idle since February. However, the company is having big trouble getting financing. The Coalition of Northeastern Governors is pushing expanded use of biomass (trees, plants and wood-based byproducts) for energy production. But the governors are going against the grain. More biomass plants have been closing down as power utilities buy out their expensive contracts. Speaking of governors, Maine Governor Angus King told the annual meeting of the paper industry that he wanted to be a co-conspirator with papermill managers in Maine to convince top brass at their multinational corporations to invest more in Maine to expand employment.

Champion International got approval for a new wood slashing and storage area in Bucksport after it promised neighbors to keep noise levels down. However, a decision on the company's appeal for \$4.5 million in refunded local taxes, to be decided in November, could raise the decibel level considerably in Bucksport. James River Corp. is still scrambling to reinvent itself. The company experienced an exponential expansion through mergers during the 1970-80s, then went into freefall in the 1990s. JR's communica-

tions papers business and part of its packaging business will become a new company called Crown Paper, under a new holding company, Crown Vantage. The Berlin, NH, mill will become part of the new company and avoid the cuts that will eliminate jobs for 4400 other JR employees. The JR Berlin mill already lost 150 jobs this year [Ed. Note: and more on the way]. JR will get a new CEO this fall, too, Miles Marsh, who will decide the fate of the James River mill in Old Town. Downsizing is already happening there, where 28 jobs will go when JR hands its woodchip trucking operations to an outside contractor.

Madawaska has bowed to pressure from Fraser Paper and cut the company's proposed property tax valuation by more than \$22 million. Two years after Forster Inc. closed a hardwood plant in Mattawamkeag slashing 110 jobs, new owner Aroostook and Bangor Reload Company is expanding, bringing employment to nearly 50. Citizens, businesses and public agencies are cooperating on a study of possible links between air emissions and health problems around Boise Cascade's mill in Rumford. The area has long been known as Cancer Valley. The historic Pejepscot Mill in Topsham was gutted by fire in late September. At its peak, the mill employed up to 500 making magazine paper, but operations ended in the 1980s. Finally, the North American Association for Environmental Education held its annual conference in Maine in September. Most of the sponsors were corporate, including the American Forest Foundation, Boise Cascade, and International Paper.

***Reshuffling the Deck:** Earlier this year the King Administration and the Maine Legislature agreed to set up a Productivity Realization Task Force to find \$45 million worth of cuts in state expenses. The Administration has been using the business-oriented Task Force as a way to reshape the executive branch of government. For instance, the Department of Conservation wants to eliminate 68 positions to save \$1.8 million. However, the plan advanced by Conservation Commissioner Ron Lovaglio goes further to merge several programs, including some with general funding and others with dedicated funding. The plan would even rename the Land Use Regulation Commission (LURC) as the Land Use Planning Commission to downplay the R word and emphasize customer service. As the ramifications of the changes become evident people are starting to understand that politics, not productivity, is the driving force.

Continued on page 28

The Pre-Settlement Forests of New Hampshire

by David Publicover

Ed. Note: This paper has been excerpted from NH Forest Resources Plan Ecological Assessment Report, May 1995. While it specifically focuses on the pre-settlement forests of New Hampshire, readers interested in the pre-settlement forests of Maine, Vermont and the Adirondacks and Tug Hill regions of New York will find much helpful information.

An understanding of the "natural" or "pre-settlement" condition of New Hampshire's forests gives policy makers, foresters, and landowners a conceptual baseline against which the effects of past actions and future policies may be judged. This understanding can inform questions such as: Are changes in forest structure and composition since European settlement due to human or non-human factors? How abundant were various wildlife species as compared to the present? Is it desirable or even possible for the state to encourage forests to be managed so as to more closely resemble pre-settlement forests?

Several specific questions must be addressed: How well is the pre-settlement character of New Hampshire's forests known? Have the conditions that molded this forest changed in the several centuries since European settlement? Regarding the latter question, it is clear that human land uses (agriculture, permanent development, and forest management) have had a profound effect on the present day nature of New Hampshire's forests. These anthropogenically-induced changes make more subtle natural shifts difficult or impossible to detect. This discussion considers two different aspects of forest condition: forest type and species distribution, and stand composition and age-class structure.

Information on these forests comes from regional and local palynological studies (Davis 1981, Patterson and Backman 1988, Foster et al. 1992, Foster and Zebryk 1993, Russell et al. 1993, Spear et al. 1994), stand reconstruction's (Henry and Swan 1974, Oliver and Stevens 1977), early surveyor's records (Lorimer 1977, Siccama 1971), early harvest records (Cary 1894, 1896; Graves 1899; Hosmer 1902), historical accounts (Carroll 1973, Cronon 1983), and examination of existing "virgin" stands (Chittendon 1905; Cline and Spurr 1942; Cogbill 1993; Hamburg and Cogbill 1988; Leak 1975, 1987; Lorimer and Frelich 1994; Martin 1977; Oosting and Billings 1951; Runkle 1982, 1991). These studies have several limitations including uncertainty about how well existing areas represent pre-settlement conditions and how well studies from other areas represent New Hampshire.

Forest Type & Species Distribution

Forest types were in transition for many thousands of years following glacial retreat as species re-colonized the region at different times (Davis 1981, DeGraaf and Miller unpublished draft). However, most major species have been present in the state for at least 7,000 years (Spear et al. 1994). The modern hardwood forest type

Regionally the pre-settlement forests were characterized by a much higher proportion of late-successional tree species (sugar maple, beech, spruce) and a lower percentage of early successional species (paper birch, aspen, red maple, balsam fir, white pine) than exist today.



Old growth Blackgum stand in Deerfield, NH. Photo courtesy of The Nature Conservancy—New Hampshire Chapter.

became recognizable in the pollen record at this time; the modern spruce-fir forest appeared about 2,000 years ago when red spruce increased due to climatic cooling (Spear et al. 1994). Species ranges have probably never achieved complete equilibrium with climatic conditions (Davis 1981, Jacobson and Davis 1988, DeGraaf and Miller unpublished draft); Webb (1988) reports that several tree species may have moved southward in the past 2-3,000 years. However, there have been no major shifts in forest type or species ranges since settlement (Carroll 1973, Gould and Reidel 1979). Gould and Reidel (1979) state (pg. 560) "the map of [current] vegetation zones could have been drawn by King Phillip or Miles Standish". Carroll (1973) states (pg. 28) "The New England forest today would be almost identical to that of 1600 if men had not moved against it."

Though the types have remained relatively stable, there have been shifts in the species composition and niche use within the types, both preceding and following settlement. In the centuries preceding settlement the composition of the oak-pine type remained relatively stable, but mixed northern hardwood stands saw an increase in spruce and fir and a decrease in hemlock and beech during the cooler period known as the Little Ice Age (1400-1800 AD) (Russell et al. 1993). The settlement period has coincided with a gradual warming of the regional climate, with the most noticeable result being a reduction in red spruce in mixed stands (Hamburg and Cogbill 1988). Other climatically-related changes may have occurred but

Human activities have led to some permanent changes in the tree species present in New Hampshire's forests. Most notable is the reduction or elimination of American chestnut, American elm, and butternut due to exotic pests (USDA 1992). This type of decline is not unprecedented; Spear et al. (1994) note that hemlock declined precipitously around 5000 years BP, most likely due to a pathogen outbreak. It is interesting to note that while numerous exotic tree species have been planted for landscaping, and other exotic or off-site species (red and Scotch pine, Norway and black spruce) have been used for forest plantations, none have become a naturalized part of the broad forest flora.

With the exception of the disease-related losses listed above, the tree species currently present in New Hampshire's forests are changed little from what were present in pre-settlement times (though there have been major changes in the relative proportions of these species and their size- and age-class distributions, as discussed in the next section). The same cannot be said for shrubs and herbs, though information on these species is much more limited. It is clear that some exotic species have become naturalized in New Hampshire's forests, and that other species known from historical records have disappeared.

Natural meadows and grasslands were limited in extent in New Hampshire's pre-settlement landscape, though they would have provided extremely valuable habitat diversity in

the otherwise forested region. Several different types of grasslands were present: wet meadows in floodplain areas, dry grasslands in very droughty soils, beaver impoundments, and clearings maintained by Native Americans. Early explorers to the area made note of extensive grassy clearings along some of the major river valleys, including the Piscataqua and the Merrimack in New Hampshire, as well as in restricted "sand plains" (Carroll 1973). Few remnants of these communities remain, as they have been valuable sites for agriculture and development for several centuries. The recurrent disturbance agents that maintained these meadows (fire, flooding, ice scour, etc.) have been greatly suppressed; opportunities to maintain or recreate these communities in their original landscape setting are limited. The effects of beaver and Native Americans are discussed in the following sections.

Stand Composition & Age-Class Structure

Regionally the pre-settlement forests were characterized by a much higher proportion of late-successional tree species (sugar maple, beech, spruce) and a lower percentage of early successional species (paper birch, aspen, red maple, balsam fir, white pine) than exist today, with land clearing/abandonment and increased fire frequency being the major factors in this change (Russell et al. 1993, Publicover unpublished). Aspen species, which are important disturbance indicators on some sites, were present in low levels in the pre-settlement forests (Russell et al. 1993, Spear et al. 1994) but showed no distinct response to post-settlement changes. Anecdotal accounts, surveyor's records and logging records describe a forest with many more large old trees than currently exist (Cogbill 1993). The majority of existing stands identified as free from human disturbance are described as old growth (though there may be a bias toward old growth in identifying these areas).

Clearly the pre-settlement forest had many more late successional or old-growth stands than currently exists. However, the actual distribution of age classes, the amount of land in even- versus uneven-aged stands, and the amount of open or disturbed land is not well known.

The northern hardwood (beech-birch-maple) forest is better known than either the spruce-fir or transitional hardwood or oak-pine (red oak-white pine-hemlock) regions. Lorimer and Frelich (1994) examined three large pristine northern hardwood sites in the northeast (including the 5,000-acre Pisgah Forest in southwestern New Hampshire) and found all to be dominated by old-growth stands. However, the Pisgah site did have a higher proportion of white pine and white birch and more clearly even-aged stands than did the other areas (in Michigan and Pennsylvania), indicating more frequent (or at least more recent) disturbance. Runkle (1982) determined that undisturbed eastern hardwood forests throughout the northeast were characterized by small-gap regeneration patterns, with less than 1% of the land area in openings greater than 0.25 acres in size. DeGraaf and

Miller (unpublished draft) state that "The center of the eastern deciduous biome was relatively stable, influenced predominately by small-scale disturbances such as gaps formed by the fall of individual trees and small fires on dry ridges."

The influence of catastrophic events is difficult to assess. These events are infrequent and their effects are highly variable across the landscape. Frelich and Lorimer (1991) indicate that in the hemlock-hardwood forests of Michigan, disturbances removing 30-50% of the canopy occur every 300 years in a given stand. There have been

Runkle determined that undisturbed eastern hardwood forests throughout the northeast were characterized by small-gap regeneration patterns, with less than 1% of the land area in openings greater than 0.25 acres in size.

four major hurricanes in inland New England since European settlement (1635, 1788, 1815, 1938), though each has affected different areas. Coastal areas have seen more activity, Gould and Reidel (1979) give a return interval of 75 to 100 years for southern New England. Catastrophic fires are uncommon but not unknown in this type (Lorimer and Frelich 1994, Spear et al. 1994); many stands in the Pisgah forest originated after a major fire in 1665. Each disturbance would have led to a widespread but irregular increase in early successional vegetation across some portion of the landscape.

Estimates of the return interval for catastrophic disturbance in northern hardwoods range from several centuries to over 1,000 years (Cogbill 1993, Lorimer and Frelich 1994). Schoonmaker (1992) estimated the average interval between catastrophic fires to be 600 years in southern New Hampshire. Foster and Zebryk (1993) report that their study area in central Massachusetts had not burned in over 1000 years. Backman (1984), in a study of a hemlock-northern hardwood forest in the Berkshires of Massachusetts, found no evidence of fire and a relatively stable vegetative composition for a period of 750 years prior to settlement.

Less information is available for spruce-fir areas. Existing virgin areas are generally restricted to sites (mountainous areas or bogs) that are unrepresentative of the type. It is clear from logging records that the pre-settlement forest contained a significantly greater component of older trees (150+ years, especially spruce) than is currently present, though differences between pure spruce-fir and mixed spruce-hardwood forests are not known. The natural disturbance patterns and age-class distribution are uncertain.

The spruce-fir forest of northern New Hampshire saw fewer hurricanes than the hardwood type because of its more inland location. The fire regime of these forests is not well known. This type is not the true fire-dominated boreal forest found farther north (Seymour 1992), and most studies indicate few large fires. The fire frequency in pre-colonial New England generally

decreased as one moved northward and inland (Patterson and Backman 1988, DeGraaf and Miller unpublished draft). Return intervals for catastrophic disturbances in the spruce-fir region of northern Maine have been estimated at 1,150-1,400 years for hurricanes and 215-800 years for fires (Lorimer 1977, Cogbill 1993). (The fire estimates include one very large fire which may have been of human origin; the range becomes 465-1900 years if this fire is excluded). This information is for lowland spruce-fir; montane forests are more frequently disturbed, especially by snow and ice, and are less likely to contain large, old trees.

Knowledge about the pre-settlement nature of insect disturbance (especially for spruce budworm) is a major limitation on our understanding of the dynamics of spruce-fir forests. Blais (1985) and others have argued that spruce budworm outbreaks were less frequent and more localized in pre-settlement forests as compared to the present century. Seymour (1992) concludes that Maine's red spruce forests went at least 100 years prior to 1913 without a catastrophic outbreak.

Seymour (1992) states that "large-scale stand-creating disturbances were much less common...prior to extensive logging of spruce...the evidence appears to support a regime of disturbances that were perhaps quite frequent relative to the life span of red spruce, but which rarely resulted in complete overstory removal." He also describes Maine's spruce-fir forest as "dominated by mixed-age, old-growth stands", while admitting that the actual proportion of uneven-aged and even-aged stands is unknown. Lorimer (1977) presents a similar picture, estimating that 2% of his study area would have been in

recently disturbed stands (0-10 years old) and about 60% in older all-aged forests (150+ years).

Characterizing the pre-settlement pine-oak forests of southern New Hampshire is problematical. Because this forest type covers the earliest and most heavily settled part of the state, no extensive virgin forest areas remain. These areas would have had a greater frequency of catastrophic natural disturbance, both hurricanes (because of their proximity to the coast) and fire (because of their warmer, dryer location). In addition, unlike the northern hardwood or spruce fir regions, portions of the oak-pine type were heavily influenced by Native American manipulation prior to European settlement (Cronon 1983). This makes describing the "natural" pre-settlement condition difficult.

In contrast to the more northerly forests, which were described as dense and dark by early travelers, the oak-pine forests were often described as open and parklike with extensive clearings due to aboriginal agriculture, firewood cutting and burning (Cronon 1983, DeGraaf and Miller unpublished draft), though these activities may have been local rather than widespread (Russell et al. 1983). Chandler (unpublished) noted that this type of land use by Native Americans in New Hampshire was located primarily along the southern Connecticut River.

Fahey and Reiners (1981) estimated a fire interval of 530 years for the pine forests of southern Maine. Patterson and Backman (1988) report an interval of 50-350 years for eastern Massachusetts, frequent enough to maintain an open forest of pine and oak in at least some areas. Despite the more frequent disturbance, the overstory of these forests persisted long enough in

some areas for very large white pines and red oaks to develop. However, little quantitative information on the pre-settlement structure of this type is available.

One other disturbance agent affected all forest types in New Hampshire—beaver. These animals played a ubiquitous role in creating and maintaining early successional forest patches throughout the landscape; Rudemann and Schoonmaker (1938) note from historical accounts that nearly every body of water in New England was occupied by beaver prior to European settlement. However, quantitative information on their effect in New Hampshire's forests is limited. Beaver have rebounded strongly from near-elimination in the state and have become a nuisance in many settled areas, though the relation of current to pre-settlement population levels is not clear.

Naiman et al. (1988) note that beaver impoundments occupied 13% of their study area in Minnesota (up from less than 1% in 1940). They note that this figure is so high for two reasons: the low density of natural predators (primarily wolf) and an abundant food supply (aspen regeneration following extensive clearcutting) in the study area. In addition, the relatively gentle topography of their study area would allow greater expansion of beaver impoundments than in the more rugged New Hampshire landscape. Remillard et al. (1987) note that beaver flowages in the Adirondacks ranged from 0.4 to 24.3 hectares in size and had a disturbance return interval of 10 to 30 years, but gave no figures for the amount of land area affected.

At least four other characteristics of the pre-settlement forest should be noted. First, the pre-settlement forests



This stand is one of the pockets of blowdown left in the wake of the July 15 "microburst" windstorm that affected about 1500 square miles of public and private forestland in the Adirondack Park. The area of most severe blowdown centers on the Five Ponds Wilderness, including more than 50,000 acres of uncut ancient forest, the largest such natural area in the eastern United States. Since 1894, the New York State Constitution has expressly forbidden the sale, removal, or destruction of trees on the publicly-owned Forest Preserve. Despite this protection, numerous interests are calling for a "salvage" operation on the Preserve, which would theoretically reduce the fire hazard while providing jobs for residents and income for the state. The windstorm is just the latest convenient excuse for these interest groups to promote road-building and tree cutting in the Park's wildlands. Environmentalists have vowed to oppose any such salvaging and are preparing to mount a major campaign to defend the forest. Photo by Gary Rendorf—Adirondack Council.

characteristically contained large amounts of standing and down dead wood in all stages of decay. This dead wood (especially the larger sizes) provides important habitat for a wide range of species (DeGraaf et al. 1992) but may be missing from many stands (especially those that have regenerated from agricultural areas or clearcuts). Tyrrell (1994) estimated that it would take 350 years for this component to reach steady state levels in a hemlock-hardwood forest in Wisconsin. Second, the forest floor of pre-settlement stands has a high degree of local topographic diversity (pit-and-mound) due to root pulls, decayed stumps and logs, etc. This topography creates microsites for a wide range of seedlings and herbaceous plants. Intense land uses (pasturing, plowing, or heavy skidding) have leveled forest floors and eliminated this small-scale diversity from many areas. Third, well-developed and generally undisturbed organic forest floors served as important sites for nutrient cycling and retention and provided critical protection against soil erosion. Fourth, the increased presence of humans throughout the forest (both as residents and visitors) has greatly decreased the remoteness of these forests, affecting those species (especially large carnivores such as cougar and lynx) which do not co-exist well with humans.

To what extent could these stands be re-created or mimicked if it is decided that this is a desirable public policy goal? Certainly some aspects (such as remoteness) are unrecoverable, and others (such as pit-and-mound topography) will take many centuries to return to the pre-settlement state, even if areas are left completely alone. Given enough time, the composition and structure of unmanaged areas would approach a balance with the natural disturbance regime (though dealing with fire in and around these areas could present problems). However, forests clearly reflect the history that created them for many centuries, and the effects of past human action will not quickly disappear. Foster et al. (1992) report that their study area (a hemlock-hardwood forest in central Massachusetts), "although seemingly mature and stable, is unlike any preceding vegetation and is a poor analogue for the pre-settlement forest. Many of the species that were common before European settlement are rare on the site today and uncommon in the landscape...[T]he modern forests on a stand or landscape level have not reverted back simply to a composition and relative abundance typical of their pre-settlement occurrence."

Some aspects of pre-settlement stands could be partially emulated even in managed stands, including species composition, gap-phase regeneration, and dead wood retention (Hansen et al. 1991). Runkle (1991) states "Management actions to mimic gap and snag dynamics cannot replace all functions of an old-growth forest but may allow certain species and processes to establish at a site several decades earlier than they would by natural changes."

Conclusions:

1) The broad distribution of both forest types and species' ranges within the state has not changed noticeably since European settlement. However, the relative proportions of different species within these types have changed

The potential for recovering or mimicking through management the pre-settlement condition is probably greatest for the northern hardwood type.

considerably. Climate shifts over the last few centuries may have reduced the red spruce component of mixed stands. A few species have been eliminated or diminished by introduced pathogens. No exotic tree species (but some shrubs and herbaceous plants) have become naturalized in New Hampshire's forests. Species shifts due to human manipulation have had a far greater effect on stand composition than any natural factor.

2) The pre-settlement forest consisted of a complex mosaic of stands governed by local topography and disturbance history. Large catastrophic disturbances (hurricane and fire) had return intervals of several centuries or more. In the absence of large disturbances, stand structure was primarily multi-aged dominated by small-scale gap creation.

3) Because of the infrequent occurrence of large disturbances, the pre-settlement forest had a much higher proportion of late-successional stands and species than currently exist. The actual extent of these areas is unknown but they probably covered well over half the area of the state. Early successional tree species (white birch, red maple, balsam fir and white pine) were less common in pre-settlement forests than at present.

4) Larger openings and early successional stands probably covered only a few percent of the pre-settlement forest, though estimates are rough and this undoubtedly varied greatly over time and space due to the unpredictable nature of large disturbances. Early successional stands were more common in areas where Native Americans maintained permanent settlements (primarily the oak-pine forests of southeastern New Hampshire and the lower Connecticut River valley).

5) Most aspects of the pre-settlement forest are potentially recoverable across some part of the landscape, though some will take centuries for some components to return to pre-settlement conditions. Though managed forests can never completely mimic natural forests, some aspects of pre-settlement forests (dead wood, large trees, small gaps) could be retained in man-

aged landscapes, though the economic and social implications were not assessed.

6) The potential for recovering or mimicking through management the pre-settlement condition is probably greatest for the northern hardwood type. The pre-settlement condition for this forest is better known than for the other types, the natural disturbance regime (primarily small- and large-scale wind events) has been unaffected by human activity, and forest management techniques can potentially mimic the natural disturbance regime and stand structure (with the exception of hurricane events).

7) There is moderate potential for recovering or mimicking at least some components of the pre-settlement condition for the spruce-fir type. Older age classes of spruce could be created through management. However, detailed knowledge of the pre-settlement structure of this type is limited. In addition, the dynamics of one major natural disturbance in this type (spruce budworm) may have been altered on a regional scale by past harvesting patterns.

8) There is limited potential for recreating the pre-settlement oak-pine forest. Because of extensive manipulation of this type by Native Americans, the natural condition of this forest is not well known, and even the concept is somewhat ambiguous. Also, because fire (both natural and human) was a major factor shaping this forest type, recreating the pre-settlement forest would be difficult, since this type is now the most heavily settled part of the state and extensive use of fire is not feasible.

9) Beaver are an important natural agent for creating small wet meadows and early-successional forest patches. They have exhibited a strong ability to co-exist with humans, though their impoundments can create a nuisance in settled areas. In less settled forest areas their return can make a contribution toward the maintenance of a more natural vegetation mosaic.

10) Large natural grasslands were relatively uncommon in pre-settlement

upland forests, though extensive meadows were present along the floodplains of major rivers. Because these sites have been greatly altered by development, agriculture, and damming of rivers, the opportunity to re-create their pre-settlement distribution and composition is extremely limited.

11) Pre-settlement forests had certain attributes that can help frame current management approaches (W.B. Leak, pers. comm.):

- A component of maximum-aged trees and stands.
- A wide range of opening sizes and nonforest patches due to the free play of natural disturbance.
- A complete range of age classes and structures within and between stands.
- A component of dead, down, and decadent material, especially in larger size classes.
- A resultant complete range of viable populations of plant and animal species.
- Species occurring on the sites and in the niches they are best adapted to (i.e. no off-site populations).
- Mixed stands and free play of successional processes (i.e. no monocultures).
- Minimal human intervention (i.e. some wilderness component).
- Minimal barriers to migration and dispersal.
- Control over erosion and nutrient loss due to deep and undisturbed forest floors.
- Uninhibited natural selection and a wide genetic base, ensuring continual adaptation of species to changing or variable environments.

Literature Cited

- Backman, A.E. 1984. 1000-year record of fire-vegetation interactions in the northeastern United States: A comparison between coastal and inland regions. M.S. thesis, University of Massachusetts, Amherst.
- Blais, J.R. 1985. The ecology of the eastern spruce budworm: a review and discussion. P. 49-59 in: Recent advances in spruce budworm research (C.J. Sanders, R.W. Stark, E.J. Mullins and J. Murphy, eds.). Proceedings of the CANUSA spruce budworm research symposium, Bangor, ME, Sept. 16-20, 1984. Canadian Forest Service, Ottawa.
- Carroll, C.F. 1973. The timber economy of Puritan New England. Brown University Press, Providence, RI.
- Cary, A. 1894. On the growth of spruce, p. 20-36, and Early forest fires in Maine, p. 37-59. Second Ann. Rep. For. Commissioner State of Maine. Augusta, ME.
- Cary, A. 1896. Report of Austin Cary. P. 15-203 in: Third Ann. Rep. For. Commissioner State of Maine. Augusta, ME.
- Chandler, D.S. Anthropogenic effects on the biodiversity of New Hampshire. Unpublished notes prepared for New Hampshire Scientific Committee on Biodiversity.
- Chittendon, A.K. 1905. Forest conditions of northern New Hampshire. USDA Bur. For. Bull. 55. 100 p.
- Cline, A.C. and S.H. Spurr. 1942. The virgin upland forest of central New England: a study of old growth stands in the Pisgah Mountain section of southwestern New Hampshire. Harv. For. Bull. 21. 58 p.
- Cogbill, C.V. 1993. The ancestral forest. Northern Forest Forum 1(4):30-31.
- Cronon, W. 1983. Changes in the Land. Hill and Wang, New York. 241 pp.
- Davis, M.B. 1981. Quaternary history and the stability of forest communities. P. 132-153 in: Forest Succession: Concepts and Applications (D.C. West, H.H. Shugart and D.B. Botkin, eds.). Springer-Verlag, New York.
- DeGraaf, R.M. and R.I. Miller. The importance of disturbance and land-use history in New England: implications for forested landscapes and wildlife conservation (unpublished draft).
- DeGraaf, R.M., M. Yamasaki, W.B. Leak and J.W. Lanier. 1992. New England wildlife: management of forested habitats. USDA For. Ser. N.E. For. & Range Exp. Sta. Gen. Tech. Rep. NE-144. 271 pp.
- Fahey, T.J. and W.A. Reiners. 1981. Fire in the forests of Maine and New Hampshire. Bull. Torrey Bot. Club 108:362-373.
- Foster, D.R. and T.M. Zebryk. 1993. Long-term vegetation dynamics and disturbance history of a *Tsuga*-dominated forest in New England.
- Foster, D.F., T. Zebryk, P. Schoonmaker and A. Lezberg. 1992. Post-settlement history of a *Tsuga canadensis* (hemlock) woodlot in central New England. J. Ecology 80:773-786.
- Frellich, L.E. and C.G. Lorimer. 1991. Natural distur-



East Inlet forest near a 300-acre stand of old growth Spruce-Fir owned by The Nature Conservancy. Photo courtesy of The Nature Conservancy—New Hampshire Chapter

Boise Puts Vermont Aerial Spray Plans on Hold

by Andrew Whittaker

In early August several landowners in Brunswick, Vermont were informed by Boise Cascade that the paper company was planning to conduct an aerial application of herbicide later that month on an abutting parcel of land. A few days later, Vermont's Department of Agriculture issued a permit to Pine Belt, Inc. of Bangor, Maine, subsidiary of an Arkansas firm, allowing Agrotors, Inc. of Gettysburg, Pennsylvania to conduct the spraying on a total of 180 acres of clearcut land in Brunswick. (In its first issuance, the department had overlooked the existence of a Class II wetland on the Boise site; the final permit stipulated a Conditional Use Determination for part of the spray area.)

Abutter Lloyd Gierke of Brunswick, owner of water rights on the Boise parcel, protested the spray program and initiated a public awareness campaign that culminated in Vermont governor Howard Dean requesting Boise not exercise its permit until the matter had received adequate public hearing. Gierke and other residents of the Brunswick area opposed the spraying on several grounds. Water was a chief and principal concern, with Bloomfield resident Sherry Belknap observing that Vermont's northeast region, with its steep terrain and adjoining wetlands, is simply not suited for Maine-style herbicide application: "it's all watershed." Many residents also viewed spraying as the unfortunate outcome of clearcutting—and yet another step down the road toward a monocultural approach to timber management.

Many of those who registered their protests of the proposed spray with Governor Dean were much concerned that its overall impact on biodiversity had not been adequately addressed. An analysis of the internal agency memos that preceded the issuing of the permit indicates that the only questions raised in this regard came from a Fish and Wildlife biologist, David Callum, who asked in an apparently unanswered memo, "If this is the new management practice for timber in Vermont, what is

the long range impact to the soils? What is the impact on native birds, insects and animals?" Although Callum indicated that these questions required answering before permits for softwood release were issued, other officials at Agriculture and Forests and Parks did not seem to agree.

Fate of Spray Program Uncertain

For now, members of the public have been appeased by Boise's abstaining from spraying and Governor Dean's assurances that the proposal, with all its implications for forest management, will receive proper public hearing. While one Vermont newspaper (the *Times-Argus*) has expressed the view that the policy missteps have been mainly procedural and that public hearings "could have helped ease the fears that have sprung up about the spraying," another (the *Burlington Free Press*) correctly identified the wider implications of the Boise spray proposal: a "sharp departure from past forest and wildlife management practices" and the probability that Essex County's much larger landowner, Champion International, will want to spray as well.

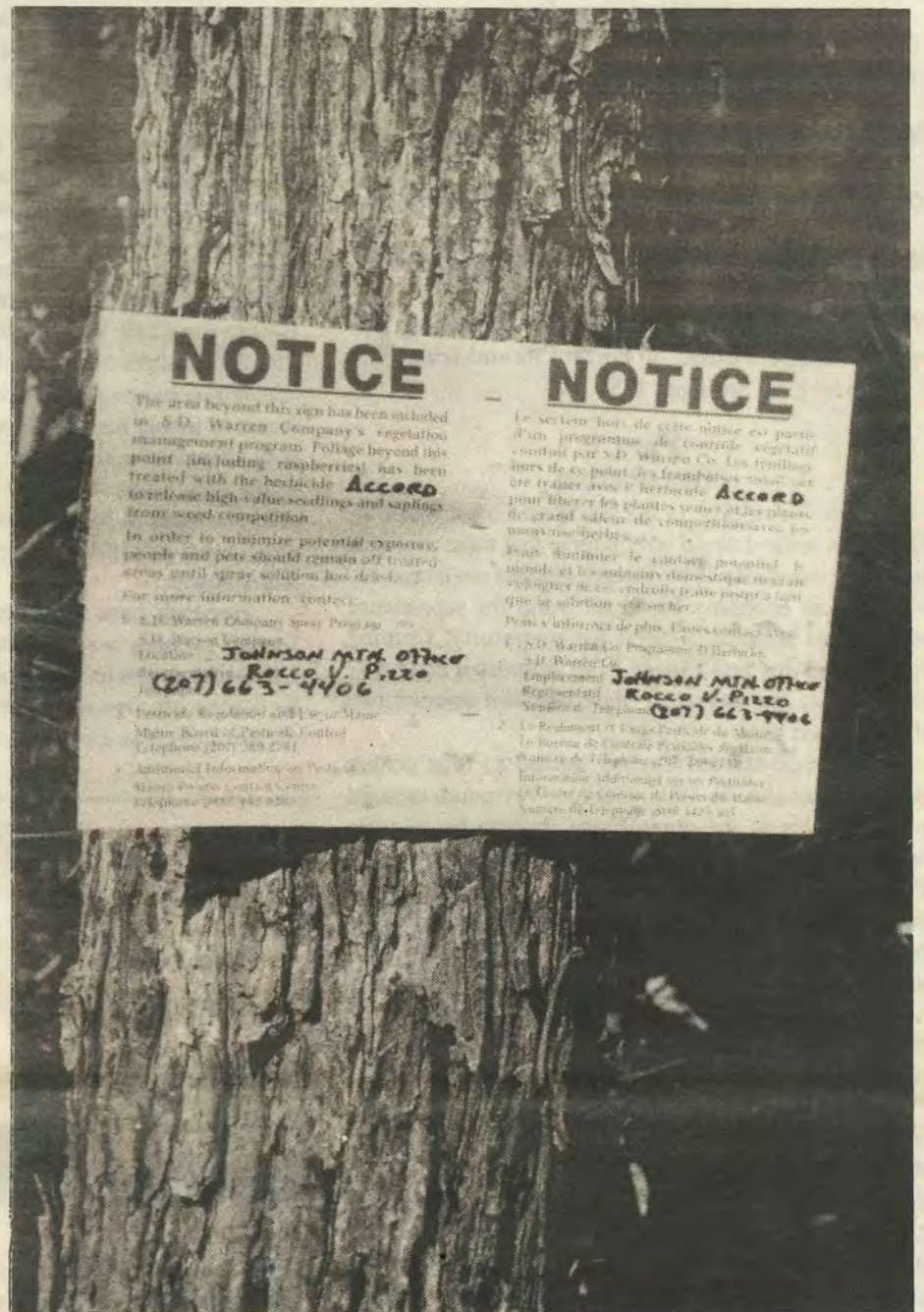
Landowner Gierke did indeed receive a visit from one Champion forester eager to allay his concerns over Boise's plan. Champion, which at the time was conducting an aerial herbiciding of 700 acres in Pittsburg, NH, is pressing the argument that the herbicide in question, Accord, is composed of an environmentally benign ingredient, glyphosate. The company has also asserted that New Hampshire's environmental community has expressed no concern over their spray program in that state and that Maine residents are equally quiescent. Undoubtedly, these same arguments will be heard in Vermont as well.

Meanwhile, Vermont residents opposed to spraying have mounted a petition campaign seeking legislation that would outlaw herbicidal treatment of clearcuts. A group of residents has made a public request to the Forest Resource Advisory Council for a hearing in the region of the proposed spray,

while several citizens have personally appealed to FRAC that the body discuss the spraying, particularly in the context of sustainability. It is also assumed that Vermont's Pesticide Advisory Council—actually composed of several involved in issuing Boise's permit—

will hold a public hearing into the matter.

For more information about the campaign to halt herbicide treatment of clearcuts in Vermont, please contact Andrew Whittaker at PÖB 72, E St J, VT 05838 or call 802-748-8043.



Herbicide spray notice posted by the Johnson Mountain Office of S. D. Warren in Maine. Paper companies regularly spray herbicides in Maine's troubled "Industrial Forest"; now Boise-Cascade and Champion International are trying to introduce the practice of aerial herbicide spraying to Vermont. This year Champion sprayed about 700 acres in Pittsburg, NH; no environmental group publicly objected. Photo © by John McKeith.

bance regimes in hemlock-hardwood forests of the upper Great Lakes region. *Ecol. Monogr.* 61:145-164.

Gould, E.M. and C.H. Reidel. 1979. The Yankee forest. *J. For.* 77(9):558-562.

Graves, H.S. 1899. Practical forestry in the Adirondacks. USDA Bull. No. 26. 85 p.

Hamburg, S.P. and C.V. Cogbill. 1988. Historical decline of red spruce populations and climatic warming. *Nature* 331:428-430.

Hansen, A.J., T.A. Spies, F.J. Swanson and J.L. Ohlmann. 1991. Conserving biodiversity in managed forests. *BioScience* 41:382-392.

Henry, J.D. and J.M.A. Swan. 1974. Reconstructing forest history from live and dead plant material—an approach to the study of forest succession in southwest New Hampshire. *Ecology* 55:772-783.

Hosmer, R.S. 1902. A study of the Maine spruce. P. 62-108 in: Fourth Rep. For. Commissioner State of Maine. Augusta, ME.

Jacobson, G.L. and R.B. Davis. 1988. Temporary and transitional: the real forest primeval. *Habitat* (Journal of the Maine Audubon Society), January 1988.

Leak, W.B. 1975. Age distribution in virgin red spruce and northern hardwoods. *Ecology* 56: 1451-1454.

Leak, W.B. 1987. Characteristics of climax stands in New Hampshire. USDA For. Ser. N.E. For. & Range Exp. Sta. Res. Note NE-336. 5 pp.

Lorimer, C.G. 1977. The presettlement forest and natural disturbance cycle of northeastern Maine. *Ecology* 58:139-148.

Lorimer, C.G. and L.E. Frelich. 1994. Natural disturbance regimes in old-growth northern hardwoods: implications for restoration efforts. *J. For.* 92(1): 33-38.

Martin, C.W. 1977. Distribution of tree species in an

undisturbed northern hardwood-spruce-fir forest, The Bowl, N.H. USDA For. Ser. N.E. For. & Range Exp. Sta. Res. Note NE-244. 5 pp.

Naiman, R.J., C.A. Johnston and J.C. Kelley. 1988. Alteration of North American streams by beaver. *BioScience* 38:753-762.

Oliver, C.D. and E.P. Stephens. 1977. Reconstruction of a mixed-species forest in central New England. *Ecology* 58:562-572.

Oosting and Billings. 1951. A comparison of virgin spruce-fir forests in the northern and southern Appalachian system. *Ecology* 32:84-103.

Patterson, W.A. III, and A.E. Backman. 1988. Fire and disease history of forests. Pp. 603-632 in: *Vegetation History* (B. Huntley and T. Webb, eds.). Kluwer Academic Publ., Dordrecht, Netherlands.

Publicover, D.A. Summary of the workgroup on forest transitions, Northern Forest Scientific Workshop, Lyndonville, Vermont, August 17-20, 1993.

Remillard, M.M., G.K. Gruendling and D.J. Bogucki. 1987. Disturbance by beaver (*Castor canadensis* Kuhl) and increased landscape heterogeneity. Pp 103-122 in: *Ecological studies 64: Landscape heterogeneity and disturbance* (M.G. Turner, ed.). Springer Verlag, New York.

Rudemann, R. and W.J. Schoonmaker. 1938. Beaver dams as geologic agents. *Science* 88:523-525.

Runkle, J.R. 1982. Patterns of disturbance in some old-growth mesic forests of eastern North America. *Ecology* 63:1533-1546.

Runkle, J.R. 1991. Gap dynamics of old-growth eastern forests: management implications. *Natural Areas Journal* 11:19-25.

Russell, E.W.B., R.B. Davis, R.S. Anderson, T.E. Rhodes and D.S. Anderson. 1993. Recent centuries of vegeta-

tional change in the glaciated north-eastern United States. *J. Ecol.* 81:647-664.

Schoonmaker, P.K. 1992. Long-term vegetation dynamics in southwestern New Hampshire. Ph.D. thesis, Harvard Univ., Cambridge, MA. 319 pp.

Seymour, R.S. 1992. The red spruce-balsam fir forest of Maine: evolution of silvicultural practice in response to stand development patterns and disturbances. P. 219-230 in: *The Ecology and Silviculture of Mixed-Species Forests* (M.J. Kelly, ed.). Kluwer Academic Publishers.

Siccama, T.G. 1971. Presettlement and present forest vegetation in northern Vermont with special reference

to Chittendon County. *Am. Midl. Nat.* 85:153-172.

Spear, R.W., M.B. Davis and L.C.K. Shane. 1994. Late Quaternary history of low- and mid-elevation vegetation in the White Mountains of New Hampshire. *Ecol. Monogr.* 64:85-109.

Tyrrell, L.E. 1994. Dynamics of dead wood in old-growth hemlock-hardwood forests of northern Wisconsin and northern Michigan. *Can. J. For. Res.* 24:1672-1683.

US Department of Agriculture. 1994. Northeastern Area Forest Health Report. NA-TP-01-94. USDA For. Ser. Northeast. Area State & Priv. For., Radnor, PA. 61 p.

Draft NH Forest Resources Plan Will Hold Five Public Comment Sessions in October

The NH Division of Forests & Lands has released the Draft Forest Resources Plan which discusses the use, ownership, and management of forests, and establishes legislative priorities to promote both public and private resource management programs in NH. Written Comments are welcome until October 23.

There will be five public comment sessions from 7-9 PM on:

- October 5—Peabody Lodge, Cannon Mountain, Franconia
- October 10—Urban Forestry Center, Portsmouth
- October 12—Public Library, Keene
- October 17—NH Fish & Game Dept., Concord
- October 19—Berlin City Hall, Berlin

To receive a copy of the Draft FRP, contact Laura Falk or Susan Francher at Division of Forests & Lands (603) 271-2214.

Demand Reduction: A Brief History of the Ups & Downs of Maine's Forest

And a Recommendation for a New Three-Part Forest-Protection Strategy

by Mitch Lansky

*And when upon the long-hid soil the white Pines disappear,
We will cut the other forest trees, and sow whereon we clear;
Our grain shall wave o'er valleys rich, our herds bedot the hills,
When our feet no more are hurried on to tend the driving mills;
Then no more a lumbering go, so no more a lumbering go...*
—from "Loggers Boast," in *Forest Life and Forest Trees* by John Springer, 1851

Part I Devastation

There was a time in the Northern Forest when the European settlers could not imagine that there might be limits to wood use. The forests seemed so incredibly vast that an economy based on wood for subsistence and export seemed assured for perpetuity. Coming from a land that had already been deforested and badly farmed out, the forests of New England seemed like the promised land.

The wood-starved English wasted no time getting down to business. In 1605, George Weymouth brought back samples of the magnificent timbers he encountered along Maine's coast and rivers. At the time, Europeans faced a shortage of mast-trees suitable for sustaining powerful navies. The closest mast sources for England, Scandinavia and the Baltic countries, were being cut off by hostile monarchies and grasping monopolies. Yet, here were white pines towering more than 150 feet, suitable, wrote Weymouth, "for ships of four hundred tons."

Maine was a prime location for ship building in both colonial and later years. In 1607, two years after Weymouth's voyage, colonists built a 30-ton ship in Sagadahoc (now Bath). By decree, all sound pines over 24 inches in diameter were claimed by England with the mark of the Broad Arrow, a policy which the colonists resented. By 1855, the United States had the largest merchant marine fleet in the world and Maine had supplied more than half of these wooden ships.

The early settlers also found game and furs in the forests. John Smith reported bringing home 11,000 pelts from just one 1614 expedition to the Maine coast. Not only were beaver and other valuable species soon decimated, but passenger pigeons, wolves, panthers, and caribou were extirpated as habitats were destroyed and animals ruthlessly hunted.

Forests were cleared and burned for agriculture. The rapidity and scale of the deforestation were staggering. By the mid-19th century, most of New York and southern New England, and millions of acres of northern New England had been cleared, farmed or pastured, and, in some cases depleted and abandoned (see "Change in Forest Acreage" chart). In the northwoods, many thousands of acres were cleared simply to feed the horses and oxen needed to log the forests.

Not just ships, but homes were built of wood. Maine ranked first in the country for production of saw timber up until 1800. By 1840, Maine was second only to New York. At that time, however, the city of Bangor was the biggest producer of saw timber in the world. At first, white pine was the dominant species. By 1850, most of the easily accessible big pine had already been cut.

Observers of that time could see the trends, but they were not pushing for a sustainable woods economy. On the contrary, John Springer, in 1851 observed that, "...there is now timber enough standing in the forests, on territories through which the waters of the Penobscot pass, to maintain the present annual operations, vast as they are, for fifty successive years. After this it is thought the amount will diminish about one tenth per annum until its final consumption, when,

doubtless, the pursuits of the lumbermen will give place to the labors and regards of husbandry, and the working of the various veins of mineral deposits already known and yet to be discovered."

By 1861, more spruce than pine was coming out of the Penobscot watershed. Lumber production increased up until 1909, but by then, Maine ranked 19th in the nation. Even bigger deposits of easily-accessible raw timber had been discovered in other states.

A major use of wood in previous centuries, was for fuel. Large colonial homes might require 30 or 40 cords of firewood each winter for heat. Wood was also burned to make charcoal to fuel iron and copper furnaces. One can still see the remains of one of these smelters at Katahdin Ironworks near Gulf Hagas gorge. Before the Civil War, these furnaces might consume 150-250 bushels of charcoal per ton of iron produced. The refineries usually owned 15,000 to 40,000 acres of forest to supply their wood needs. Wood was burned as well to produce steam for various uses such as saw mills, steamships. By 1850 there were 36 steam-powered sawmills in Maine. Even in the late 1870s, however, most sawmills in New England depended on water power.

Hemlock bark was used to tan leather. By 1860, leather tanning was Maine's third largest industry. Historians estimate that around 9 billion feet of hemlock were cut down for the leather industry. Most of the trees, once stripped of bark, were left to rot. A tan-



nery might use 6,000 cords of bark a year—and it took five big hemlocks to yield a cord of bark.

Wood was used to make boxes, barrels, tool handles, spools, dowels, and excelsior stuffing for packaging. In 1860, Charles Foster opened a toothpick factory in Strong, Maine. That year he turned out 16 million white birch toothpicks so refined people could clean their teeth after meals.

And then, industrialists started making paper from trees. The first production, where ground wood was mixed with rags, was in 1868, in Topsham, Maine. By 1880, several companies had begun producing paper solely from wood pulp. By 1889, a number of mills started using the sulfite processing for pulp production. A new industrial era was dawning. Deforestation proceeded at a frightening rate.

By the end of the 19th century, nearly all the virgin forests in the region were gone. Industrialists dependent on water power began complaining about severe fluctuations of water levels and of siltation foaling their mills. They started demanding protection of headwaters. In 1901, Francis Wiggin addressed the State Board of Trade in Rockland calling for the establishment of forest reservations by the right of eminent domain. He suggested starting with the regions around

the Rangely Lakes area, Moosehead Lake, the West Branch of the Penobscot River, near Mt. Katahdin, and along the Allagash River.

While New York got the Adirondacks in 1894, and New Hampshire the White Mountain National forest (after the Weeks Act in 1911), the Maine legislature took no action to create reserves or parks in the north woods. Percival Baxter, many years later, had to personally buy land around Katahdin and then donate it to the state.

Even some members of the forest industry expressed their concerns about forestry trends. In 1892, William Russell, the president of the American Paper Makers Association warned his group that "Certainly we shall keep on denuding the forest for as we are turning almost wholly to wood as a fiber...we are drawing on the forest rapidly. I hope that some wiser way of cutting our timber in this country will be devised so that we shall not...see the end of our spruce forests. We must either of our own volition, or by some government control, prevent the destruction..."

Despite attempts at regulation (to establish diameter limits for cutting pine and spruce in 1907, 1909, 1913, 1915, 1917, and 1919, no such limits were set (see quotes in "Deja Vu All Over Again"). The limits were, by default, landowner objectives and the market.

Nature Strikes Back

With the heavy cutting and other human-caused disturbances came greater forest instability. Soon after settlement, huge fires consumed thousands of acres of forests. The fires tended to follow heavy cutting (indeed, moist, dark virgin forests often acted as barriers to put fires out). Fires first swept through the coastal forests, and then, as logging moved north, so did the fires.

In 1825, the "Miramichi" fire (so named because it coincided in time with an unconnected fire in New Brunswick) burned an unbelievable 832,000 acres. The fire in New Brunswick burned an estimated *two million* acres. The Katahdin area had another major fire of 20,000 acres in 1884. Nineteen years later, in 1903, 84,500 acres burned in the Katahdin region and around 270,000 acres of forests burned in the state. That same year, more than 637,000 acres burned in the Adirondacks.

These massive burns were but a prelude to even greater destruction. At the turn of the century, the larch sawfly decimated the tamaracks of the state. From 1911 to 1919 a severe spruce budworm outbreak swept through millions of acres of forest, killing an estimated 40%, or 27.5 million cords of the spruce and fir in Maine and 225 million cords in northeastern North America. In some areas, the dense fir thickets, which grew to fill the gaps left by heavy logging of spruce, suffered complete mortality. Even in older stands, not just fir but spruce and hemlock were impacted.

Recovery

The clearing, the logging, the fires, and insects and diseases caused a major reduction in both acreage and volume in the northern forests. Conservationists at the turn of the century were decrying much of the destruction as needless waste. They saw lumbermen cutting high on the stump and cutting off tops with much good wood going unused. The slash was creating tremendous fire hazards. Waste from sawmilling, they insisted, could be used to create boards (with glue) or for pulp. Their arguments were given force by the support of the renowned forester, Austin Cary, who advocated setting large diameter-limits and doing more selective

Fire Control in Maine (1910-1969)

Decade	Number of fires	Total acres burned	Average acres per fire
1910-1919	1,121	229,784	205
1920-1929	1,744	275,251	158
1930-1939	2,516	282,360	112
1940-1949	4,552	337,942	74
1950-1959	5,903	107,631	18
1960-1969	5,292	42,227	8

cutting.

By 1919, the Maine Forest Service, which earlier had been denying the severity of the problem, could do so no longer. Maine Forest Commissioner, Forrest Colby, stated in his annual report, "It is a fact not to be disputed that we are cutting off our forests today much faster than they are being reproduced, and we have been doing this for years...That we have wasted our forest is a matter of common knowledge."

Colby recommend a three-part strategy for protecting the forest:

- 1) improved fire control,
- 2) more state ownership,
- 3) and reducing logging waste and planting over "wastelands."

The first of these strategies to be taken seriously in the state was fire control. The 1903 fires sent a jolt through the legislature and in 1905, Maine established the nation's first fire towers. In 1919 a law was passed that gave a 20-year tax break for those who planted trees on cutover land. In 1921 a law was passed encouraging the purchase of state lands and the creation of "auxiliary" state lands. The auxiliary lands were privately owned, but subject to strict diameter limits designed to grow big pine and spruce. This law was amended in 1923 and 1929, and then finally repealed in 1933. Very few people took advantage of the tax breaks. There was more incentive to cut the wood.

Forest industry spokespeople cannot resist comparing the forests of today with those at the beginning of the century. They like to imply that the increased volume and acreage of wood is due to their benign management. While some companies did, under the influence of Austin Cary and other reformers, start using diameter-limits for cutting their spruce, and did cut lower on the stump and higher up to the tops of trees, such changes were not the primary cause for forest recovery.

What brought back a new forest was not enlightened forestry, but the abandonment of farms and a decline in logging. Historian David Smith estimates that the cut after 1930 was less than 1/3 of that in 1909:

Year	Cut
1901	682,000,000 feet
1904	762,000,000 feet
1909	more than 1,000,000,000 feet
1917	less than 800,000,000 feet
1920	less than 500,000,000 feet
1925	less than 400,000,000 feet
1930	less than 300,000,000

According to Smith, the cut did not rise above this level again until after WWII.

Part II Highgrading

If there has been a constant theme in resource use, it has been highgrading. Farmers and foresters have been attracted to the best soils, the biggest trees, and the easiest access. As the poorer, rockier soils in New England got depleted, farmers moved West to much more productive lands. They were able to take advantage of government-subsidized rail and barge systems to transport their farm goods to population centers. As New England farms were abandoned, starting in the 19th century, they grew back into forests (see "Change in Forest Acreage" chart).

Loggers looked first for the biggest trees near lakes, rivers and large streams (transport to mills was mostly by water). As transportation and logging technology improved, loggers were able to go farther afield



in search of big timber. High grading was thus both by the landscape (the best, most accessible forests) and by the site (the biggest trees). Later cutting was at less productive sites and with less impressive trees.

By the middle of the 19th century, loggers were already scrambling to find the pine in more difficult locations. John Springer, in 1851, writes of the techniques the lumberjacks used to get big timber off of steep slopes and mountain sides. Although sluices were preferred, loggers sometimes lowered the big timbers down with block and tackle, or even shoved them off of cliffs.

After most of the big trees had been skimmed from the Northern Forest, loggers, taking advantage of transportation networks, moved to new, more productive regions. The Erie Canal, opened in 1823, opened up wood markets from the Lake States to flood into eastern markets. The Panama canal, in 1914, did the same for the Pacific Northwest. The Great Northern Railroad, in 1885, also allowed Western wood to enter the East at competitive prices. After 1909, the lumber industry in Maine went into decline. There was better wood available at better prices from elsewhere. By the late 19th century, for example, big mast trees, even on ships built at Bath, were coming from Oregon.

As wood became more scarce (and more expensive), industrialists came up with substitutes. By the 1860s, iron began replacing wood in ship building. Changing hide sources, new technologies, and industry consolidation caused a rapid decline in the use of hemlock for leather tanning in this region in the early 20th century. Cardboard replaced wood for construction of boxes. Coal took the place of charcoal for iron furnaces and steam mills. City buildings were increasingly built with steel beams, concrete, and bricks. Oil took the place of firewood for heat. Oil also allowed the substitution of machines for animals in the woods, freeing up thousands of acres of pastureland to return to forest.

Even as abandoned farmland was growing back and as the lumber and tanning industries declined regionally (having moved on), another force appeared to save the forest—the Great Depression. The big American economic boom went bust. Demand declined. Growth was greater than cut. The battered, bugged, and burnt forest started to recover. After World War II (with the exception of 1947), new tech-

nologies, from tank trucks to airplanes, made sure that fires burned far fewer acres (see chart). Hunting and trapping regulations allowed for the return of some of the endangered game animals—including the moose and beaver—to the new forest. The northwoods showed its resilience.

New Devastation

What bounced back, however, was not the same as what came down. The size, structure, and species ratios had changed. But this new forest was just fine for the paper industry which, after the depression and war, began to rebound with the forest. New technologies of chainsaws, skidders, pulp trucks, and timber harvesters allowed the paper industry, which bought out millions of acres of forests from the lumber barons, to reach new deposits of timber or more completely utilize old ones.

Technological change did not improve the quality of forest species or trees; it allowed the companies to use what was available. By 1972, for example, the USDA Forest Service lamented that hardwoods had been so repeatedly highgraded that growth rates and quality were abysmal. "So little hardwood timber in Maine is in managed stands that for all practical purposes one can say that generally in Maine hardwoods are not managed." By 1986, the Maine Forest Service declared that 43% of all hardwoods were "unsound." A new industry—biomass for steam and electricity—evolved (with government and environmentalist help) that could use this low-grade material—branches and all. Whole-tree clearcutters now had a market for all fiber.

In the 1970s, another spruce budworm outbreak erupted in full after sputtering along since the 1950s. Once again, abnormal concentrations of balsam fir had filled in the gaps left from the last harvest/budworm spree. This time, however, the industry, with government help, was able to spray millions of acres with broad-spectrum chemical insecticides. And this time, with more roads and more machines, the paper industry "salvaged" with a vengeance. New technologies capable of better utilizing smaller-diameter trees encouraged the growth of a new lumber and stud-mill industry, creating more markets to absorb the massive cutting.

The clearcutting was far more widespread and severe than even the fires earlier in the century. Adding insult to the injury, companies using heavy machinery rutted and compacted the soil, removed whole trees, and topped off the disaster with a blanket of herbicides to keep down pioneer species. The industrial landowners looked at what they had done (it was visible from outer space) and declared that it was good. They called it "intensive management."

A Maine Forest Service inventory assessment in 1993 showed that both softwoods and hardwoods had declined over the previous decade.

Once again, the combination of demand from people and bugs had exceeded the growth capacity of the forest. In addition, the forest is now subject to air pol-

Change in Forest Acreage (thousand acres)

			Loss		Gain	
	1600	1909	1600-1909	1987	1909-1987	
Maine	18,180	14,900	3,280	17,174	2,274	
New Hampshire	5,490	3,500	1,990	4,803	1,303	
Vermont	5,550	2,500	3,050	4,424	1,924	
New York	27,450	12,000	15,450	15,798	3,798	

(from Irland 1993)

lution, climate change, introduced insects and diseases, development, and other stresses that may make recovery more difficult this time around.

As happened at the turn of the century, citizens are demanding reserves and regulations. We actually have regulations in Maine now, but these regulations have more impact on the way clearcuts are arranged across the landscape than on sustainable levels of cut. All we have to save us, at this point, are, one again, market forces and landowner objectives.

Recovery?

Although Maine did go through a recession that slowed growth in consumption temporarily, the level of cut is still high. New markets for hardwood pulp, biomass, lumber, and exports have replaced the markets that declined earlier in the century. The industrial landowners are mitigating the impacts to their woods by reducing cut on their own lands, buying more from non-industrial landowners, and importing more wood for their mills. They are also substituting more hardwoods into their pulp mix. Indeed, more hardwoods than softwoods are being cut for pulp.

Those waiting for diminishing markets to save the forest may be disappointed. Globally, population is growing and per-capita consumption of wood and paper products is growing as well. The recession for the paper industry has ended. Demand for export of wood, including hardwood chips, to the Far East is increasing.

With markets more globalized, people can live with the illusion that there are no limits. Indeed, there are a few "fiber mines" left that have not yet been fully exploited. Due to poor infrastructure and political instability, for example, there is still a huge forest "resource" available in Siberia. If that gets opened up to the global economy, it might do for over-exploited timber regions what Minnesota or Oregon did for Maine many decades ago. People will be able, temporarily, to continue high levels of consumption without seeing the consequences at a local level. But if these trends continue, Siberia will suffer the same fate as other exploited regions.

The timber industry has been offering another fix for the demand problem—intensive management. They point to the graphs that show rising demand and conclude that the answer is rising supply. The best way to increase supply, they argue, is through short-rotation plantations, herbicides, and pre-commercial thinning of clearcuts. They wouldn't mind if we, the public, subsidized these activities—which are, after all, for our own good.

The intensive management fix assumes that demand (as projected by industry or government officials) is sacred and we have a moral obligation to meet it. It assumes that this form of management will yield

A Three-part Strategy to Save and Restore Forests

Any strategy to protect forest biodiversity and ensure sustainable use of forest products would have to contain reserves, low-impact forestry, and demand reduction. All three parts of this strategy work together for forest protection. If one of them is absent, this means that forests, wildlife, or people will be harmed either at another location or another time.

Reserves

We need wild, unmanaged areas as a baseline against which to measure our impacts and as a place to allow and study natural processes and forest dynamics. We need reserves to ensure that all habitats and species are protected—including ones that are sensitive to human encroachment or that require old growth. We also need wild places for spiritual renewal.

Low-impact Forestry

We need forest products. Wood can be a renewable resource if forests are managed in a sustainable manner. Obtaining wood products can cause less environmental harm than obtaining some wood substitutes. Low-impact forestry strives to reduce the known undesirable impacts so that after the cutting is done, there is still a recognizable and functional forest. Low-impact forestry also ensures that forests are not overcut—they can continue to grow in height, volume, and complexity.

Demand Reduction

Demand reduction ensures that any local reduction in cut, due to reserves or lower-impact forestry, does not get translated into greater environmental or social damage elsewhere. Demand reduction deals with waste and inefficiency, but it must also address the trend of unlimited growth of consumption. One does not have to live near the forests to participate in demand reduction. All citizens can have a role in protecting forests.

—ML

as promised and that the public (which hates clearcutting and herbicides now) will grow to love it. It also assumes that the world will either end in the year 2050 or that what comes after that year is not worth pondering.

Unfortunately, the intensive management fix ignores the basic question: How can we have ever-increasing fiber demand in a world with limited forests? Even if foresters found a way to double forest production over the next 70 years, if population doubles and per-capita consumption increases as well, all this increased growth will be devoured—and then what? It is time to think the unthinkable—reduced demand.

Part III Reduced Demand

Our experience earlier in this century demonstrated that forests (of a sort) could grow back if the cut is reduced. The way the cut was reduced, however, did not truly solve the problem. Population increased by multiples. Demands were simply shifted somewhere else. The problem of non-sustainable farming was foisted onto the Midwest. Non-sustainable forestry is going on now in the Pacific Northwest. Non-sustainable energy use has been shifted to fossil fuels. Indeed, some of the substitutions for wood, such as steel, plas-

tic, or concrete, use up more energy and cause more environmental damage than cutting trees.

In October 1994, a group of activists, organized by the Rainforest Action Network and the Turner Foundation, met in Tomales Bay, California with the purpose of saving the world's forests by confronting the overconsumption of wood products. Their overriding principle was that this should be done without creating serious new environmental problems. They determined that North Americans could reduce wood-product consumption by 75% if our society systematically used the right tools. This sounds rather drastic until one learns that Americans consume six times the wood and paper products per capita as does the rest of the world.

The group framed the challenge this way:

Major Industrial Wood Use Sectors

- I. Paper and Packaging
- II. Construction
- III. Pallets/shipping uses/Finished wood products

Reduction Categories

1. Decreased per capita consumption
2. Increased re-use
3. Increased recycling
4. Increased efficiency in production
5. Increased use of alternative materials
6. Product durability and design improvements

Campaign Tools For Change

- *Regulations & Legislation
- Proposals/Enforcement
- *Public Education & Advocacy
- *Fiscal & Economic Incentives
- *Technical Solutions

The group published a 70-page pamphlet^{1*} that details how this campaign can work, with examples of organizations that are already using some of these tools. For example, wood could be reduced in housing by more efficient use of framing materials, use of salvaged materials, substitution with more benign materials (such as rammed earth), and even changes in use. We now have the dubious trend (due to the breakup of families and communities) of bigger and bigger buildings for fewer and fewer people. Forest cutting for paper use can be reduced by such measures as more efficient use (and reuse) of office paper, ending junk mail and superfluous packaging, sharing of newspapers and magazines, recycling, and substitution of other materials (such as agricultural waste, hemp, or kenaf).

Government policy is crucial for achieving raw material use reductions. The pamphlet describes how we can change purchase policy, trade policy, regulatory policy, or taxation policy to stop waste and save forests. Too much of our policy is used to subsidize waste and artificially cheapen forest products. As long



Forestry as practiced by our Global Economy in western Maine. In response to Maine's industry-friendly clearcut regulations, township-sized clearcuts have been replaced by these cookie-cutter clearcuts that can be greater than 300 acres. Photo © by John McKeith.

Deja Vu All Over Again

Maine Forestry Controversies At the Turn of the Century

Salmon

"The admission of pulp mills upon our streams, more especially upon the Penobscot...was and is a most grievous error...No manufacturer of any kind whatever should be allowed to throw its waste into a river any more than into our highways. No argument or demonstration is necessary here..."

—E.M. Stilwell, *Maine Commissioner of Fish and Game*, 1889

"Of course the fish are decimated, but what does that matter if it does not affect the price of pulp or leather? Has it not created a new industry in the sale of spring water for the drinking of our population?"

—Marshall MacDonald, *speaking for Federal Commissioner of Fish and Fisheries*, 1892

Wood Supply

"Thus is natural greed stimulated to hasten the destruction of all our forests and bring upon the valleys of the Kennebec and Penobscot the devastating floods that are sure to follow such destruction. If it were wise to live today, as if there were no tomorrow, this might be excusable; but with the existing impression that the country will remain after we are gone, and that our children will need, and will be thankful for the heritage unimpaired, it seems like the folly of madness, not the wisdom of wise men, to pursue the course we are now pursuing."

—Editorial, *Portland Eastern Argus*, 1883

"There is no doubt that lands drained by the Kennebec are being overcut. Neither is there any doubt that the cut will have to shrink largely within a few years. A great many towns have been greatly damaged by cutting so far as their producing capacity in the future is concerned. The cutting has been done carelessly."

—Austin Cary, 1895

"A proper policy for our state has in view two ends, the preservation of the forest, the restoration of the forest...We shall have a system either while our forests survive or after they are destroyed. It seems wiser to have it while we have woods to preserve."

—George F. Talbot, 1889

"This forestry agitation is, for a large part, based on wrong premises. I believe in taking care of the forests, but when it is said that the forests of Maine are disappearing, such statements are dead to the wrong. Why two cords of wood are growing in Maine, today, where one was growing ten years ago...What Maine wants is not so much a protection of the forests as more railroads to bring them to the markets. On wild lands the growth of our hardwoods is wonderful."

—Anonymous logger, *Bangor Daily Commercial*, 1883

"Until conditions materially change, we can safely leave it to the self-interest of the owners of timberlands to determine when the time shall arrive to save timber instead of using it."

—*Industrial Journal*, 1884

"I have no patience with these theorists who are continually talking about the destruction of the forests and urging the preservation of the timberlands for future generations. In the first place, they are, as a rule, highly impractical and their arguments are nothing but theories, and in the second place, the argument for saving the trees for future ages, is most absurd."

"As long as Americans remain as they are at present, they'll not be so consider-

as we have throwaway wood and paper products, we will have throwaway forests.

Conclusion

If we truly want the northern forests to recover to sustainably provide both ecological and social benefits, we will need a new, more complete strategy. University of Maine professors Robert Seymour and Mac Hunter have proposed a three part strategy that includes reserves, "New Forestry," and "intensive management." Leaving the name "Triad" to Hunter/Seymour, the new trio (treeo?) of strategies would be reserves, low-impact management, and demand reduction. Unlike the Triad, where biodiversity is sacrificed in one part for the sake of temporarily maintaining it in the other parts, all three elements of the strategy work towards forest recovery. We have seen, from this brief historical sketch, that reduced cutting can allow forests to grow back. Unless demand reduction (including an end to geometric population growth) is central to our strategy for sustainability, we are just fooling ourselves



ate for the welfare of future inhabitants, as to cease money making and close down big industries. They'll run the thing as long as there is any money in it..."

—A.H. Carter, *Berlin Mills Company*, 1899

"[Hugh Chisholm, president of International Paper Company] declared that the paper industry was not to blame for deforestation nor for the reduction of the water supply. According to his view it was the huntsman, the charcoal burner, and the fuel cutter who were really at fault. The paper companies cut only spruce, nothing else, therefore it could not be their fault. Besides, there was not really less water, it only seemed so."

—Historian David Smith's summary of an editorial by Chisholm in 1902

"...I am satisfied that the supply of available material to carry on our present pulp and lumber manufacturing establishments, and such others as may be built as time goes on, is sufficient and ample; and I firmly believe that there is no immediate danger of a timber famine in this State..."

—Edgar Ring, *Maine Forest Commissioner*, 1902

"[George F. Talbot] called [Ring's] estimate a 'very extravagant one,' and cited the work of Austin Cary as evidence of the time it took a tree to grow to maturity. He also cited his own experiences as evidence for the case against Ring. In the 1840's

when he was a law clerk in Gardiner great pine logs two feet at the butt were commonplace at the mills, but now only small stuff was at the saw and none of it pine. On his own land in 1856 the logs ran three and four to the M; now it was eighteen on the spruce and eleven on the hemlock. Who could believe the commissioner in the face of such evidence? He said that the state needed better fire protection than the law of 1889, selective cutting and replanting, and finally the repurchase of lands from private hands to place them into state forests."

—Summary by David Smith of Talbot's 1903 editorial

Regulations

In response to a 1907 bill that would require a ten inch diameter-limit on pine and spruce, one legislator characterized the bill as:

"...a piece of freak and vicious legislation...the bill is unscientific; it is improper and loosely drawn; it is freak legislation. I claim that it is outrageous to take from the small property owners of Maine their individual rights in this matter. Shall the State of Maine say to me that I shall not cut a pine or hemlock tree on my land that is under ten inches in size at the butt?..."

The bill was sent to the Maine Supreme Court to determine if it was constitutional. The Court responded in 1908:

"We think it a settled principle, growing out of the nature of a well-ordered society, that every holder of property, however absolute and unqualified may be his title, holds it under the implied liability that his use of it shall be so regulated that it shall not be injurious to equal enjoyment of others having an equal right to the enjoyment of their property, nor injurious to the rights of the Community."

"While it might restrict the owner of wild and uncultivated lands in the use of them, might delay his anticipated profits, and even thereby cause him some loss of profit, it would nevertheless leave his lands, their product and increase, untouched and without diminution of title, estate or quantity. He would still have large measure of control and large opportunity to realize values. He might suffer delay but not deprivation."

and robbing our descendants.

Sustainability alone is not a sufficient goal for forestry policy. Questions about control of the forest and of markets must be raised as well. A "sustainable forest" that only benefits a small handful of absentee landowners is hardly a desirable outcome.

Even this issue was anticipated by writers of previous centuries. John Springer, in 1851, saw the possibility of a great future for the city of Bangor, which was, he believed, "surrounded by resources of wealth altogether beyond any other town or city in the state..." But he warned that:

"Of one great disadvantage, which must retard her progress, mention may be made, viz., capitalists abroad own too much of the territory on her river. A judicious policy in business must be steadily pursued, else she may only prove the mere outlet through which the wealth of her territory shall pass to other hands..."

Sources

Colby, Forrest, 1919, *Forest Protection and Conservation in Maine*, Maine

Forestry Commission, Augusta.

Ferguson, Roland and Kingsley, Neal, 1972, *The Timber Resources of Maine*, USDA Forest Service, Upper Darby, Pa.

Ferguson, Roland and Longwood, Franklin, 1960, *The Timber Resources of Maine*, USDA Forest Service, Upper Darby, Pa.

Holbrook, Stewart, 1961, *Yankee Loggers: A Recollection of Woodsmen, Cooks, and River Drivers*, The International Paper Company, New York

Ireland, Lloyd, C., 1993, *Wildlands and Woodlots: The story of New England's Forests*, Working Draft, cited with permission from author.

Ireland, Lloyd, C., 1994, an address on the resiliency, recovery, and challenges of the Maine woods given at the Forest Products Society 1994 convention in Portland.

Maine Forest Service, 1993, *Assessment of Maine's Wood Supply*, Department of Conservation, Augusta.

Ring, Edgar, 1904, *Report of the Forest Commissioner*, Maine Forestry Commission, Augusta.

Seal, Cheryl, 1992, *Thoreau's Maine Woods Yesterday and Today*, Yankee Books, Emmaus Pa.

Smith, David C., 1972, *A History of Lumbering in Maine 1861-1960*, University of Maine, Orono.

Springer, John, 1971 (originally published in 1851), *Forest Life and Forest Trees*, New Hampshire Publishing Company, Somersworth.

¹ To order, send \$10 to Wood Use Reduction Campaign, Rainforest Action Network, 450 Sansome, Suite 700, San Francisco, CA 94111

Chasing Chances

An Excerpt from *The Northern Forest* by David Dobbs & Richard Ober

*Editor's note: In their book *The Northern Forest*, David Dobbs and Richard Ober weave together the stories of several people who live and work in the woods. This excerpt, which includes parts of two chapters set in Maine, picks up after we have met logging contractor Brian Souers, who runs Treeline, Inc. in Lincoln. Like all journalism, this excerpt is a snapshot in time; in this case, August 1993 through December 1994. Details such as wood prices may no longer be precise.*

The Northern Forest was published in May 1995 by Chelsea Green Publishing Company of White River Junction, Vermont. It is available through any bookstore or by calling the publisher at 800-639-4099.

"There's just not that many good stands out there," says Dick Slike, Treeline's money man. "It can be two and a half years now between decent chances." He pauses and shifts his weight. "It can be longer."

Slike is leaning against the door jamb of a cluttered office at Treeline's cinder block garage in Lincoln. Tim Shorey, the company's logging foreman, is sitting on a desk. The two look like they've swapped roles: Dick, stocky and powerful with shoulder-length black hair and a thick beard, looks more like a lumberjack than Tim, who is leaner and clean-cut. They both wear work boots, jeans, and tan shirts emblazoned over the left pocket with the company name as well as their own. The small room is crowded; both men are over six feet tall, and they had not planned to stop and talk here. We had been on our way out with Tim when we had run into Dick. As invariably happens in conversations about logging in Maine, money had crept into the discussion, and Dick had offered a few thoughts. That was a half hour ago.

"We cut gobs and gobs of wood that we make no money on," Dick says. "There's a lot of gross to make. The trick is getting the net. We bid for stumpage deals where we're going to make a dollar a cord, and we lose them. How is that possible? Who can cut wood for less than a dollar a cord?"

Nobody, Dick says, answering his own question, unless they are cheating. All contractors who follow the rules have similar fixed costs. Worker's compensation insurance alone costs Treeline \$42.67 for every \$100 the company pays in wages. On top of that comes health insurance, Social Security, safety training, fuel for company trucks and machines, maintenance, and mortgages on the garage and equipment. Dick knows the company loses jobs to contractors who aren't covering some of these costs because they don't buy workers compensation insurance, or because they pay their

loggers under the table.

Down time is also expensive. Treeline gets its best chances to cut quality wood in the winter, when wet areas that grow good spruce are frozen and the heavy equipment does less damage to the ground. Problem is, that's also the most difficult time for trucking, and Treeline doesn't get paid until the logs and chips arrive at the mill. Hundreds or even thousands of cords can pile up in the woods if the roads get soggy or a truck breaks down; meanwhile, Dick has to keep on writing paychecks. These cash flow problems are even worse for many other contractors. Treeline keeps repairs in-house, and the company's good safety record holds their workers compensation premium as much as 25 percent below some of their competitors.

"Once in a while we run into a deal in the woods where Treeline makes money, and the woodcutter makes money, and the mill makes money, and it's a win-win-win situation all the way around," Slike says. "But time and time again there are two or three people in this chain who are losing. There's all this lose-lose-lose stuff."

Most often, the biggest losers are the men doing the most dangerous work: the woodcutters. Like most contractors, Treeline pays its loggers by piece-rate: the more they cut, the more they earn. Treeline's rate runs between four and five dollars per cord, depending on the species of tree, and depending on whether the logger can drag out whole trees or has to spend time cutting off limbs in the woods. To keep its payroll and therefore its insurance costs down, the company also pays equipment rental fees totaling around ten dollars per cord to loggers who use their own skidders and chainsaws. A steady woodcutter who brings in around 50 cords a week will gross about \$700 in wages and equipment rental fees. Out of that comes fuel for the skidder (around \$100 a week), payments on the skidder, gas and oil for the chain saw, and equipment maintenance. Logging machines are expensive. An average-sized cable skidder costs around \$50,000 and can run as much as \$65,000; a set of tires for a skidder goes for about five thousand. While these expenses rise continually, the piece rate hasn't changed in eight years. It's all many loggers can do, Dick says, just to clear minimum wage. If you can't increase the amount of money you clear from every cord, you have to cut more cords.

"Corporate America has to make its money," Dick says. "Then comes the unionized workers in the paper mill, then the logging contractor." By the time the fixed costs are paid, hourly salaries for other employees covered, and Treeline owner Brian Souers takes his share, there is little left-over for the individual loggers. "A woodcutter's out there taking his life in his hands day in and day out. And he's getting paid, like, minimum wage to do it," Dick says.

The phone rings and someone down the hall picks it up. Dick had ignored a few other calls during our conversation, but this one is from Brian. He says he'd better take it, and disappears into his office with a wave.

"Well," says Tim, standing up. "To work."

Pulling out of the driveway in an aging, green Ford pickup truck, Tim lays out his day's itinerary. Treeline recently signed a ten-week contract with International Paper to cut 7000 cords of wood from Township 3 Range 1, a 23,000-acre square of virtually uninhabited timberland just east of Lincoln. Tim needs to check in on the hand crews, write down how much wood they have cut, refuel a skidder, and make sure that the men running the de-limber and slasher have enough wood to process. Treeline will barely break even on this contract as long as everything runs smoothly, and it is Tim's job to make sure that happens. He switches on the two-way radio and drives east over the Penobscot River. In the middle of Lincoln's busy three-block downtown, he bears right on Route 6 toward Township 3 Range 1.

When northern and central Maine was originally surveyed in the nineteenth century, government agents divided the region into a grid of square townships, each measuring 36 square miles, or about 23,000 acres. Ten of these townships constituted a range; Township 3 Range 1, or "T3R1," was the third township in the first range west of Maine's border with New Brunswick.

Today, International Paper owns all but a few hundred acres of T3R1. The only residences are hunting camps.

Treeline's woodcutters cover about a thousand acres of T3R1 every year, harvesting some 15,000 cords in a variety of methods. Only around ten percent of this wood ends up in International Paper's own facilities; the rest is sold to other manufacturers.

Deep into the township, Tim halts the truck in the middle of a gravel road. On our left is a thick forest of hemlock and poplar and beech trees, most between six and twelve inches in diameter. On the right is a completely treeless, 35-acre rectangle, shorn of all vegetation and scraped smooth, like an oversized soccer field awaiting new grass and white lines. On three of its four sides, the clearcut ends abruptly in straight lines of trees. On the fourth side, along the road where Tim has stopped the truck, lies a house-sized pile of logs. Their raw ends are moist and pitchy and tagged with numbers in fluorescent orange paint: 6, 7, 6, 8, 6, 6, 5, 5, 6, 5, 5.

Tim steps out of the truck and looks at the empty land. IP, he says, prefers the term "stand conversion" to "clearcut," because the company's goal is to convert a forest that was growing mostly hardwoods and a bit of hemlock to one that will grow a crop of pure spruce.

"This was probably ninety percent hardwood and ten percent softwood, and they want to convert it to all softwood," Tim says. "This was a good chance for a woodcutter, because all he had to do is cut it all down and bring it to the road. That's where the woodcutter makes money." After the logger cut all the trees and hauled them to the roadside, Tim explains, Treeline's processing crew came in with the mechanical de-limber and the slasher and turned the trees into logs. The tops and branches, along with whole, smaller trees, were fed into a giant chipper, and the chips were blown into a tractor trailer to be hauled to the mill. The logs will be picked up later this week. Next summer, laborers working for IP will come in and plant spruce seedlings. The following year, a helicopter will fly over and spray herbicide to kill the hardwood saplings that, by then, will be threatening to choke out the spruce transplants.

From the woods on the far edge of the clearcut comes the heavy droning sound of a diesel engine. We walk on the road along the clearing until we reach the line of trees, then follow the sound into the forest. Two hundred yards off the road, in a stand of poplar, hemlock, and fir trees, Treeline woodcutter Mike Dube is unreeling a thick steel cable from a winch mounted on the back of a yellow John Deere skidder. We stand and watch him work.

Dube has already felled several poplar (or "pop-



Author Richard Ober discusses forestry with Treeline logging foreman Tim Shorey standing in front of a 35-acre "site conversion" on T3R1. Photo © David Dobbs and Richard Ober.

ple") trees. When he has the cable pulled out to one of the downed trees, he hurries back to the skidder for a chain. Returning, he wraps the chain around the butt of the tree, hooks the chain to a sliding cuff on the cable, scurries back to the skidder, and engages the winch. The revolving drum pulls the cable tight, dragging the fallen tree into line behind the skidder. Dube pulls the cable back out and attaches it to another tree. While this one is being reeled in, a limb catches on a stump. Dube climbs into the cab of the skidder and tries to drive the machine forward to jerk the log free, but the limb holds fast against the stump, and the front wheels of the skidder lift off the ground. He jumps down, releases the tension on the winch, reaches behind the seat of the skidder and pulls out a chainsaw. He follows the cable through the brush and branches back to the poplar, slices off the hung-up limb, and returns to the skidder. He engages the winch again, and the cable draws the tree into position next to the first one.

It takes Dube fifteen minutes to winch five trees into a bunch directly behind the skidder. Then he holds the winch lever down until the cable lifts the butt ends of the trees several feet off the ground. He climbs back into the cab and drives forward. He tries to maneuver around a 20-foot standing poplar, but every time he turns the skidder, the load of trees dragging behind the machine gets caught on a stump. Finally he gives up, roars straight ahead, and the small tree disappears under the skidder. With the huge rubber tires churning the soft ground, Dube drives the skidder out of the woods and across the adjacent clearcut. He stops next to the pile of logs alongside the road, not far from Tim's truck.

We follow him on foot across the clearcut.

By the time we get to the road, Dube has released his load of trees and is standing awkwardly next to his skidder. He looks distinctly apprehensive, like a kid waiting to see the principal. When Tim makes introductions, Dube's face sags in relief. "Jesus Christ," he says, blushing, reaching out to shake hands. "You guys scared the shit out of me. I thought for sure you were OSHA." Dube rarely sees strangers at his job sites, which are usually many miles from the nearest paved road. He figured the sight of his boss showing up with two guys carrying notebooks and cameras could only mean one thing: the Occupational Safety and Health Administration. We know that loggers dread visits from OSHA inspectors, but Mike's fear seems to be out of proportion. All of Treeline's woodcutters are trained according to OSHA regulations, and Mike is wearing the obligatory hard hat, face screen, gloves, steel-toed boots, and safety trousers made of Kevlar (the material used in bullet-proof vests). He had handled his saw well, and the skidder appears to be in perfect operating condition.

But an OSHA inspector, Dube says, could have found plenty to complain about, plenty to fine. Dube's gloves aren't of regulation thickness. His cable is nearing its recommended maximum number of hours. A regulator would have objected to the way he pushed over that small poplar. Most offensive of all, he had left a few standing dead trees in his work area. OSHA regulations require loggers to cut down every dead "stub" more than two inches wide and ten feet tall within two tree lengths of their work site. Since the budworm outbreak, few forests in Maine are free of standing dead fir trees, and many areas are completely choked with them. Since Dube was cutting 50-foot poplar trees, technically he first should have felled every dead tree within 100 feet of where he was working at any given time. He had dropped most of them, but if he followed the law to the letter, he would never make any money—nobody pays him to cut dead stubs, they just tell him he has to. If he doesn't, and if he gets caught, Treeline is fined a thousand dollars for each stub. And OSHA looks. Thirty-four loggers were killed on the job in Maine from 1978 to 1993, including several who were crushed under falling dead trees. Treeline has recently gone through a pre-inspection audit, and unannounced field checks are imminent. That, Dube says, is why we scared him so badly. He keeps saying it every time the conversation lags, and he repeats it before climbing back into his skidder.

"Jesus," he says, shaking hands with us again. "You guys sure scared me."

"This is not a good chance for Mike," Tim says, as he watches the skidder disappear back into the for-



Treeline cuts much of its wood with mechanized equipment like this feller-buncher, although not as great a proportion as the company once did. Photo by Ron Paula, courtesy of the Society for the Protection of New Hampshire Forests.

est. "He can make his wage, but he's not making any money. But right now there's nothing else to cut. It's one of them deals that you've got to put up with for a couple, three weeks. And then you get back into better wood."

Treeline pays its woodcutters on a "butt scale," which is based on the diameter of a tree on its thick end. If all the trees a logger has cut and piled are six inches across, he gets paid the same for the 50-foot tall trees as he does for the 30-footers, even though the taller ones are more difficult to fell and skid out of the woods. The landowner, of course, gets paid more for the taller trees when they arrive at the mill, because they contain more logs. Thus neither the woodcutter's pay nor the difficulty of his labor is reflected by the value of the trees he is cutting. Loggers paid on the butt scale particularly dislike thick stands of fast-growing hardwoods such as poplars, because they are usually full of skinny, tall trees.

Tim knows exactly how much money Dube is making, because part of Tim's job as logging supervisor is to tally what the loggers cut. He comes by twice a week, measures the diameter of the logs, paints the measurement on the butt, and reads the tally into a hand-held tape recorder. A secretary listens to the tape and fills out tally sheets so Dick Slike can write out the logger's paycheck.

"Tim just talks into the tape," Dick had explained earlier. "'Mike's cut: hemlock...five, hemlock...six, spruce...four.' Although these days it's more like, 'popple five, popple five, popple five, popple five, popple five, popple five.'"

Driving down the gravel road, Tim lifts a folder off the dashboard and extracts a letter-sized, photocopied topographic map marked with International Paper's arrow-shaped corporate logo. The map is dense with squiggles and polygons, hashmarks and large capital letters. It takes a moment to figure out where we are and what we're looking at. Alternating his attention between the road and the map, Tim explains the legend: hashmarks for site conversions, A for release cuts, B for strip cuts, C for basal area cuts.

As the landscape around us rolls past, it's not hard

to follow the map's symbols. Here is a "B: Strip cut," where 20-foot-wide treeless lanes gouge a quarter mile into the forest, separated by 40-foot strips of uncut woods. These alternating strips of brown and green tick past for half a mile and then stop abruptly at "A: Release," where the forest has been reduced to a scattered few spruce and birch trees, like birthday candles on a five-year-old kid's cake, frosted with a tangle of undergrowth and shattered branches. Then we're into "C: basal area cut," where the loggers were told, essentially, to take half the trees and leave the rest standing. Just when this more parklike look starts to become soothing, the forest changes to "Hashmark: site conversion," where the bald earth waits to be plugged with seedlings. Large areas have also been cut by "diameter limit," where all of the trees thicker than four or five inches have been removed. Every few miles we pass a plantation of shoulder-high red pine or Japanese larch trees, lined up in straight queues that disappear over the tops of ridges.

Only the site conversions, about a fifth of the total harvest in T3R1, are replanted; IP counts on the rest of the areas coming back through natural regeneration. Strip cuts are supposed to reseed themselves from the band of uncut trees on either side, which also provide shade to keep the soil cool; release cuts are done only where there are seedlings of the desired species already established, and the loggers are told to leave a few seed trees; and basal area cuts retain enough residual trees to mimic natural succession. And yet, despite the diversity of these "prescriptions," as foresters call them, there is a numbing sameness in the land. The shoulders on both sides of the road are cleared 30 feet back to accommodate countless piles of logs and brush. In the stands where some trees were left, many now lean over or have fallen into piles like pick-up sticks, blown down once the protective forest around them was gone. Virtually no large trees, alive or dead, are left in any of the cut areas. Live large trees were cut and hauled to the mill; the dead ones, which would have helped feed and shelter many species of wildlife, have fallen to OSHA's rigorous regulations. Fragments of wood and bark are everywhere.

In the text of its recreationists' map of Maine, IP

Timberlands declares that the company uses "a variety of forestry techniques to work with nature. The result is a healthier, more vigorous and more valuable forest. Recognizing the environmental and visual impact of harvesting activities, we limit the size of harvest operations and intersperse them among stands of different ages. In addition, harvest operations are usually irregular in shape to maximize the benefits for wildlife...Our foresters have developed and implemented Environmental Guidelines for use in all IP Timberlands forests. Many of these guidelines go beyond measures stipulated by law...Our foresters require that all contractors operating on IP Timberlands adhere to these guidelines. On-site inspections are conducted to ensure compliance."

In broad terms, this text accurately describes what happens on T3R1. The company does use many forestry techniques to manage and harvest trees, and certain areas undoubtedly grow back more vigorously as a result. Foresters from International Paper use maps and ribbons to define the prescription for each block. They check in regularly with Tim and Brian to find out how the harvests are going, and they monitor mill receipts to make sure Treeline is sending in the right volumes of wood. Paper company foresters are trained to understand the impact of logging on soils, wildlife, scenery, and water quality. Many are active in a range of professional and scientific organizations, and they work closely with state wildlife agencies.

According to many loggers, however, paper company foresters make few day-to-day decisions in the woods. A logger can work for a month without ever seeing an official from the company that owns the land. In that time, the logger might remove 300 cords of wood; a feller-buncher will cut five times that. Even when foresters do show up, they are forbidden for insurance reasons to give instructions directly to the woodcutters. Direct contact suggests an employer-employee relationship, which the paper companies avoid lest they become liable for injuries, workers compensation, or payroll taxes. For much of the harvests, of course, on-the-ground forestry instructions are somewhat irrelevant: In site conversions, the logger cuts everything down to the dirt. In strip cuts they do the same, but in rows. In release cuts they leave a few trees and try not to crush the little seedlings. In diameter limit cuts, they cut every tree that is wider than a certain diameter.

Across from a sprawling plantation of feathery, eight-foot larch trees, Tim turns left on to a deeply rutted road and stops. Three men in tan Treeline work shirts and jeans are huddled over the saw housing of a slasher, a portable saw that Treeline hauls to logging jobs behind a truck. A large grapple skidder and mechanical de-limber stand nearby.

"I hate Mondays," says Rick Irish, the slasher operator, as Tim walks up. A flywheel in the motor has shifted slightly and sheared off several bolts. Tim peers

into the machine and shakes his head. He takes the parts manual out of Rick's hand and pulls a tiny notebook from his own shirt pocket.

As Tim works on the broken saw, Bill climbs back into his skidder and Arthur starts up the de-limber. Rick is idle. He leans against a pile of wood and folds his arms across his chest. "This used to be the pine tree state," he says. "It's more like the alder state now. Or the larch state. It just doesn't have the value for the woodcutters anymore. The landowners are just squeezing it for all it's worth."

He looks up the road at the plantation of evenly spaced larch trees.

"Now wouldn't you be proud to own that?" he says wryly. "I know I would. It's a shame to walk in the woods and see something like that. I just don't like to see it. But I have to feed my kids, and that's what buys my biscuits at the end of the week. I make a living at this. But I don't have to like it."

In 1994, International Paper started running a series of artful double-page advertisements in national magazines, including *The New Yorker*. Image ads for paper companies are nothing new; Weyerhaeuser, Georgia-Pacific, and many other firms have long used them to position the companies as corporate Johnny Appleseeds, planting trees in neat rows across the land. The new IP series was a little different, for it directly addressed the conflicts and cross-purposes that underlie [former Northern Forest Lands Council member Jerry] Bley's comment: "At the heart of a lot of this is the basic incompatibility of our economic system with forestry."

Illustrated with a large sepia photograph of a blanket-shrouded child wandering in the woods, the ad read, in part, "Though we're one of the largest private landowners in America, we know it's not only our land...We know there are millions of people who rely on our forestland for different yet important reasons. Some need lumber to build homes. Some need tons of paper to run their businesses. Some just want a place to go camping or fishing. These are not complicated desires. But satisfying them involves complex personal, business and global issues." The ad encouraged readers to call Dr. Sharon Haines, toll-free, "to talk further." Haines, a renowned soil scientist and International Paper's manager of natural resources, has become a timber industry leader in understanding biological diversity and ecosystem management. She was active in the Northern Forest debate, and chaired the Society of American Foresters' Task Force on Sustaining Long-Term Forest Health and Productivity—a candid discussion of ecosystem management and new forestry that generated much controversy within the profession. She is grandmother of the child in the photograph and the company's top spokesperson on land management.

Pat Flood is responsible for all of the company's

land in Pennsylvania, New York, and northern New England. Some 970,000 acres of this land are in Maine, as is Flood's office.

Flood, for one, welcomes the attitude adjustment that Haines personifies. "Fundamentally, there has been a movement in our company to do kinder, gentler forestry," he says. "We're learning how to do things differently. We're trying to blend aesthetics and landscape-scale management together so that in planning our harvests we're doing them not just to accomplish silvicultural objectives, but so some of these other objectives are met. We're very conscious of public opinion." To move toward a gentler forestry, Flood says, IP foresters in Maine and elsewhere are leaning away from big clearcuts and planning more shelterwood cuts, pre-commercial thinnings, and basal area selection harvests. The foresters are also taking courses in landscape management to minimize the visual impact of harvest areas by, among other methods, planting grasses in disturbed roadsides and instructing loggers to push shorn limbs and branches back into the woods. Flood acknowledges that this approach sometimes requires the loggers to do more work for which they are not paid. "We have a few less foresters, we have a lot more responsibility, and a lot more area to cover," Flood says. "I don't think we need to make apologies for that, but we should probably commiserate a little more with the loggers. Because we find the same things happening to us."

This new direction notwithstanding, IP still plans to cut a lot of wood in Maine. In 1993, the company cut 466,000 cords from about 30,000 acres in the state. Flood and his boss John Cureton estimate that the annual harvest will drop a bit between 1994 and the year 2000, to an average of around 436,000 cords. (That's down from a high of 650,000 cords in 1987.) Maine's forest grows at an average rate of 0.4 to 0.5 cords per acre per year. International Paper owns 970,000 acres in Maine. If the growth rate remains constant and the projected harvest doesn't change, the company will be cutting close to one hundred percent of the growth every year.

Responding to the concerns of some experts that such cutting levels will eventually produce a gap when the existing mature timber is gone and younger stands have not yet economically matured, Flood says, "We've had (University of Maine silviculturist) Bob Seymour here giving us his lecture, and we understand what he's saying. We're trying to even out those peaks and valleys with pre-commercial thinning, planting, and herbicides so we don't have this long wait for the young timber. All those things will help fill those gaps so we can bring the forest back to a balance that we're comfortable with. We're trying to make our lands more productive." Flood says that as the lands become more productive, capable of growing more wood per acre, the harvest level may rise somewhat early in the twenty-first century.

"Folks think that the harvest level is set by some boogeyman in East Jesus, Somewhere, who says 'You guys will cut this much wood'," Flood says. "That's not the way it works. We start from the bottom up and determine what the forest is able to sustain. We don't call it the 'sustainable' harvest. We call it the *appropriate* harvest—the right level for the forest given the forest's condition. That's a number that's generated here, based on biology and nothing else. We reserve the right to adjust that number, but only within a certain framework."

Land ownership, Flood says, has a lot of challenges. He says large corporations like International Paper face the same problems as all landowners, only the problems are far bigger. He also jokes that, as a forester, he is "deadly jealous" of Chuck Gadzik of the Baskahegan Company [Ed. note: now head of the *Maine Forest Service*], who works under less demanding pressures to produce high short-term revenues.

"It's hard for anybody to take into account all the considerations when you're harvesting 30,000 acres a year, because you have 30,000 potential screw-ups," Flood says. "We don't practice perfect forestry, but our people are really working hard. We're trying to learn. But at the same time we all have responsibilities to keep conducting business."

Copyright 1995 by David Dobbs and Richard Ober.



While a lot of public attention is paid to heavy mechanized logging, small independent operators still occupy an important niche throughout the northeast. Through profiles and analysis, *The Northern Forest* explores pressures and opportunities facing logging contractors of all sizes. Photo courtesy of the Society for the Protection of New Hampshire Forests.

Bigelow Mountain Battle: A Lesson for the Creation of Maine Woods National Park

by Lance Tapley

The first fall-like days signal the beginning of the best hiking and back-packing season: warm days, cool nights, no bugs, and—very soon—the foliage ablaze with a fire no one wants to fight.

In considering where to go on the trails, my thoughts turn to how wonderful it would be for hikers if the proposal for a Maine Woods National Park were a reality. It would be marvelous, too, for cross-country skiers, snowshoers, kayakers, canoeists, mountain climbers—all who delight in self-powered outdoor recreation.

Of course, many others would benefit: fishermen; naturalists; the watchers of loons, eagles, and falcons; and those who simply want a refuge from our noisy, gadget-filled, money-grubbing civilization. And the national park proposal now being put forward would even allow regions for snowmobiling and hunting.

The park idea has been with us for generations, but it has been revived by RESTORE: The North Woods, a New England organization which recently opened an office in Augusta headed by Jym St. Pierre, one of the most respected conservationists in the state.

RESTORE's proposal calls for the purchase by the federal government of 3.2 million acres surrounding Baxter State Park; Chamberlain, Chesuncook, and Moosehead Lakes; hundreds of smaller lakes and ponds; scores of mountains; and 100 miles of the Appalachian Trail. In sum, the wild and beautiful heart of the Maine forest. All for far less than the price of one useless B-2 bomber.

For generations the park idea never flew because wood cutting by the paper companies which owned the forest was gentle compared to the sickening, brutal clear-cutting, poison-spraying pillage and rape—I choose these words carefully—of the last 20 years.

Now, too, some corporate landowners, whose sole responsibility is to make money for their global stockholders, are selling off prime lakefront property. And so much of the woods may go the way of the Maine coast: a private, rather than a public, preserve.

Because of this changed situation, there is a lot of serious discussion about a park. In addition to endorsing the park, which will take, I believe, at least 15 years to create—it won't happen in the present environment in



Bigelow Mountain. Photo by Michael Gertsner.

Washington—I want to contribute a couple of points to the discussion.

First, the designers of the Maine Woods National Park should learn from past mistakes. The ugly overcrowding at Acadia, Yellowstone, and Yosemite comes from allowing too much to automobiles and RVs, those apartments-on-wheels that increasingly dominate our roads.

A park can be designed so that muscle power is the chief means of access. Our national parks should be redefined: As motor vehicles ruin or threaten the beauty and tranquillity of every other place in the country, parks should be places to escape them—at least in large parts of the parks.

Secondly, if the idea is to be accepted in Maine the appeal should be made to working men and women more than to the self-conscious and far less numerous "environmentalists."

Unfortunately, the leadership of the two big Maine environmentalist organizations have either virtually abandoned fighting for the environment (the Maine Audubon Society) or become pro-development out of their need to raise money from corporations and rich people (the Natural Resources Council of Maine).

I put in evidence here the recent support by the Natural Resources Council for the widening of the Maine Turnpike—a flip-flop in position—and for the sacrifice of the Boundary Mountains to Kenetech Windpower Inc.'s unneeded development. In brief, these outfits can't be counted on any-

more. Interestingly, the Maine Audubon Society has already expressed hostility to the national park proposal.

The steadiest environmentalists in Maine are not found in the rich Portland suburbs of Cape Elizabeth and Falmouth, to the likes of which Maine Audubon and the Natural Resources Council turn for financial support, but in the city wards and villages of the hunters and fishermen and hikers and campers and canoeists.

Nearly 20 years ago the people of Maine in an initiated referendum vote created the Bigelow Preserve, setting aside a magnificent mountain range "for the use and enjoyment of the public," stopping the development of a huge ski resort, "the Aspen of the East." This was done despite the opposition of Gov. James Longley, the business establishment, most of the newspapers, and the legislature.

There was a reason why the Bigelow Preserve bill passed overwhelmingly in the working-class wards of Biddeford, Lewiston, Augusta, Waterville, and other cities yet lost in Cape Elizabeth and Falmouth.

This is because the proposal was not only pitched to working people, it was designed for them. Those of us involved in that campaign went to the mills, to the unions, to the sportsmen's clubs, and door-to-door in the neighborhoods. When we asked these Maine people to preserve a priceless part of their heritage, they responded.

And we had created the preserve

for them. It allowed hunting and fishing and regulated snowmobiling and even allowed carefully regulated timber harvesting. We allowed some wood to be cut because we wanted to help local people keep their jobs. In the design of the Maine Woods National Park, I urge these considerations.

Sportsmen, especially, are natural allies to those who want to preserve the Maine woods. But, as is the case with some environmentalist organizations, the leadership misleads the troops. I am thinking specifically of the Sportsmen's Alliance of Maine and its knee-jerk criticism of the national park idea. SAM should not be a pawn of people who want to conserve corporate profits instead of Maine wilderness.

I also want to suggest that, for the support of the Maine Woods National Park as well as for other causes, there should be an organization which represents politically the state's hikers, backpackers, runners, canoeists, kayakers, cross-country skiers, and others who pursue active outdoor sports. One lobbyist in Augusta for the public interest can get a lot done.

Lance Tapley is publisher and editor of Maine Running & Fitness magazine, where this article originally appeared. Versions also appeared in his column in the Bangor Daily News and Augusta's Kennebec Journal. In the 1970s he organized the successful crusade for the preservation of the Bigelow Mountain Range.

LURC Windpower Project Approval Appealed

The Maine Land Use Regulation Commission's August 17 decision to approve the Preliminary Development Plan of Kenetech Windpower, Inc. and rezone approximately 20 remote high mountain peaks from protection areas to a development zone is now under appeal to the Maine Superior Court. The case will not be decided before the end of the year.

Appealing the decision to give preliminary approval to the giant wind farm in the Boundary Mountains of western Maine are National Audubon Society; three Maine Chapters of National Audubon Society; RESTORE: The North Woods; and two individuals—retired chief district ranger Duluth Wing and National Audubon activist Samuel Hands.

Whether LURC followed its own rules and procedures is expected to be a major issue in the appeal. The court will be asked to decide whether LURC can bypass its own statutory scheme for rezoning, which requires an assessment of the project's impacts on the environment and natural resources and a determination about the suitability of the site for the new zone.

What You Can Do: To help save the Boundary Mountains join Friends of the Boundary Mountains. Fill out this coupon and send as much money as you can.

—Pamela Prodan

Dear Friends of the Boundary Mountains,

I, to, would like to register my concern by becoming a member. Enclosed is my contribution for telephone calls, postage and other expenses that will make Friends a visible presence:

\$15 _____ \$35 _____ \$50 _____ \$100 _____ other \$ _____

Name _____

Address _____

Town _____ State _____ Zip _____

Telephone (optional, for telephone tree) _____

Mail forms and contributions to Friends of the Boundary Mountains, P.O. Box 910, Wilton, Maine 04294.

Protecting the Traditions of the Northern Forest: The Northern Forest Stewardship Act

A Conservation Ethic for the 1990s

by Senator Patrick Leahy

The Northern Forest Stewardship Act of 1995, S. 1163, is an example of what Congress can achieve when it heeds the public's voice. The bipartisan legislation that I introduced with several other Northern Forest Senators on August 10, 1995 is founded on extensive research, open discussion, consensus decisions, and visionary problem solving by the people who have a stake in the future of the forest. Legislation rarely embodies such a thorough effort by so diverse a constituency. Our goal was to accurately reflect the recommendations of the Northern Forest communities, envisioned in the final report of the Northern Forest Lands Council.

The Council process was initiated to avoid the conflicts that have divided communities in some regions of our country. These conflicts have very often been fueled by misinformation, politics, and short-term economic gain. Over the past four years, Northern Forest communities have made a dedicated effort to develop a shared vision for their

future. They have worked hard to arrive at a consensus and our job is to insure that their efforts are rewarded.

This legislation is guided solely by the Council's recommendations—it goes no further, nor does it fall short. The bill includes a package of technical and financial assistance which the Congress can and should support. Between the Family Forestland Preservation Act (S. 692) and the Northern Forest Stewardship Act (S. 1163), Congress can meet the recommendations made by the people of the Northern Forest.

The Northern Forest Stewardship Act includes provisions on:

- the Council's fundamental principles;
- formation of forestry cooperatives;
- defining measurable benchmarks for sustainability;
- a Northern Forest research cooperative;
- interstate coordination and dialogue;
- forest-based worker safety & training;
- funding for land conservation planning and acquisition;
- landowner liability; and
- non-game wildlife conservation.

The legislation embodies the conservation ethic of the 1990s—non-regulatory incentives and assistance to real-

ize community-based goals for sustainable economic and environmental prosperity. The rights and responsibilities of landowners are emphasized, the primacy of the states is reinforced, and the traditions of the region are protected. Yet, the bill also promotes new ways of achieving our goals and a common vision that did not exist several years ago.

Moving ahead with the Council's work, we will pursue enhanced forest management, land protection that supports the recreational and wildlife needs of the region, integrated research and decision making, and increased productivity in the traditional as well as new compatible industries.

Through this bill, we can boost sustainable development and protect the ecological integrity of biological resources across the landscape. The nation has taken notice of this highly successful effort as a model for meeting the conservation challenges of the country, and I am confident of its inevitable success.

I welcome the constructive input of people who will compare this legislation with the final recommendations, research, and public participation in the Northern Forest Lands Council. It is my goal to create the best possible repre-

sentation of the future described in the report to Congress, **Finding Common Ground: Conserving the Northern Forest**—to make the Council's solutions work, and work well. This can happen if all affected citizens continue their hard work and help shape the final product.

The Northern Forest Stewardship Act is the work of many people. I want to congratulate the members of the Council for their success, and most importantly the people of the Northern Forest for their enthusiasm during the long process. Thousands of people took time to turn out for public meetings and share their views on the Northern Forest. Hundreds more put pen to paper or picked up the phone to register their thoughts. Senators Gregg, Jeffords, Cohen, and Snowe deserve thanks for their contributions to this draft, and I look forward to working with the entire Northern Forest delegation to refine the bill as necessary to move it through the Senate in the upcoming months.

The Council recommendations reflect the first, true consensus vision of Northern Forest communities. We must reward that cooperation by providing a fair and true reflection of their combined wisdom.

Carpe Diem: The Northern Forest Stewardship Act

by Stephen Blackmer

The Northern Forest Stewardship Act (NFSA) offers an unprecedented opportunity for all who love the Northern Forest. Particularly for a Congress that, overall, has been intensely antagonistic to the environment, the NFSA is a breakthrough. While the Act needs strengthening and funding in order to fulfill its promise, it creates a federal role in regional land conservation, ecosystem research, and community development that is critical to the future of the Northern Forest. No legislation is perfect, and the Northern Forest Stewardship Act is no exception. But if we don't take advantage of the opportunity to speak up for strengthening communities of the Northern Forest, improving forest stewardship, and protecting wildlands, we have only ourselves to blame. Some suggestions for strengthening the Act follow.

Forest Stewardship: We urgently need good science and public policy analysis to identify and better understand problems, trends, and opportunities confronting the Northern Forest. Use of the Northern Forest is becoming more intensive, human population is spreading while many other species are declining, and the long-term impacts of development, pollution, and intensive forest management are poorly understood. All who are interested in the future of the Northern Forest share a need for sound scientific research and analysis, for public policy analysis based upon this research, and for outreach and education for forest managers and the general public. The Northern Forest research consortium proposed in the Act is a good start. To make sure it will work, the loosely structured research cooperative in the Act should be strengthened to become a Northern Forest Ecosystem Center with a clear structure and funding.

Wildland Protection: Much of the character of the Northern Forest stems from its wildness. But no private landowner should be asked to bear all the burden of protecting wildlands. Nor can the states alone bear the cost. The federal government must help. The Northern Forest Stewardship Act has tremendous potential for providing federal assistance for land conservation. To fulfill this potential, the Act needs three additions: First, the Act should create a clear public involvement process, based upon the experience of the four states and tailored to each, to provide the opportunity for people throughout each state to participate in identifying land conservation priorities. Second, the

Act should provide federal financial and technical assistance to analyze the ten critical wildland regions identified through preliminary research, and to recommend conservation strategies for each. Third, the Act should provide clear criteria for identifying other conservation lands worthy of protection and to establish priorities for acquisition, when lands become available from willing sellers.

Finally, of course, funding is essential for purchases from willing sellers. The Act provides an excellent starting point, by authorizing use of the Land and Water Conservation Fund for state-federal and federal conservation priorities in the four states. Now, we must refine those priorities, and appropriate the money that is needed.

Stronger Local Economies: The Act authorizes the use of federal funds for rural economic development programs to assist timber-dependent communities in the four states. This is an important step. But recreation and tourism also are critical components of the Northern Forest economy. The Act should include a

strong companion program to create a Community Partnerships Program for heritage and conservation assistance throughout the region. Based upon the National Park Service Rivers, Trails, and Conservation Assistance Program's highly successful work with Northern Forest communities, and similar initiatives, such a program would provide small grants and technical assistance to local communities to develop heritage and recreational projects benefiting residents and visitors alike. Well spent, a little money can go a long way.

Overall, the Northern Forest Stewardship Act is a good step ahead. It is not perfect, but nothing is at the start. We must work to strengthen it. We have an opportunity, and it is up to us to make something of it. We must Seize the Day.

Steve Blackmer is Director of Special Projects for the Appalachian Mountain Club and Chairman of the Northern Forest Alliance.



This scene on the Raquette River in the Adirondacks represents the way we like to imagine the Northern Forest. But we must also protect less scenically spectacular tracts of land that support wildness. Photo © by John McKeith.

Northern Forest Stewardship Act Reflects Failures of Council

by Jamie Sayen

In our discussions time and again we found a fundamental conflict—between market-driven efficiency that encourages maximum consumption of resources with the least amount of effort in the shortest time, and society's responsibility to provide future generations with the same benefits we enjoy today.

We believe that until the roots of this conflict are addressed and the economic rules changed so that markets reward long-term sustainability and recognize the worth of well-functioning natural systems, existing market forces will continue to encourage shorter-term exploitation instead of long-term conservation of the Northern Forest.

This report does not address all aspects of this conflict... (Northern Forest Lands Council, *Finding Common Ground*, September 1994, p. 11, emphasis added)

Senator Patrick Leahy (D-VT) introduced "The Northern Forest Stewardship Act" (S 1163) into Congress on August 10. Co-sponsors are James Jeffords (R-VT), Judd Gregg (R-NH), and William Cohen and Olympia Snowe (R-ME). When he introduced the bill, Senator Leahy stated: "The goal of this bill is to capture perfectly the vision of the Northern Forest Lands Council and Northern Forest communities.... It goes no further than the Council's recommendations... nor does it fall short."

The Leahy bill is viewed as a "package" with a bill introduced in 1994 and again this year by Senator Gregg, "The Family Forestland Preservation Tax Act of 1995" (S 692). This bill gives the timber industry and the large landowner class all the tax breaks they clamored for during the NFLC process. The Gregg bill, which will cost the U.S. Treasury approximately \$800 million a year in lost revenues is a disgrace. (See article below.)

While the Leahy bill has some merit, the Northern Forest Alliance, a coalition of 26 mostly mainstream environmental groups, has endorsed both bills!

Senator Leahy and his staff felt an



The Great Northern Forest of Maine, or at least what's left of it. Over 2,000 acres of Maine have been clearcut since 1980; according to industry, this is sustainable forestry. The cookie cutter patterns in this photo are industry's response to the 1990 clearcutting regulations developed by the Maine Forest Service. This is one of two postcards the Sierra Club has produced to educate the public about industrial forestry. To get your postcards, contact the Sierra Club Northeast Regional Office, 85 Washington St., Saratoga Springs, NY 12866. Tel. 518 583-9166. Send one to your Congressperson. Photo © John McKeith.

obligation to introduce the recommendations of the NFLC, a process he initiated and championed throughout its six year existence. While we applaud the Senator for his sincere concern for Northern Forest communities and for his desire to assist us through the legislative process, the bill, as introduced, fails to address our region's crisis. To understand the weaknesses of the Leahy Northern Forest bill, we must revisit the failures—and betrayals—of the now defunct NFLC.

Problems With the NFLC

The fundamental problem with the work of the NFLC is that the Council asked the wrong question. Instead of asking "How can we protect the ecological integrity of the Northern Forests—the basis of sustainable natural and human communities?" the Council sought from the outset to protect the

interests of the landowner class, which, in the now infamous words of Senator Leahy and then-Senator Warren Rudman (R-NH) in 1988, "has served the region well."

Biological Diversity: The most important issue facing any species is the quality of habitat. If the life support system is healthy and secure from degrading impacts, then communities of all species, including humans, can flourish. While the forests of this region are in better condition than the ecosystems of downtown Los Angeles, they are severely degraded in relation to their presettlement condition (see "The Presettlement Forest" pages 4-7). We have cut down most of our ancient and mature forests; there are alarmingly high numbers of rare, threatened, endangered and extirpated native species and communities. Paper mills and other polluters have dumped diox-

ins, other organochlorines and a whole menu of toxic soups into our water, air, and soils. Uncontrolled development has fragmented natural ecosystems.

To honestly address these problems requires a willingness to challenge the special interests and unexamined assumptions of the status quo. It will require creation of large ecological reserves—preferably managed by regional interests—an end to abusive forestry, toxic dumping and inappropriate development. To its credit, the NFLC recommended the creation of ecological reserves. To its discredit, the Council shackled this recommendation (#21) with so many politically-motivated, unscientific constraints to assure the task could not be adequately accomplished. (See the *Forum*, vol. 2 #1, page 19)

Forestry: The greatest scandal of the NFLC process was the manner in

"Family" Forestland Preservation Tax Act May Cost \$800 Million a Year

"Public funds are scarce; the greatest public benefit must be secured for any additional investment."

—S 1163 The Northern Forest Stewardship Act

For some curious reason the above caveat is nowhere to be found in S 692—NH Senator Judd Gregg's mistitled "Family Forestland Preservation Tax Act of 1995." Could it be that this self-proclaimed fiscal conservative is embarrassed by the massive handouts his bill gives to absentee multinational corporations, absentee heirs of 19th Century Timber Robber Barons, real estate speculators, timber liquidators, and others who have clearcut, sprayed, and exported raw logs, all the while obstructing democratic discussion of forest health?

During its existence, the skeptical Council ignored (or tried to ignore) compelling scientific evidence that there is an ecological crisis in the region. It imposed a heavy burden of proof on advocates for ecological reserves. Had the Council required a similar measure of proof from advocates for these tax breaks, especially the Capital Gains giveback, the recommendations that found their way into the Gregg bill wouldn't pass the

straight face test.

All you need to know about the vile S 692 is:

(1) It will cost the U.S. Treasury about \$800 million a year in lost revenues. What will offset this revenue shortfall? Medicare cuts? Dismantlement of the National Park Service?

(2) Recipients of these handouts can continue to rape, pillage, and plunder forest ecosystems as they have for centuries. The Gregg bill requires no "performance standards" of landowners. Abusive forestry practitioners are just as eligible as the most caring land steward.

(3) The greatest beneficiaries will be absentee families and corporations.

(4) Landowners who wish to manage their forestland for Wilderness will discover this is not a "qualified forest use." You must log your land to qualify.

(5) The Capital Gains indexing, as set up by the Gregg bill, encourages short-term liquidation. Ironically, this provision, coming from the Northern Forest Lands Council actually places the Northern Forest at a competitive disadvantage with landowners in the Southeast where rotations are shorter and

landowners can clean up more frequently. Of course, the absentee corporations—such as Champion and Georgia-Pacific—of the Northern Forest region who cried loudest in the NFLC process also have large holdings in the Southeast.

(6) For \$2 billion—the equivalent of two and a half years of tax breaks offered by the Gregg bill—we could acquire 7,000,000 acres of Northern Forest lands, thereby enabling us to establish the entire 8 Million acre HEADWATERS Wilderness Reserve System.

Strengths of the Gregg Bill

Estate Tax relief for donation or sale of land or easements is good, provided easement sellers or donors are required to follow truly sustainable forest practices, such as those outlined by the Maine Clearcut Referendum (no clearcuts greater than one-half acre), and they do not export unprocessed logs, etc. This section of the bill should be added to the Leahy bill or combined with the National Excise Tax on Recreation Equipment. The rest of the Gregg bill should be consigned to the scrap heap.

—Jamie Sayen

which the special interest timber industry subverted democracy by: (1) vetoing honest discussion of forest practices for five of the six years of its existence; and (2) by hijacking the NFLS/C process to secure huge tax subsidies they neither need nor deserve. After public outrage over huge clearcuts and other unsustainable forest practices convinced the industry veto-ers that their pet tax breaks would be lost if the Council's credibility were tarnished by ignoring public outrage over abusive forest practices, the Council belatedly issued a few recommendations about forestry policy. It refused to take a stand on abusive forestry, and it joined the anti-regulatory mood of the gay (19) nineties. It was an especially unedifying spectacle to witness the NFLC reward the clearcutters and subverters of the democratic process with recommendations for huge tax breaks with no strings attached.

Development: The fear that the Northern Forests would be sold off to developers and subdivided was the primary motive for launching the NFLC in 1988. Industry argued consistently for six years that massive tax breaks to the landowner class (one percent of the landowners in northern Maine, NH and Vermont own about 70% of the forestlands) would rescue us from the threat of development. Although the NFLC expended 42.5% of its budget on studies designed to promote these elitist tax breaks, it never succeeded in demonstrating that such expensive subsidies would either thwart development or

protect forest health.

The Council ignored much evidence to the contrary. The most unbiased study conducted by the NFLC—the Land Conversion Study—debunked the myth that loss of favorable treatment on capital gains, high property taxes, or nasty regulations had led to land sales in the 1980s.

The Council refused to seriously consider other strategies to limit development—especially the land gains tax Vermont already has; an end to the interest deduction on income taxes for second home mortgages (in an age when millions are homeless); and existing use zoning (see *Forum*, vol. 1 #6, pages 12-14). Why? Because the representatives of the timber industry and property rights zealots vetoed these much more effective and cheaper remedies. After all, large landowners wished to retain the right either to develop some of their lands or to use the threat of development to extort further subsidies.

The Northern Forest Economy: The Council work on the "Local Forest Based Economy" (LFBE) was so inept that it was of almost no use in developing policy. The LFBE subcommittee refused to examine the root causes of the region's high rates of poverty and unemployment; the continuing loss of jobs in the woods; and paper mills despite record levels of harvest; raw log exports; lack of diversification and value-added manufacturing in the region. Also unexamined by this or any

Council subcommittee was the well-documented crisis in "shortfalls" in favored economic species—spruce-fir and white pine. Instead, the LFBE relied on "booster" reports that gave wildly inflated figures of the value of the forest products industry to the region and conveniently failed to cite trends or the down side of such heavy dependence on this industry (unemployment, dioxins in rivers, clearcut forests, herbicide spraying).

Public Participation: The NFLC, to its credit, tried to promote public participation in its process. In many respects, its greatest legacy will be that it fostered a long overdue regional dialogue on the most important issues facing the Northern Forest region, and that it tried to integrate some of the public's concerns into its recommendations. Alas, long before the Council began this laudable exercise in democracy it had struck a Faustian bargain with the Maine delegation, especially with the gifted obstructionist-lobbyist of the Maine Forest Products Council, Ted Johnston. In order to keep Maine in the six-year process, the Council yielded the timber industry and other landowner extremists the "right" to veto honest discussion of legitimate issues: unsustainable forestry, the need for ecological reserves, the need to honestly assess the root causes of the region's crisis, etc. This made the numerous tax breaks/subsidies it recommended more defensible, and enabled the Council to write in its final report: "The Council's recommendations are [not]... a response to an imminent crisis."

Taxes: Taxes have already been discussed above. One further thing should be borne in mind: the Council and Senator Leahy's bill both state as "Fundamental Principles": "Public funds are scarce; the greatest public benefit must be secured for any additional investment." Bear that in mind as you reflect how \$800 million a year in tax breaks for the landowner class with no requirements for sustainable forest management will secure the greatest benefit to the other 99% of the region.

Strengths of Leahy Bill

(1) The most important and substantive element of the Leahy bill authorizes funds from the beleaguered Land and Water Conservation Fund for

the Northern Forest region for land acquisition. This is a necessary, but not sufficient, start to land protection in the region. As currently written, the bill fails to protect any land in the Northern Forest and does not appropriate any money for land acquisition.

(2) The bill puts the Northern Forest region on the "national agenda." It will hopefully serve as a tool to educate the rest of the country about the regional, national, and global significance of the Northern Forest region. It is a positive bill, and thus, a refreshing change from current anti-environmental debates about takings, wetlands and the Endangered Species Act.

(3) It helps keep the Northern Forest regional dialogue alive. To his credit, Senator Leahy and staff welcome input and amendments to the bill. As the Northern Forest Alliance has said (see *Carpe Diem* on page 16), it's up to us to put substance into the bill. The Leahy bill, though weak as currently written, offers this opportunity.

(4) The bill would establish a regional body to serve to promote regional dialogue, collaboration, and Congressional clout. However, anti-environmentalist governors can easily subvert the process as certain of their predecessors subverted the integrity of the NFLS/C.

(5) It offers support for "marketing cooperatives of willing landowners" that could promote greater value-added opportunities and lead to greater economic diversification of the region's timber-based economy.

(6) The Northern Forest Research Cooperative could help promote ecologically sustainable forest management and economically sustainable activities.

(7) It offers support to landowners to practice non-game conservation, although it fails to appropriate any money to accomplish this important work.

Necessary Amendments to Leahy Bill

No bill or bills will effectively promote and secure sustainable natural and human communities in the Northern Forest or any other region until there is a truly democratic assessment of the root causes of the current crisis. Questions that must be asked and answered are: What is necessary to pro-



A clearcut near Kibby Mountain in the Boundary Mountains of Western Maine. The photo on page 17 shows this area from the air. Tax breaks proposed by Senator Gregg (S. 692) would put billions of dollars in the pockets of caring landowners such as the absentee corporation whose "management" is highlighted here. Photo © by John McKeith.

Where is National Excise Tax on Recreation Equipment?

One of the more original ideas advanced by the Northern Forest Lands Council was the proposal (Recommendation 14) that Congress institute a national excise tax on recreation equipment to support wildlife and recreation on public lands. Neither the Leahy nor the Gregg bill picks up on this idea.

The recreation equipment excise tax should be used for both management of ecological reserves and for acquisition of lands to be incorporated into a system of ecological reserves.

Opponents of Wilderness never tire of portraying it as a playground for Yuppie elitists. By designating revenues raised by the excise tax to acquire, protect, and restore ecological reserve lands, we supplement the beleaguered Land and Water Conservation Fund and demonstrate that recreationists are willing and able to support protection of the life support system and are not just interested in allegedly "elitist" recreation issues.

There are two problems to bear in mind with such an excise tax: (1) Congress can and has filched funds that are earmarked for specific purposes; and (2) "user pays" approaches are great ideas if applied fairly, rather than selectively. While recreationists are ante-ing up, beneficiaries of the interstate highway system, water diversion projects, public lands cattle grazers, and below-cost national forest timber purchasers, as well as a thousand other public works projects should pay the true costs (both economic and ecological) of their particular benefit or subsidy.

—JS

Sears Island Cargo Port EIS Ignores Impacts to Affected Forest and Marine Ecosystems

by Ron Huber

On September 12, the Federal Highway Administration and the U.S. Army Corps of Engineers held a joint public hearing on the Supplemental Environmental Impact Statement (SEIS) for the Sears Island port proposal. The proposal envisions a state owned intermodal industrial port complex on Sears Island in upper Penobscot Bay, Maine.

As the packed Belfast National Guard Armory echoed with the raucous clamor of Earth First!ers discontented with the apparent stacking of the speaking list (speakers from EPA, U.S. Fish & Wildlife Service, and the National Marine Fisheries Service were relegated to more than four hours into the hearing), the two agencies heard from more than 100 citizens and representatives of NGO and federal, state, and municipal organizations.

Proponents painted a rosy (though vague) picture of local and regional prosperity stemming from creation of the port, and characterized existing port facilities at nearby Mack Point as outmoded and inadequate.

Opponents—around 60% of the commenters—criticized the SEIS document as inadequate in its depiction of both the affected forest and marine ecosystems, and of the environmental and economic impacts to those ecosystems flowing from port construction and operation.

In particular, critics noted that although the purposes section of the study repeatedly states that large-scale woodchip export is vital to the port's economic viability, impacts to the forest environment within the nine-county service area for the port go unexamined in the primary, secondary and cumulative impacts sections of the SEIS.

Others noted that secondary and cumulative impacts to the marine ecosystem of Penobscot Bay and south-

western Gulf of Maine were not considered in the SEIS at all. Still others argued that the SEIS' description of traffic impacts and the ultimate economic burden of the port to the people of Maine were not realistic. Representatives of the Brotherhood of Carpenters and Joiners and the International Paperworkers Union argued that export woodchipping would reduce wood and pulp supply availability, while simultaneously raising their prices and reducing employment.

Opponents also argued that the eleventh hour announcement by Governor King of an expansion of the proposed service area for the port beyond the borders of Maine to rail cargo from the rest of New England and eastern Canada rendered the SEIS's description of the affected environment and the port's impacts fatally flawed. The EPA, which has consistently opposed the island location of the port, will rule by the end of September whether to require expansion of the study to include these impacts and whether to require consideration of realignment/renovation of the existing Mack Point terminal as a site alternative. The SEIS does not consider that alternative.

A week after the hearings, the Maine Department of Transportation has announced that it will move ahead in its efforts to obtain two state environmental permits required under the Maine Natural Resource Protection Act and the Site Location of Development Law. Opponents plan to require public hearings to contest those permits.

Should the Army Corps of Engineers issue the state a Clean Water Act Section 404 permit, litigation from opponents is likely.

For more information, contact Ron Huber, Coastal Waters Project, POB 1811, Rockland, ME 04841. Tel: 207 596-7693.



RAW LOG EXPORTS

Do they effect forest health and Maine jobs? What do they say about the lack of public policies to protect resource and community health? Why is the state of Maine trying to build a cargoport on Sears Island that will export woodchips and jobs? On December 13, 1994 a group of environmental and labor organizations put together a forum to ask these questions and work toward policies that support our communities and resources. If you would like a copy of A Forum on LOG/Chip Exports and learn the answers to some of these questions, write: Sierra Club, 136 Maine Street, Brunswick, ME 04011, or call David Johnson at 207 798-4633.

tect the life support system? How do we safeguard the rights and needs of all species and current and future generations? What human activities are genuinely sustainable both economically and ecologically? Can our best interests be met by current absentee landownership patterns? Is industrial civilization compatible with long-term ecological and evolutionary integrity? The NFLC could not conceive these questions. Our current Congress is violently against asking them. Our mainstream environmental organizations, so captivated by current insider political games, are content to reform some of the most egregious symptoms of our nature-estranged culture; they seem unable to ask many of the necessary questions.

Although the Leahy bill fails to address these questions and therefore offers scant hope of escaping the current crisis, it does contain some worthwhile things, and with the addition of several amendments, could make a positive contribution to improving the condition of the region. Without adoption of the following amendments, the Leahy bill offers little hope for beleaguered Northern Forest communities, both natural and human.

At a minimum, the following

changes should be made to the Leahy bill:

(1) **Emergency Land Acquisition Fund:** It is essential that the public have a contingency fund available so that it can acquire undeveloped forest lands on short notice. The appropriation of \$50-100 a year for the next 20 years to a Northern Forest Emergency Land Acquisition Trust Fund would enable the public to acquire lands when they go on the market. If you think this unnecessary, consider: on Monday, September 18 the **Bangor Daily News** reported that the CEO of Bowater, owner of 2.1 million acres in Maine told citizens of Millinocket that Bowater plans to identify "non-strategic" land holdings and to divest these lands. The public should be ready with the cash to buy them at fair market value. Some may object that we only should buy lands of "outstanding" ecological value (habitat of rare, threatened and endangered species and communities, etc.). This is hogwash. Large tracts of undeveloped forest lands are essential components of a landscape scale conservation. If the land is available, even in severely degraded condition, let's acquire it. The wolves, caribou and wolverines will thank us.

(2) **Study Proposals for**

Ecological Reserves & a National Park: There are at least three bold, serious proposals for establishing large ecological reserves in the Northern Forest region: our HEADWATERS Wilderness Reserve System, the Northern Forest Alliance's "10 Areas", and RESTORE: The North Woods' proposal for the creation of a 3.2 million acre Maine Woods National Park. Congress must authorize the Department of the Interior to study all three properly.

(3) **Support Local, Not Absentee, Corporations and Owners:** Economic incentives and support programs should benefit locals, not absentee corporations. Only landowners who live on their land should be eligible for benefits of research and economic development strategies. Primary focus should be on: ecologically sustainable activities; diversification of the regional economy; promotion of secondary and tertiary value-added manufacture; small and micro businesses and farms; and ecological restoration.

(4) **Delete "Declaration # 8":** Declaration 8 states: "public funds are scarce; the greatest public benefit must be secured for any additional investment." Instead, insert Declaration #8 into the Gregg tax bill, and then use it to

kill the Gregg bill.

(5) **End the Deduction for Interest on Second Home Mortgages:** Let's get serious about ending the subsidization of inappropriate development by the overprivileged classes. The money saved by ending this subsidy could buy a hell of a lot of land for ecological reserves.

(6) **Reform the Tax Code:** Reform the tax code and economic development programs to eliminate incentives and subsidies for those who export unprocessed logs, who clearcut, spray pesticides, or plant monoculture tree crops.

(7) **Deny Federal Transportation Funds:** to states that permit: raw log export; clearcuts larger than one-half acre; pesticide spraying in forestry management; any amount of dioxin or other organochlorines in fresh water; or that fail to adopt strict existing use zoning. States, of course, remain free to set higher standards.

(8) **Fund the Non Game Conservation Program.**

(9) **Establish a National Excise Tax on Recreation Equipment.** See page 18.

A Critique of the HEADWATERS Reserve Proposal

by Stephen Blackmer

There is a great deal of good, challenging thinking behind the proposal to establish a HEADWATERS Wilderness Reserve System in the Northern Forest [Ed. Note: See *Forum*, vol. 3 #5]. I heartily endorse the idea of an explicit strategy for economic transition along the lines proposed, and the establishment of large wilderness reserves. Yet, the proposal has one disabling flaw: While espousing low intensity, ecologically based forest management as a part of the economic strategy, the proposed creation of 16 reserves leaves little land in the Northern Forest on which to do it. And, I believe that eliminating forest management from the Northern Forest, as the proposal effectively does, would not be in keeping with the cultural, historical, or economic underpinnings of the region. With a modest change—creating reserves in those areas that are most critical for ecological values while encouraging sound forest management in the rest of the Northern Forest—a revised Headwaters Restoration proposal would have great merit and appeal.

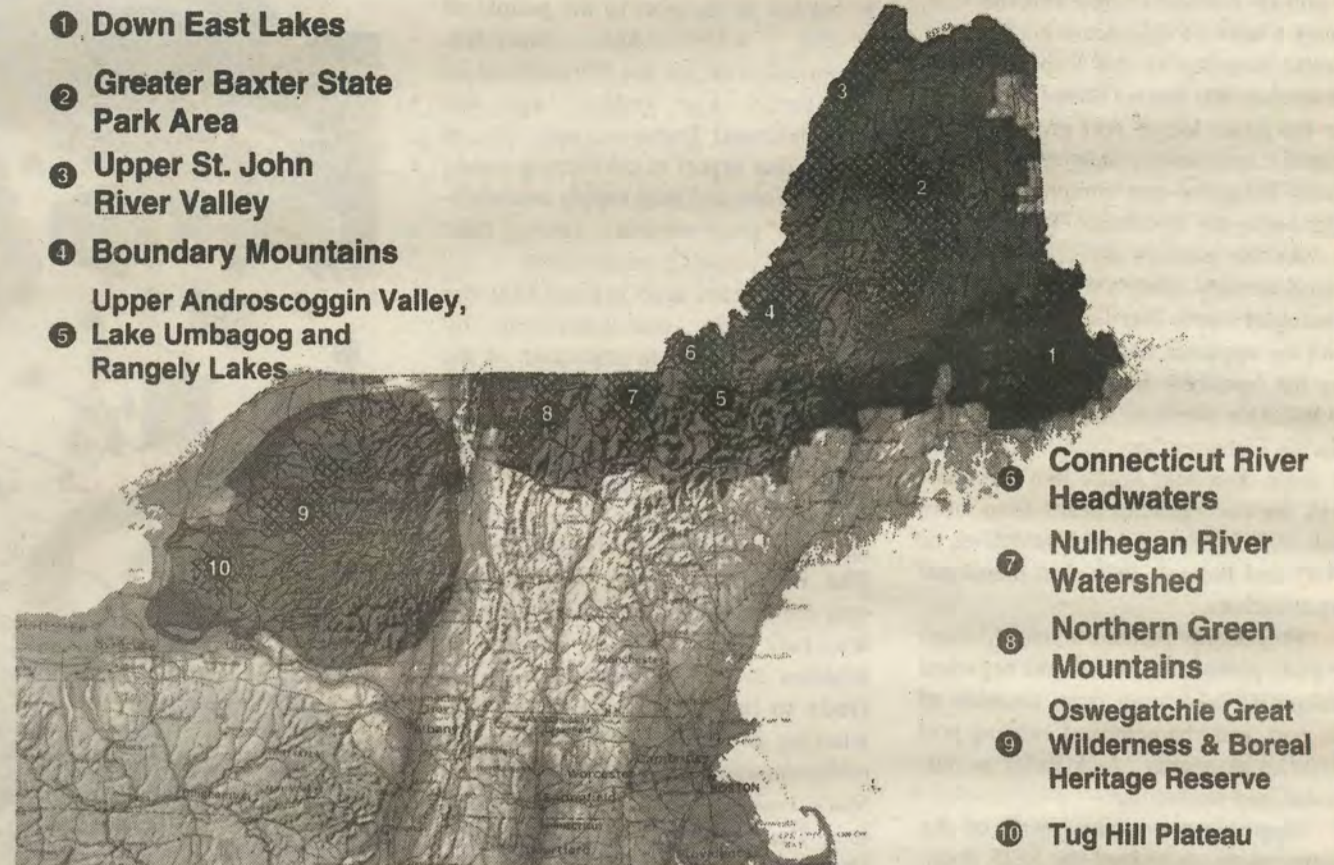
Developing an explicit strategy for economic transition is essential. Over the past one hundred years, since the development of the pulp industry, the economy of the Northern Forest has become increasingly dependent upon the least common denominator wood that the forest can provide—fiber. Much of the higher quality wood is being exported. Both trends deprive the local economy and people of the higher value possible if we were growing millions of acres of high quality trees, and milling them here.

From a simple point of competitive advantage, what we have to offer in the Northern Forest (and throughout most of the northeastern states, for that matter) is a combination of soils and climate that are magnificently capable of growing high quality timber. We are foolish not to take better advantage of it. It was this fundamental capacity of the land to grow big, beautiful trees—especially white pine and red spruce—that brought the first waves of forest industry to the Northern Forest. We are fortunate that the land remains capable of growing such trees—if we give it a chance. In order to do so, we must cease growing trees on shorter and shorter rotations; eliminate large clearcuts, monocultures, and herbiciding; stop seeing chips and exports as the primary products of the forest; and change the economics of land ownership to make that possible.

The HEADWATERS proposal recognizes these needs, but neglects to complete the circuit by indicating where in the Northern Forest low intensity forest management would take place.

If timber is one of the symbols of the Northern Forest, wilderness is the other. As we have lost the big trees, so too have we lost the deep wildness that has characterized the Northern Forest. The HEADWATERS proposal does a good job of describing the values and benefits of creating large ecological reserves, and the criteria for identifying them. In the Phase II section, the proposal also describes how to create a reserve system in the more developed portions of New England using cores

Northern Forest Alliance 10 Proposed Wildland Areas



The Northern Forest Alliance's Ten Proposed Wildland Areas

1. **Down East Lakes** - Where the Atlantic Ocean meets the Northern Forest, this area contains the watersheds of four major rivers—the Machias, East Machias, Narraguagus, and Pleasant; the largest of Maine's Grand Lakes—Spednik, Baskahegan, Sysladobsis, West Grand, Pocomoonshine, Niatous, and Tunk; and extensive wetlands and wildlife.
2. **Greater Baxter State Park Area** - Surrounding Baxter State Park, this area that Henry David Thoreau visited 150 years ago, includes the East Branch and the lower West Branch of the Penobscot River, the Nahmakanta/Debsconeag Lakes region, the headwaters of the Allagash, Aroostook, and West Branch of the Pleasant rivers, and the famed Katahdin Iron Works.
3. **Upper St. John Valley** - The St. John river is one of the largest, least developed, free flowing river systems east of the Mississippi. The watershed supports native brook trout and landlocked salmon fisheries, deer and moose populations, and provides extensive hunting, canoeing, and wilderness recreation.
4. **Boundary Mountains** - This remote region stretches from the Appalachian Trail north to the Canadian border. It includes Flagstaff and Spencer Lakes, Pierce, Attean, Wood, and Holeb ponds, the Bigelow Preserve, the watersheds of the Dead and Upper Moose rivers, and is a home to loons, rare alpine plants, and Maine's best whitewater boating.
5. **Upper Androscoggin Valley, Lake Umbagog, and Rangeley Lakes** - This region straddles the Maine/New Hampshire border and stretches from the Mahoosuc Mountains to the Canadian border. It includes Umbagog, Upper and Lower Richardson, Cupsuptic, Mooslookmeguntic, and Aziscohos Lakes, and the Dead and Swift Diamond, Magalloway, and Cupsuptic rivers, which form most of the headwaters of the Androscoggin river.
6. **Connecticut River Headwaters** - Linking Maine's wildlands and Vermont's Northeast Kingdom, this region contains the undeveloped parts of the Connecticut Lakes, the upper Connecticut watershed with Hall's, Indian, and Perry Streams, and critical ecological sites such as East Inlet, Scotts Bog, and the Norton Pool old-growth stand.
7. **Nulhegan River Watershed** - Vermont's best hope for protecting an entire ecosystem, this area stretches from the Canadian border south to Willoughby Lake. Places such as Mount Pisgah and Victory Bog provide remote habitat for peregrine falcons, herons, otters, bear, and bobcat. It also has the state's largest deer wintering area and increasing numbers of moose.
8. **Northern Green Mountains** - From Mt. Mansfield to the Quebec border, this area runs along the northern spine of the Green Mountains. The Long Trail, camping, and cross-country skiing make it a favorite recreational haunt for residents and visitors.
9. **Oswegatchie Great Wilderness and Boreal Heritage Reserve** - These are but two of the gems that comprise the Adirondack Park, yet their 600,000 acres include more than 440 lakes and hundreds of miles of navigable rivers. These two almost roadless areas of the northwest Adirondacks would provide enough space for the moose, timber wolf, and cougar to return to their ancestral home.
10. **Tug Hill Plateau** - A mix of wetlands, hardwood forests, rolling hills, and deep gorges, this windswept plateau sits as the western edge of the Northern forest, overlooking the shores of Lake Ontario. It includes one of New York's most important wetland regions and the headwaters of several major rivers.

Readers' Response to HEADWATERS Proposal

Dear People,

I am a Native American-Abenaki and Mic-Mac living in Ma Sokoki territory. So I have a question: What will be done in these areas. I think it is a good idea, but the drawback: it reminds me of Quabbin Reservoir in Belchertown, MA and what happens to Native Americans who hunt and live in that area—and fish.

I am glad to see logging stopped and terminated. We have enough paper. We just have to recycle all paper and make it a law that all government paper and envelopes and computer paper should be made of recycled paper; newspaper too. Make this a law in all of the U.S.

—Azo Guizo Maqua
Sunderland, MA

Ed. Response: Traditional Native American hunting and fishing rights will not be affected by the HEADWATERS Wilderness Reserve Proposal. Non-native hunters and fishers will also be able to continue to hunt and fish, although hatchery fish stocking, clearcutting for deer, and other destructive "wildlife management" practices will be halted. Also, there will be fewer roads.

Dear Jamie,

I would like to take the opportunity to pass along some information regarding one of the areas of public lands listed on page nine of the recent edition of *The Northern Forest Forum* (vol. 3 #5). The public land listed under Area 4—Hurricane Brook Reserve—is now known as the Bill Sladyk Wildlife Management Area.

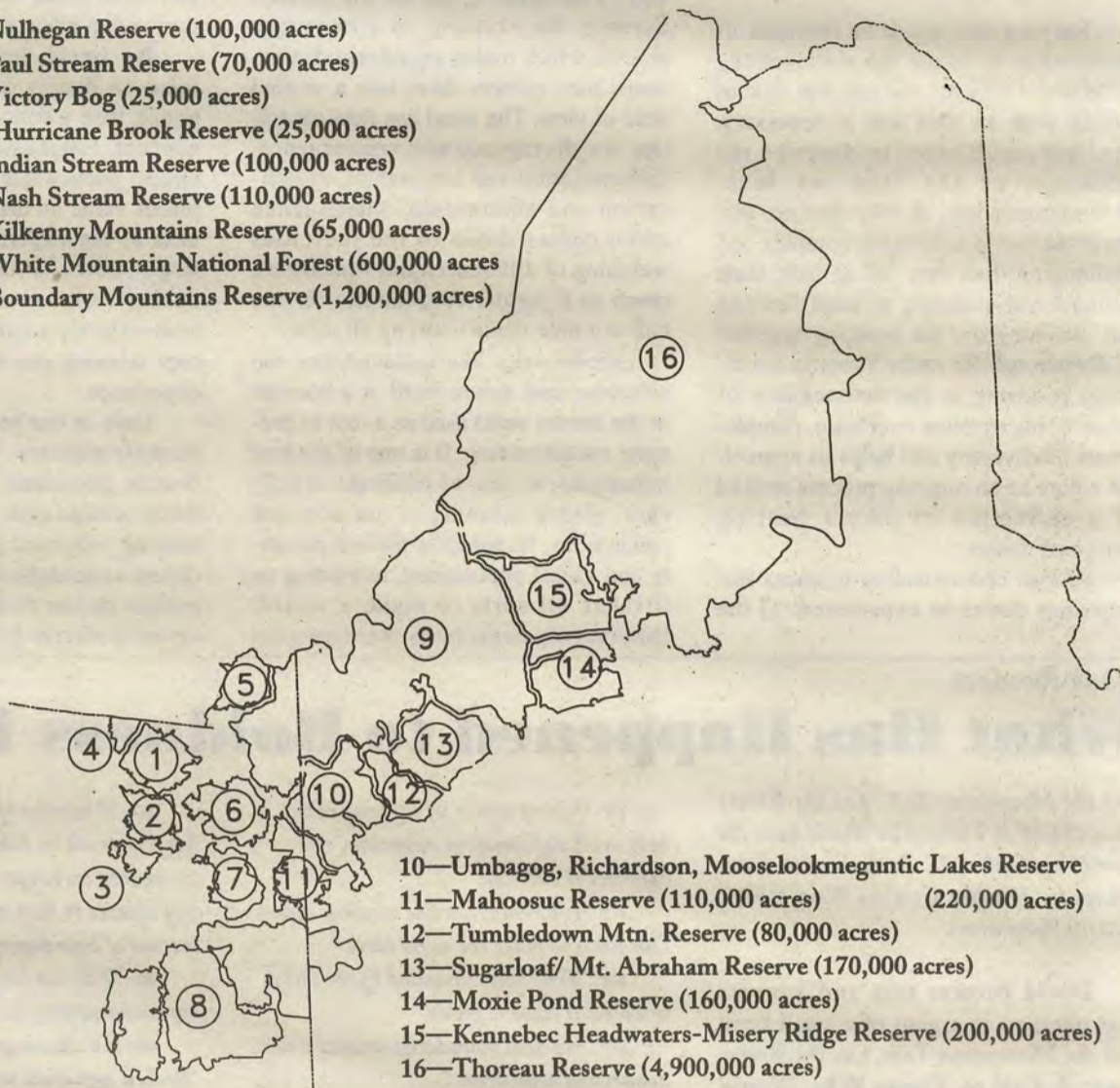
I have enclosed copies of articles from the Department of Fish & Wildlife's Habitat Highlights (1983) explaining the dedication re-naming the Hurricane Brook WMA in memory of Bill Sladyk, former Wildlife Forester for the [VT] Dept. of Fish & Wildlife.

—Jim Horton
District Forestry Ranger
St. Johnsbury, VT

Ed. Response: Thanks for the correction.

The 16 Proposed Northern Forest Headwaters Wilderness Reserves

- 1—Nulhegan Reserve (100,000 acres)
- 2—Paul Stream Reserve (70,000 acres)
- 3—Victory Bog (25,000 acres)
- 4—Hurricane Brook Reserve (25,000 acres)
- 5—Indian Stream Reserve (100,000 acres)
- 6—Nash Stream Reserve (110,000 acres)
- 7—Kilkenny Mountains Reserve (65,000 acres)
- 8—White Mountain National Forest (600,000 acres)
- 9—Boundary Mountains Reserve (1,200,000 acres)



- 10—Umbagog, Richardson, Mooselookmeguntic Lakes Reserve (220,000 acres)
- 11—Mahoosuc Reserve (110,000 acres)
- 12—Tumbledown Mtn. Reserve (80,000 acres)
- 13—Sugarloaf/ Mt. Abraham Reserve (170,000 acres)
- 14—Moxie Pond Reserve (160,000 acres)
- 15—Kennebec Headwaters-Misery Ridge Reserve (200,000 acres)
- 16—Thoreau Reserve (4,900,000 acres)

Greetings:

Volume 3, #5 of *The Northern Forest Forum* arrived a few days ago, and I just started to read it this weekend. It's great! It's a wonderful example of what can be done, and an incentive to get people moving here.

Please send me ten copies of vol. 3, #5.

Thank you,
Ian Whyte
Ottawa, Ontario

Jamie,

I loved the HEADWATERS Reserve proposal. It fills out the sketchy idea I put forth years ago. It's so great how you've continued to work on this idea, giving it flesh and real guts to what was just a skeleton of theory.

Best,
George Wuerthner
Eugene, OR

HEADWATERS Critique

and buffers. This approach makes sense. If one believes, as I do, that restoring biological diversity and economic integrity are mutually dependent rather than mutually exclusive, and that ecologically sound forest management has a role to play in the headwaters of the Northern Forest as well as elsewhere, then it follows that the principles of cores and buffers should be applied in the headwaters as well as in the more developed regions. By incorporating this concept into a reserve design in the headwaters, we could ensure both that the most important ecological features were included and that ecologically based forest management would play its critical role in the Northern Forest of the future.

The Northern Forest Alliance has been working toward this for the past several years. We offer this approach to the *Forum* as a tool in refining its proposal. We have used five criteria for identifying ten wildland areas (see map) as starting points for designing a system of core wildlands and ecologically based forest management lands:

1. Little or no resident population;
2. Limited permanent development;
3. A high concentration of ecologically and recreationally important features;

4. Proximity to existing large public lands and private conservation lands;
5. A landscape scale, using watersheds to delineate regions.

In some cases (Tug Hill core, the Green Mountains, the Nulhegan basin), the first two criteria were sufficient to delineate the areas—they are the last large blocks of relatively undeveloped, unpopulated land in an otherwise settled landscape. In New Hampshire and Maine, a larger portion of the landscape remains as undeveloped forest, so the last three criteria assume greater importance.

We have used a landscape-based approach, assessing the combination of values in a given area, rather than individual features. When possible, we used complete watersheds as the basis for delineating areas. Watersheds increasingly are being recognized as logical units for assessing ecological health and restoring biodiversity, as they tend to contain the full range of topography, soils, vegetation, and wildlife habitat in a region. Many of the most important ecological and recreational values of the Northern Forest are associated with rivers and their watersheds. Finally, the identification of these areas was based upon existing sources of data in the Northern Forest Inventory compiled by

AMC, Maine Audubon Society, and Audubon Society of New Hampshire, public data (e.g. state lake and river studies), satellite imagery, and first-hand knowledge. The major limitation in delineating these areas is the lack of comprehensive data on the distribution of natural communities and important ecological sites.

We have not yet determined which lands within these ten areas should be core wilderness reserves, which low intensity managed forest buffers, nor where corridors connecting the core reserves should be. These ten wildland areas represent an initial step toward identifying how we can restore and protect biological diversity and forest while also maintaining and improving forest management for economic, ecological, and cultural values. Much work and public discussion remains.

There is much good in the HEADWATERS reserve proposal, but it misses a large piece of what it takes for people to live sustainably for the long haul. We need not only wilderness, but also the models for sustainable, ecologically based forest management in the Northern Forest. I believe there is a fundamental good in producing useful products from the land in a way that is ecologically as well as socially and eco-

nomicly sustainable. By concentrating so hard on wilderness, the HEADWATERS proposal neglects this side of our relationship to the land.

Steve Blackmer is Director of Special Projects for the Appalachian Mountain Club and Chairman of the Northern Forest Alliance. Contact him at 107 Hackleboro Road, Canterbury, NH 03224; (603) 783-3348; or amblackmer@mcimail.com. He thanks Dave Publicover of the AMC for his assistance.

Editor Responds: Actually, we did indicate where in the Northern Forest low intensity forest management would take place: on private lands owned by citizens of the region who actually reside on their holdings and care responsibly for their lands first-hand. We believe that our culture must reduce its demand of wood products by 75% in the next couple of decades. This would significantly reduce the pressure on the Northern Forest for fiber extraction. We further believe that most of the jobs in the woods products industries of the Northern Forest must be in value-added processing of the wood, with less reliance on logging and exporting of unprocessed logs.

Biointegrity ~ Flip Side of Biodiversity

By Steve Perrin

Relying too much on the idea of biodiversity to insure the sustainability of Maine's forests, we run the risk of toying with an idea that is necessary, yes, but insufficient to describe the workings of the land we love. Environmentalists, as they mature, discover the world to be more complex and challenging than they did at first; their fundamental concepts to need fleshing out. Biointegrity, the working together of diverse species under stressful conditions, resulting in the maintenance of entire living systems over time, complements biodiversity and helps us appreciate nature as an ongoing process instead of a collection of pieces bearing Latinized names.

Human understanding balances two opposing drives in experience: 1) the

drive to focus on individual particulars, and 2) the drive to get the big picture. Science, for example, is a two-stage process which makes significant distinctions, then gathers them into a unified field of view. The mind has twin capacities for divergence and convergence, differentiation and integration, specification and abstraction. Intelligence often comes down to the judicious weighing of differences and similarities, much as a juggler concentrates on one ball at a time while whirling all three.

Biodiversity like sustainability, the economy, and nature itself is a concept in the human mind used as a tool to promote understanding. It is one of the root metaphors we use to calibrate experience, giving meaning to our acts and perceptions. Its thrust is toward plurality and varied populations, reminding us it takes all sorts to make a world. Biodiversity represents the divergent

aspect of experience, the tendency to sort individuals by unique characteristics, and to place value on particulars.

By itself, leading us always to focus on details, biodiversity is more a notion than a concept. Or at best, half a concept. Emphasizing concrete differences, particulars, and individuals, it places value on distinctions and uniqueness at the expense of unity within a larger milieu. There is danger of introducing a bias to our understanding by inadvertently relying on a partial concept favoring one end of the gradient of experience.

Only at our peril do we neglect the complementary tendency to unify diverse particulars into a larger system. Both tendencies inform each other, making judgment possible. Alone, they distort awareness, skewing it toward the narrow picture or the broad, as the idiot savant performs prodigious feats of cal-

culcation but cannot draw conclusions, or the philosopher constructs perfect systems of universal truth but cannot tell which way to turn to find his bed.

The danger in undue reliance on the notion of biodiversity is pulverization of our understanding, leading to landscape fragmentation through extension of the ark strategy in the form of biodiversity reserves harboring representative populations of particular species without attending to the generic landscape surrounding those select populations, making them possible in the first place.

The word "biodiversity" stems from Latin *divertere*, meaning to turn aside, or diverge. We use it as a tool to keep us focused on the value of individuals and species as vital spokes in the wheel of life. Populations, communities, and associations at the hub are something else again. They require a different kind of visualization and under-

Book Review

What Has Happened to Boldness in Defense of Earth?

Let the Mountains Talk, Let the Rivers Run: A Call to Those Who Would Save the Earth, by David R. Brower with Steve Chapple, Harper Collins West, 1995, \$20.00 (hardcover).

David Brower asks and answers that question in a gem of a small book *Let the Mountains Talk, Let the Rivers Run: A Call to Those Who Would Save the Earth*, written with Steve Chapple. This book is vintage Brower, full of anger, humor, boldness and hope.

Brower talks about his mountaineering exploits, his early conservation victories and defeats, the plight of the mainstream environmental movement today ("Every time I compromised," he laments, "I lost."), and a veritable menu of ideas, schemes, and programs for protecting Wilderness, halting the despoliation of the planet, and having a little fun along the way.

I could ramble on about the many important issues he raises, the wealth of ideas that tumble off the pages, and the message of boldness and hope he imparts as he enters his seventh decade as an conservation activist. But, Dave is my boss, and the reader should not take my say-so that this is a terrific book. Instead, sink your teeth into the following gems, which are a mere smattering of the wisdom and fun you'll encounter if you read the whole book.

RE: the famous quote attributed to Brower: "We do not inherit the Earth from our fathers, we are borrowing it from our children" Brower says: "Those words were too conservative for me. We're not borrowing from our children, we're stealing from them—and it's not even considered to be a crime."

"Too often in what we do, we fail to consider the two most important things: the cost to the future, and the cost to the Earth. We can be very clever, we humans, but sometimes not so smart."

"The problem with all technology... is that it must be used to correct the errors it invites... I still admire scientists, but not when they substitute arrogance for science."

"[Compromise is] arguing about how much defilement is acceptable, not opposing it entirely."

"Politicians are like weather vanes. Our job is to make the wind blow."

"Trees were invented by the soil so it wouldn't have to move."

"We need boundaries around cities, not around wild areas."

"I believe that to protect biodiversity, we need to protect big chunks of linked wilderness. You can't do this in just one state, or even state by state. Politically, there is too much risk that the private interests, mining and logging, will chip us apart. They are better organized state by state than they are nationally, compared to environmentalists."

"A quarter of the world's remaining forests are in Siberia. Those of us who are hooked on oxygen should be willing to pay Siberia to keep exporting oxygen instead of liquidating its forests."

"I do not blindly oppose progress. I oppose blind progress."

RE: Ecological Restoration: "Broken eggs must remain broken, but broken hearts may be mended with love. Extinct species are gone, but endangered plants and animals may be brought back from the brink."

"I want to restore what once was, not for an old man's memories, but for a baby's smile."

"Restoration is not an effort to stop the clock, but rather a chance to keep the

clock running—in fact, our best chance."

"In Berkeley's Tilden Park, we have signs on the roadway that say 'Newt Crossing' and have even closed a park road during the mating season to allow the newts to cross safely in the essential search of each for the other."

"Should I tell Congressman Gingrich about this?"

"We cannot have peace on the Earth without making peace with the Earth."

"The weight of all the ants on the Earth happens to be greater than the weight of all of us. These little ants do not like clearcutting, they don't use herbicides, they don't like our pesticides or chemical fertilizers. And informed by chemical signals from the queen, they know exactly what they're doing."

"We all still possess a little fragment of the first bit of life on Earth. consequently, everything that's alive is related—and a submicroscopic part of us all [DNA] is three and a half billion years old. Some of us show that age more than others."

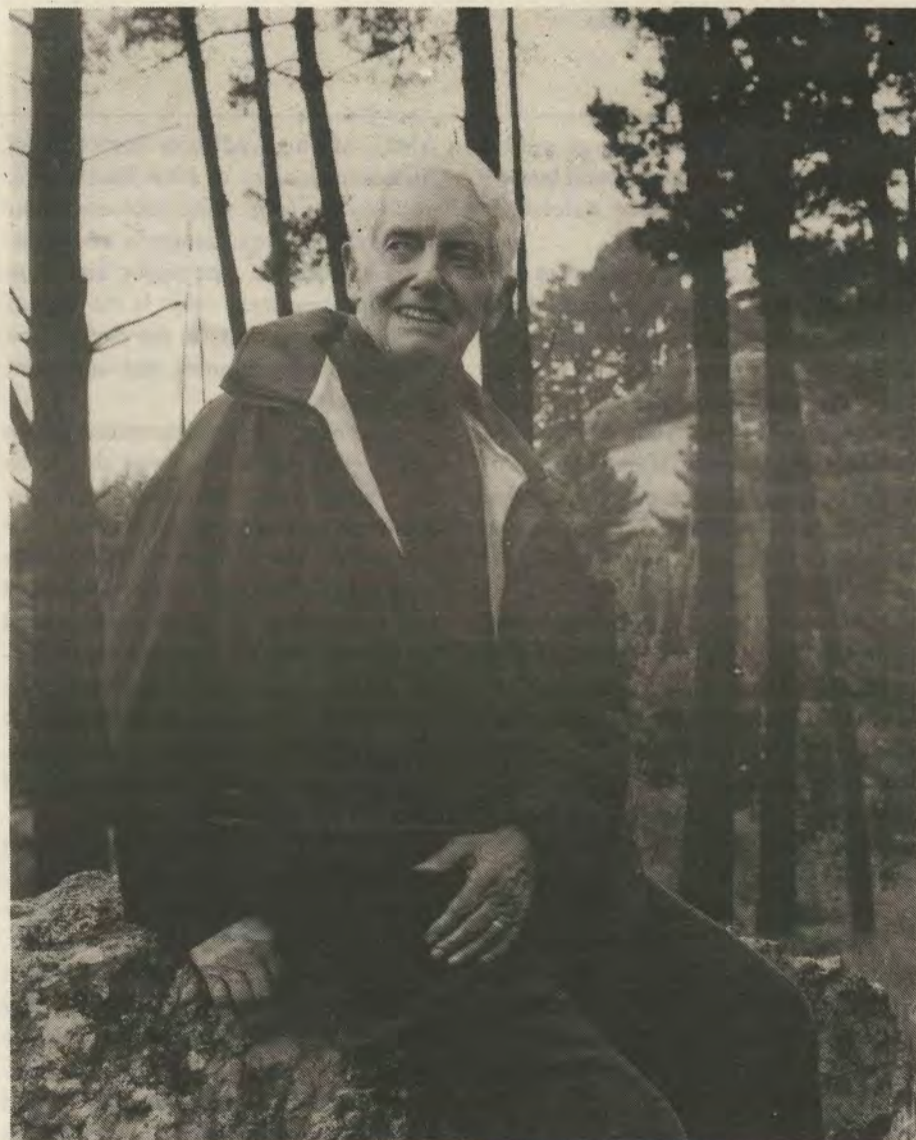
"When you lose contact with wilderness, you've lost an important part of yourself. I think it makes people sad, without their even knowing why, deep down."

"Enjoy watching nature at work. The sun lifts the water. The water washes the mountains down. The tectonic plates say, 'Oh, no, you don't!' and push the mountains back up. That's long-term recycling."

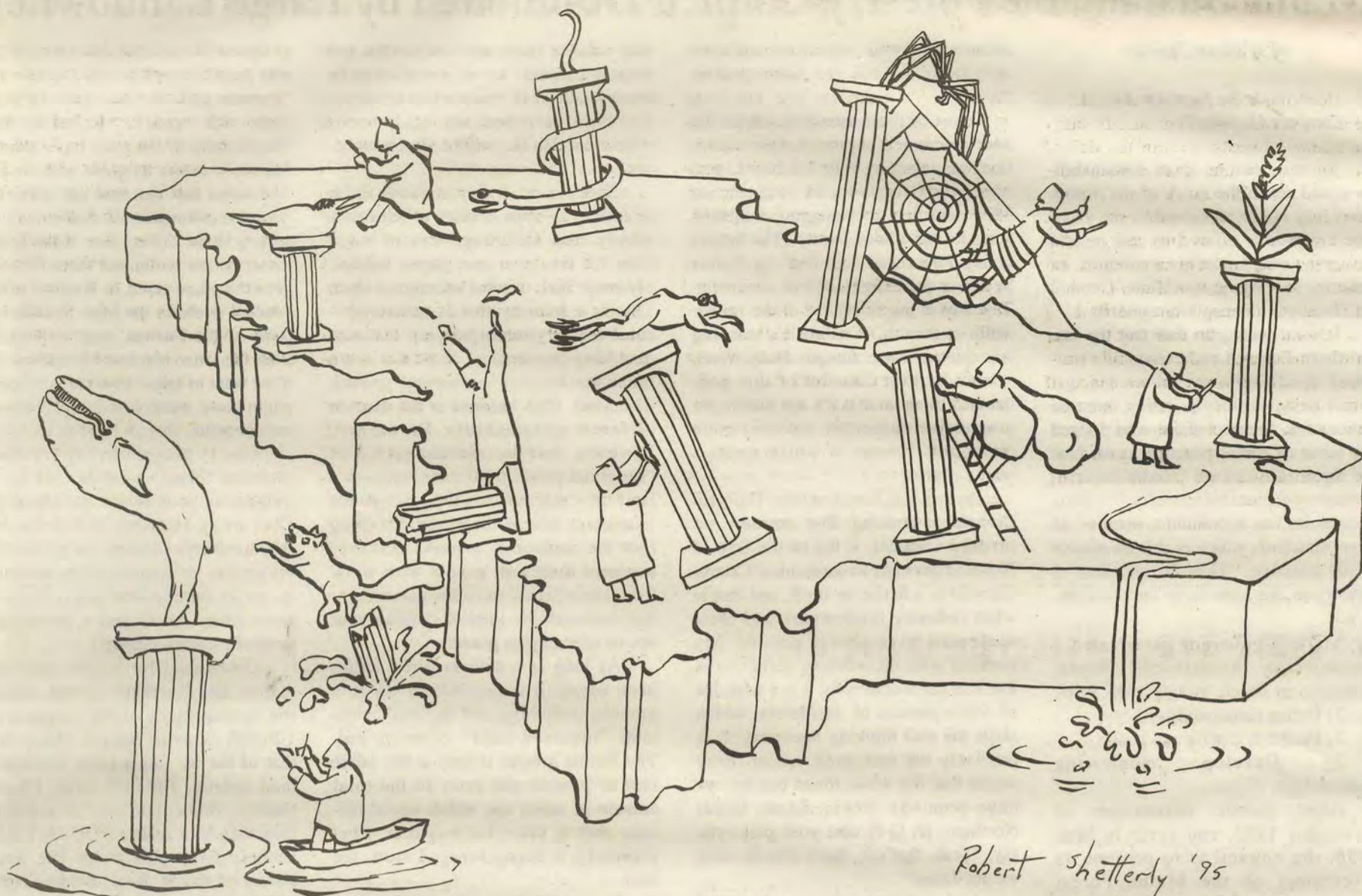
RE: The decline in power of the mainstream environmental groups: "What are the reasons for this? The quick and dirty answer is: lack of boldness, smug leadership, battles over turf, absence from the legislative arena, bureaucracy, and no fun."

RE: Turf battles: "The idea is not to claim turf. The idea is to save turf."

"Do you have magic in you. You bet. Magic is that little genetic genius that has been evolving for three billion years. It connects us all to each other and to everything that has come before and that still lives on the planet. That is some magic, and it was formed in wilderness."



David Brower among the Redwoods.



standing stressing mutual interaction, leading to an appreciation of individuals working together, complementing one another, composing a larger reality made up of conjunct parts. This opens the way, for example, to appreciation of forests, habitats, and watersheds as landscapes of life, matrices within which individual plants and animals pursue survival.

Complementary to diversity, "integrity" stems from Latin integer, meaning intact or untouched. That is, whole, complete, perfect, entire, unified with overtones of being honest, virtuous, or essential. It represents the opposite tendency in awareness by which diverse details are brought to bear on a unified and more complete understanding. But undue reliance on the isolated notion of integrity, or in this case bio-integrity, leads to warm, fuzzy feelings about the unity of nature, interdependence of living beings, all-pervading harmony, and the oneness of the universe. Many would say nature functions more by ruthless competition between individuals vying for limited resources than by cooperative interaction between members of a larger community.

Neither biodiversity nor bio-integrity by itself leads to an adequate understanding of nature's workings in the Maine woods. Each allows a partial view of how best to ensure long-term sustainability. We know the woods were in good working order when European settlers first dammed Maine's rivers and set up their mills. As Lescarbot wrote in 1609, "The Woods of the maine Land are faire and admirable high and well growne" (Erondelle's translation). It has been downhill for almost four hundred years. Healthy forests and viable populations of indigenous species are now ongoing concerns. Efforts are being made to identify ways to promote the

continued health and productivity of our native woods, both as habitats and renewable resources, over a range of cyclical and transient influences governed by long-term climatic conditions and impacted by prevailing recreational and forest practices on an industrial scale. To do that we need both the wide and narrow view to keep ourselves simultaneously focused on the plight of individual plants and animals at specific sites, and on the well-being of habitats-communities-associations as a whole.

As it is now, we favor an analytical approach which places greater emphasis on myriad details than on integrating such details across a finite landscape to provide a glimpse of the big picture. Perhaps that is because we find it easier to locate and itemize species than to comprehend how they interact among themselves or are influenced by factors such as climate and terrain. The result is we have trouble seeing the forest through the trees. Watching over individual species here and there throughout Maine does nothing to promote the well-being of the generic Maine woods in between. We run the risk of taking them for granted. We are told they've always been there, and always will be. That is the conventional wisdom of resource-based industries. Similar to the wisdom of fishes in overlooking water itself until they are hauled out of it, or birds in overlooking air until they are blown from its grasp.

Along with the full complement of Maine's wild species, we need to consider the landscape matrix that provides them with suitable habitat. Not just here and there on selected sites, but across the length and breadth of Maine. Given current industrial forest practices, we can take nothing for granted. Hand axes and oxen are long gone. Puny chain saws, too. The age of Tyrannomachus

rex has dawned. Industrialized forestry has been with us a brief thirty years. Though industrialized forest practices may temporarily benefit stockholders today, there is absolutely no guarantee that over the long term such practices are good for the woods. One thing is sure: what's bad for the woods is bad for Maine.

Biodiversity by itself is not the master key to forest sustainability. It is entirely possible to sustain the so-called diversity of native species here and there while sacrificing the woods as a whole. Biodiversity is merely one means of striving for landscape longevity. As a guiding concept it can lead to fragmentation of the landscape into separate reserves for this species and that, attempting to account for all while neglecting the generic matrix that gives them a home. It is the integrity of every acre in Maine that determines the integrity of Maine's forests. Augmenting biodiversity with the notion of bio-integrity reminds us to look at places in the Maine landscape possessing special virtue as habitats and metahabitats.

On the landscape scale, watersheds come to mind as metahabitats no species can do without. Watersheds are three-dimensional systems that receive skywater, store it, and distribute it through the growing season, sustaining photosynthesis and all life in Maine. Gravity powered, governed by climate and terrain, watersheds nourish every part of the landscape. Since all life depends on water, they are basic units of natural functioning on earth. As such, watersheds provide a meaningful level of analysis for gauging the bio-integrity of Maine's living landscape.

Another word for bio-integrity is "health." It refers to the wholeness and wholesomeness of living beings taken

together as integral systems. That is precisely the quality undue reliance on biodiversity overlooks in focusing on individual parts. Bio-integrity reminds us to look to the health of the whole the Maine woods as a natural water-management system.

It makes sense to establish a network of biodiversity reserves in Maine. But spacing them at intervals across the state only ensures that each native species is alive and well somewhere. Such reserves will do nothing for the landscape at large. More holistically, we should also take the pulse of Maine's watersheds to catch early signs of incipient or hidden decline (e.g., from toxic atmospheric deposition, ruthless forest practices, overzealous development, excessive power generation, pollution, and so on). Forest trees are as much products of Maine's watersheds as phytoplankton, black fly larvae, and trout. We would be wise to ask, how is it with the headwater forests of the Androscoggin, Kennebec, Penobscot, Saint John, and Saint Croix rivers? The answer comes back in every case, just fine we hope. That's the party line. But do we believe it? We would do well to remember who pays the salaries of those who tell us so.

We think of water as the currency of nature, while money is the currency of the human economy. But humans are natural beings who run on water as much as spruce, blueberries, and alewives do. Watersheds are our homeland, the source of our truest wealth. A watershed is the locus of every use of land. If we care about human and community health, we would do well to look to the state of the watersheds that have met our needs for 400 years, and the needs of Maine's woods and fisheries for 10,000 more.

Maine Sustainable Forestry Council Dominated by Large Landowners

by William Butler

Q: How stands the Northern Forest?

A: Compared to what?

These questions about sustainability would cut to the quick of the matter. They may not be addressed by the tentative definitions offered by the several groups, governmental, academic, or industry serving on the Maine Council on Sustainable Forest Management.

It is surprising to find that the late Northern Forest Lands Council's proposal should survive, but we see that forest sustainability is being debated nationwide. Some of those who dodged the issue of forest practice again face the threat of a defined "credible benchmarks of sustainability." New Hampshire has appointed a team of 24 to set standards which enable an answer to the question, "How do we know if forestry in this state is or isn't sustainable?"

Maine's governor has created a Council on Sustainable Forest Management which, by July 1996, is to

- 1) Define sustainability
- 2) Establish criteria and goals
- 3) Develop monitoring methodology.

After public discussion in November 1995, and again in May 1996, the council is to present its assessment of the Maine Forest Practices Act by October 1996.

Membership of the council follows the usual pattern of a generous lacing of large landowner representatives. Ron Lavaglio and Charles Gadzik, Conservation Commissioner and head of the Maine Forest Service, respectively, were appointed from positions with International Paper and Baskahegan Lumber. Isabel McKay, is a forester and attorney. She had much to say in the tax breaks in the Northern Forest Lands recommendations. Richard Schneider is manager of a woods contracting firm for Great Northern (Bowater). Schneider's outfit works for a subsidiary of H.O. Bouchard, Inc., which supplies untold amounts of chips to wood-fired boilers, particularly for Champion Paper at Bucksport. On Champion land, Bouchard is the third apocalyptic horseman—he cleans up after the manual and mechanized operations of St. Regis Paper, now Champion. Peter Triandafillou is chief forester for James River Timber, with a paper mill in Old Town. Donald Tardie represents Fraser Paper. These six may emerge as the working majority of the council.

If there is less industrial landowner bias in the remaining four, it is in the persona of Gary Cobb, whose family has operated a sporting camp in the Maine woods for three generations, Janet McMahan of the Nature Conservancy, and two faculty members of the University of Maine, Malcolm Hunter and Robert Seymour. The latter have published a plan for "New Forestry".

In a late-August meeting in Orono, the council wrote a tentative working definition of "sustainability". This is their text:

"Sustainable forest management enhances and maintains the biological productivity and diversity of Maine's forests while assuring economic, environmental and social opportunities that

balance landowner objectives and society's needs, for this and future generations."

Most of those attending (about 24) and the council approved. One exception was taken by John Cashwell, who went from Georgia-Pacific to director of MFS, and then to managing a million acres for the Schley family. (The Schley family forest was "certified" by Robert Seymour for enlightened management. This strikes me as typical of the round-robin approach.) Cashwell's warning was quoted in the *Bangor Daily News*, "Don't build a Camelot of this god-damned thing so that it's not useful. Be progressive rather than devising more regulation ... none of which meets a reality check."

As you see, John is direct. The term *Camelot* is striking. The last time we invoked Camelot, it led to the Bay of Pigs and attempts to assassinate Castro. Camelot is a fiction or myth, and that is what industry landowners and their apologists have always created. My problem with the working definition is that it is not a definition; it is a wish-list of consequences or desiderata, which skips the real thinking necessary. It is precisely the feel-good, warm-fuzzy recipe that the worst forest butcher we have seen (St. Regis, Scott, Great Northern, IP, G-P, take your pick) can say, "Yeah, that's it, that's exactly what we are doing!"

As I suggested in one of several public comment intervals at this meeting, the term is defined only when it is quantified. Most of the terms, such as "biological diversity" and "economic, environmental and social opportunities

that balance landowner objectives and society's needs" are so broad as to be immeasurable. If biodiversity has alpha and beta varieties, society's needs would require the whole Greek alphabet.

To the point, I see sustainable forest practice as that which produces a steady, non-declining, flow of wood fiber for whatever use; paper, lumber, plywood, fuel, or what economics elect. This is a quantity that is measured—cubic feet or pounds per year. For non-declining production, this total drain must not exceed the annual growth increment. This **balance** is the essence of forest sustainability. Be warned, however, that foresters speaking of "sustained yield" from their company's land may neglect that the low growth increment due to their recent cutting (not the budworm) requires that they augment their mill supply with wood from Nova Scotia and other ownerships. But sustainability implies limiting your use to your surplus growth.

As long as a cutover forest hasn't been paved, it is possible to say it is growing something, and that this constitutes "sustained yield". Some do this. The annual growth is only a few cubic feet or pounds per acre, so the total amount of wood use which would balance this is low—far less than what presently is being scraped from the land.

In past US Forest Service inventories of Maine, the annual growth per acre was reported in 1972 as 40 cubic feet and in 1982 as 20. The 1996 number should continue this trend. To place these growth numbers in scale, an annu-

al increment of 80 cubic feet per acre was reported by Charles Gadzik in an "unmanaged" second-growth stand, over 40 years. Experts from Washington, in the past, have exhorted Maine foresters to grow 160, or even 240 cubic feet per year per acre, with intensive management. Sad to say, our spruce forest did achieve these growth levels before we mined them. The old-growth spruce stand in Baxter Park, of which I wrote in the Mud Season 1995 issue of the *Forum*, may well exceed even the latter number. I proposed that, if we want to know how much wood we might grow, while sustaining all the forest's benefits, we can still learn.

One is tempted to say we should measure forest sustainability by the number of jobs in the woods and in fiber-using industry, but technology (productivity) reduces the payrolls. If we specify tax support of the community, we are starting from nearly zero—we have never developed a meaningful level of industry support.

Dobbs and Ober in their most informative *The Northern Forest*, contrast the management of the Baskahegan 100,000 acres in eastern Maine with that of the St. Regis (now Champion) land nearby, 700,000 acres. Charles Gadzik, immediate past manager for Baskahegan, reveals a relatively conservationist forest philosophy. The cutting history of the St. Regis holding is presented as what I would call a catastrophe. (I may be biased, living in a small village in St. Regis-land and having "contracted" with them to cut logs, later pulpwood, in the 50's and 60's.) Going back to how we constitute public advisory bodies such as this council, I note that Tom Hartranft of Champion was appointed but hasn't appeared. He was a relatively senior forester for St. Regis when they stripped their land. He is, no doubt, an authority on what not to do in sustaining a forest. Again, get the Dobbs-Ober book.

When he was forest commissioner John Cashwell said: "Maine forestry is 90% politics and 10% trees." We should hold John to his word; forestry, like any natural resource policy, is properly political. Let's make it democratic.



Erosion at a landing site near Jackman, Maine. Photo © by John McKeith.

NH Forest Sustainability Standards Work Team

The New Hampshire Forest Sustainability Standards Work Team is in the process of attempting to define credible benchmarks of sustainability for New Hampshire forest types. It recently held a well-attended scoping session on its draft mission statement and proposed work plan. The group will issue a final report late in 1996.

Meetings of the FSSWT are held monthly and are open to the public.

The next three meetings will be:

- *October 20—Hubbard Brook Research Station, Thornton
- *November 17—DRED Office, 172 Pembroke St., Concord
- *December 8—Location to be announced.

If you would like to receive the FSSWT Newsletter, contact Susan Francher at (603) 271-2214.

Canadian Companies Race to Embrace Sustainable Forest Management Certification

by Charles Restino

Headquarters for the Nova Scotia Forest Products Association is set in an open field a few miles beyond Truro, Nova Scotia. Nearby are some recent clearcuts, and a plantation of field spruce, struggling to grow in a grassy field. The large building, built entirely out of wood, is isolated and empty looking, without a single tree near it. At one time prime native Acadian forest dominated the landscape here.

The Forest Products Association represents major timber companies in the province. All the members of the association profess to practice Sustainable Forest Management (SFM). They've recently become ardent supporters of forest management certification in a province where more than half the native forest has been clearcut to oblivion during the past hundred years. Its members believe, along with every other major forest business group in Canada, that certification now provides "a rational and objective benchmark against which we can measure and improve our sustainable forestry practices." Certification, they hope, will assure their customers that "the products they buy come from sustainably managed resources."

The fact is multi-nationals currently clearcutting Canada's forests at a rate of an acre every 12 seconds, are concerned over the success of marketplace campaigns against destructive logging in Canada. The spectre of U.S. and European markets, suddenly evaporating the way the slaughter of seals led to the demise of the fur trade over a decade ago, haunts timber companies from Newfoundland to British Columbia.

With more money being spent each year on PR campaigns than on ecosystem research, certification (on the industry's terms) offers companies a fresh supply of rhetorical smoke to maintain business as usual. Companies long ago learned the value of adding layers of verbal legitimacy when buying time to maintain the status quo. First it was sustained yield forestry, then multiple use, then integrated resource management and now certified sustainable. From industry's perspective, changing terminology is a lot easier than dealing with the paradigm shift needed to really implement sustainable forestry.

To develop certification standards on their terms, industry contracted the Canadian Standards Association (CSA) to produce a set of voluntary forest management standards. The process is being paid for by the Canadian Pulp and Paper Association. Industry obviously believes that the same system whereby manufacturers decide the life span of products from toasters to light bulbs is good enough to sustain Canada's forests.

Having spent millions of dollars promoting itself in the international arena, our forest industry now appears to have fallen under the spell of its own propaganda and now considers itself a global forestry super power. After years of blissful isolation, both the industry and government agencies make no bones about their desire to see Canadian standards adopted at the international level by the countries which make up



the International Organization for Standardization. The CSA claims its SFM system provides a "credible and recognized process" for achieving sustainable forestry in Canada.

A hidden bonus coming out of the arrangement would be the elimination of overseas boycotts against "certified companies" as non-tariff trade barriers, now illegal under a number of international trade agreements. Other than its short term propaganda value, there are other ominous spin-offs coming from industry-sponsored certification, at least in eastern Canada. The process could give industry even greater control over the flow of wood coming from small private woodlots, and marginalize independent private ecological forestry associations now starting. In Nova Scotia over 75% of small woodlot owners have refused to take part in previous industry/government forest "management" schemes. Small private holdings make up over 50% of the forest resources in the Atlantic region.

Under the CSA sustainable forestry framework, companies voluntarily establish a SFM system in a defined forest area (DFA). The SFM system centers around six essential elements: *Commitment, Public Participation, Planning, Implementation, Measure and Assess, and Review and Improve*. Companies are to be audited by an independent, impartial Certification Organization (CO), approved by the CSA. These auditors determine whether a DFA under the company's jurisdiction is being managed according to CSA sustainable forest management principles and criteria. These principles pretty well allow the company to define sustainable forest management for its own DFA.

The CSA process brought together a familiar array of Canadian government and industry consensus-shaping experts and consultants to develop standards that would be acceptable to the industry. A number of the group have

distinguished themselves in the past by their ability to divert attention from what's actually happening to Canada's forests, to loftier realms of what could be happening. Headed by former federal Deputy Minister of Forests Jean-Claude Mercier, this "technical committee" includes former University of New Brunswick Dean of Forestry, Gordon Baskerville, and University of British Columbia professor Hammish Kimmins.

Dr. Baskerville is best known among environmentalists as the chief academic supporting New Brunswick's 43 year insecticide war against the spruce budworm. The project was the most extensive continuous chemical assault on any forest ecosystem in global history. Chemical spraying was finally ended this spring after pesticide manufacturers were caught and fined over \$5 million for fixing prices during the 1980s. Dr. Kimmins is one of Canada's most articulate proponents of the *Clearcuts should be tolerated because they're just like any other catastrophic disturbance in the forest school of apologia*.

Drafts of the CSA *Sustainable Forest Management-Guidance Document*, released for public comment, emphasize an unshakable commitment to the credo of sustainable development. From the outset, sustainable forestry is inextricably tied to the philosophy that the solution to our environmental ills is to produce more and consume more. Forestry sustainable development adherents steadfastly maintain we can consume more trees and have them too, with constantly increasing demands for benefits coming from a constantly diminishing resource base.

The CSA guidelines express all the things expected from a document of this sort. A company's "commitment" to SFM will be expressed through "vision, mission, and policy statements". Public participation is encouraged through an

"open, fair, and well defined process", with access to "comprehensive and easy-to-understand information" on the management of a DFA's resources. Criteria and indicators of a SFM system include: the "conservation of biological diversity, maintenance of multiple benefits to society", and even *society's* "responsibility to sustainable management".

Under a section on the contributions forests make to global ecological cycles, guidelines acknowledge the positive contribution of forests in the storage of carbon and state "the conversion of forest land to low biomass, short-lived standing crops with rapid turnover rates [an apt description of the current Canadian plantation forestry model] degrades the forest's capacity to absorb carbon." To remedy this, the guidelines amazingly promote the "sustained utilization of and rejuvenation of forest ecosystems." Nothing is mentioned about the 1.2 million pounds of herbicides currently used each year by industry to "rejuvenate" plantations and shorten rotation cycles. Nothing on the industry's enormous dependence on fossil fuels. And nothing on the obvious benefits of longer harvest cycles, or using alternative fibre sources in an effort to reduce the harvest of trees.

The guidelines make it clear that public participation is essential to a sustainable forest management system (SFM), but emphasize that final decisions on what constitutes sustainable forestry "rest entirely with the forest manager or owner." The guidelines encourage companies to "provide relevant information to the public" in a "suitable format". Nothing is said, however, about how comprehensive or accurate the information has to be.

Nova Scotian groups got a sample of the relevance of industry information in 1993 when Stora Forest Industries "opened its books" to show the company's pulp mill had lost \$19 million. *Continued on page 27*

Fingers in the Dike ~ Tracking Vermont's FRAC

by Andrew Whittaker

Vermont's Forest Resource Advisory Council is dusting off its hands after a short season of fact gathering and policy discussion and will now move on to drafting recommendations. What will Vermont receive for the \$50,000 appropriated to Forests and Parks for FRAC support?

Process and Procedure Frame Debate

In April, FRAC heard from participants in New Hampshire's latest Forest Resource Plan; the message they delivered was the need for inclusion of the range of forest stakeholders in policy discussion. Vermont's Commissioner of Forests, Parks and Recreation, an ex-officio member of FRAC, stated at the time that Vermont had been "evolving" toward a more inclusive process. FRAC chair Darby Bradley (president of the Vermont Land Trust) expressed reservations about too many participants threatening the manageability of FRAC and suggested it was up to "the VNRCs" (Vermont Natural Resource Council) to widen the scope of the discussion.

By May, FRAC had nonetheless decided to widen participation. The body formed three working groups to which were added approximately 20 citizens invited from the 80 or so people who indicated interest in discussing rural economic development, sustainability benchmarks, and an assessment of forest conditions. Faces familiar from statehouse hallways, academic conferences and gatherings of the forestry community blended together to create the aura of balance. (However, several

FRAC observers felt that the absence of citizens from the state's most forest-dependent region of Caledonia and Essex Counties, despite their signaled interest in participating, was a key failing.)

Between the full FRAC meeting in June, at which work groups were pulled together, and August, when they delivered their preliminary findings, most of the discussion and work upon which FRAC will be basing recommendations this fall occurred. (With no September meeting scheduled, it will be close to November and the legislative season before the group meets again). In August, Commissioner Motyka was warning one work group that the preliminary data gathering stage was nearing an end. Any close analysis of FRAC's schedule, especially in comparison to the eight months spent by New Hampshire in conducting assessments alone, will yield the conclusion that FRAC has been inspired by a sense of urgency—to get done with, if not to get something done.

Equally debilitating has been the absence of a context for discussion of both sub-groups and the full council. FRAC members have at times suggested that last legislative session's S 114 should be the springboard for current policy discussion, and that sticking close to legislative mandate is imperative. At the same time, several FRAC members have expressed contempt for the legislature as an appropriate arena for forest policy formulation. One FRAC member, himself a legislator, voiced thanks to the council at its April meeting for helping to get "the bill cleaned up pretty well" (readers of the

Forum will recall that one of FRAC's first official moves was to recommend an S 114 pruning job to the House Appropriations Committee after the bill moved out of Environmental and Air Quality). Further, while the Vermont Forest Resources Plan states that 1995 is a year for review of progress toward policy goals and initiation of a new planning cycle, little mention has been made of this fact.

Thus, neither the full council nor the working groups have based their work on a clear statement of overall mission and purpose. The group thought by many to face the most important task did have a legislative charge to consider benchmarks for sustainability in three areas: water quality, scenic quality and balance of age classes. A second group was to assess current forest inventory data, tax policy and the effectiveness of Vermont's Acceptable Management Practices in protecting water quality. Rural economic development concentrated on the underfunding of current use and the expense of workmen's compensation. **No overall assessment of Vermont's current forest conditions was conducted or stated.** No one created a context for the contributions of citizen participants and outside commenters so that these have fallen somewhat like the cannonballs of a French warship described by Joseph Conrad in *Heart of Darkness*, lobbed aimlessly and without meaning somewhere toward the dark continent.

Sustainability—Principled or Practical?

Attendees at the FRAC meeting of August 24 were quick to realize its flawed and rudderless approach to forest policy. Meeting together for the first time since June, the full council heard from its working groups, which presented what appeared to be more or less finished products.

A list of possible benchmarks for sustaining water quality, seen as technical and detailed, opened a discussion on the general nature of benchmarks—reflecting earlier debate within the working group. Chair Darby Bradley noted the need for "clear bright lines" in establishing benchmarks and expressed the "personal reaction. . . [that] benchmarks have to be things we can reasonably measure." Following on the heels of legislator, Newfane resident, and FRAC member David Clarkson's suggestion of the condition of the pre-settlement forest as a possible if controversial benchmark for sustaining a balance of age classes, Bradley's comment seemed to imply that FRAC will be opting for the more technical approach of "sustainability by numbers". Clarkson noted that "a number-driven discussion risks obscurity." (As a comparison, New Hampshire started with the qualitative pre-settlement forest benchmark and arrived at a recommendation of practical consequence concerning the need for re-establishment of more spruce/fir stands.)

A technical approach, in which water quality would be determined, for instance, by nutrient flows and macroinvertebrate populations, does have problems. One citizen questioned whether the work group had not missed the larger picture by neglecting a discussion of principles that underlie sustainability—

such as interdependence, reciprocity and appropriate time frame. While several FRAC members, including botanist and Sustainability co-chair Hub Vogelmann, seconded the suggestion that principles need addressing, the comment of greatest practical significance was Commissioner Motyka's question about the affordability of monitoring in the field. As he did this summer when asked by legislators to come up with a comprehensive siting policy for mountain top developments on state land, Motyka pleaded his department's underfunded budget. Forests and Parks has no interest in taking on additional tasks—even a comprehensive discussion of sustainability. (A proposal for a symposium on sustainability offered by UVM Extension forester Thom McEvoy has been ignored by FRAC.)

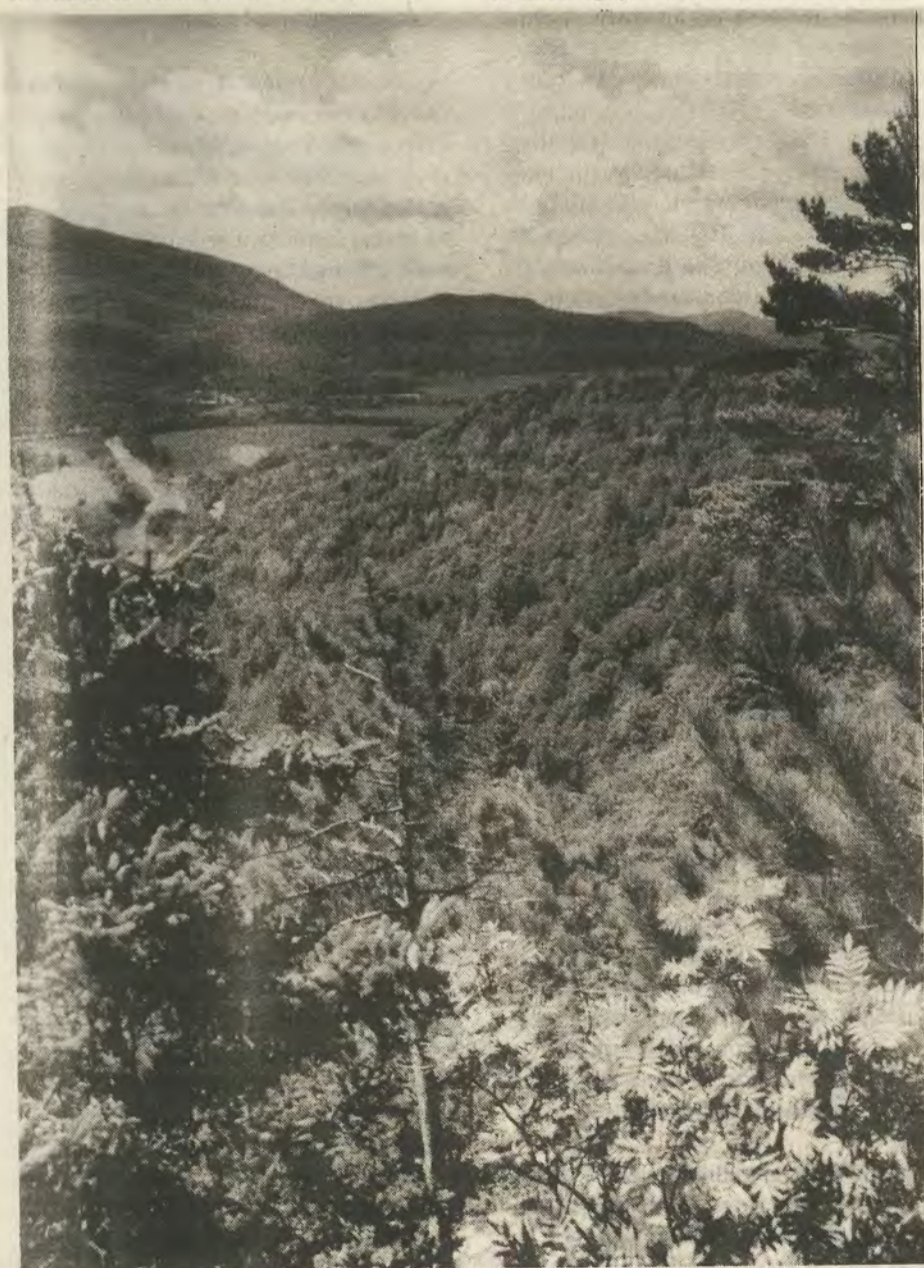
Thus, the greatest failing of a list of technical parameters to determine sustainability is that it would demand time-consuming monitoring in place of a policy driven by qualitative assessments by field personnel. If the legislature were to fail to fund further monitoring (likely), Forests and Parks would in all probability feel free to walk away from all this sustainability nonsense it has been so bothered with.

Significantly missing from the presentation of the Sustainability work group was reference to its earlier discussion of scenic quality benchmarks. The group seemed divided over whether the best approach to addressing impacts on scenic quality, particularly high elevation vistas, was to manage public perception or deal with ecological fundamentals in logging. With this discussion centering on the clearcuts along Route Two, there emerged a tacit disagreement within the work group as to whether these highly visible cuts do in fact represent any sort of ecologic degradation or simply an affront to over-tender public sensibilities.

AMPs—A Crumb from Under FRAC's Rug

At the August meeting, co-chair of the Assessments group, Fred Pratt of Duxbury, directed most of his comments toward the insufficiency of data in assessing the current situation of Vermont's timber supply, noting that we are between forest inventories. Much of the ensuing discussion centered on FRAC's impending survey of Vermont woodland owners and the subject of liquidation cuts. Dave Clarkson questioned why, given the large amount of land in Vermont held by owners of fewer than 300 acres, the survey was directed toward owners of parcels over this size? "We take seriously the task to look at the whole big picture," Clarkson said, "how much of the 800,000 acres [in small parcels] is in active management? That would be critical information."

While discussion moved on to the question of which ownership class is liquidating parcels, it again became apparent that FRAC's deliberations lacked focus. One FRAC member suggested the body had yet to define liquidation (an audience member came up with "harvests seeking greatest short-term yield distinct from long term objectives")—despite the fact that Forests and Parks, within the ranks of its own regional and county foresters, could in one afternoon arrive at a



View from the Long Trail on Prospect Rock. Green Mountains are in the background. Photo © by John McKeith.

statewide assessment of what increasing numbers of Vermonters are witnessing on ownerships of 10 and 1000 acres: harvests of all merchantable wood.

The larger story of the Assessments group report has to do with Pratt's comments on the AMPs. Pratt stated that it was the group's intention to "fully and genuinely" address whether the AMPs are working. He noted that Vermont had come through a recent flood with minimal problems (several counties did however qualify for federal disaster relief) and that it would seem not only that the AMPs meet with broad compliance but that "there is some suggestion the AMPs may be too stringent."

Although Commissioner Motyka made no comment about this finding on the AMPs, it is a subject he has taken a close interest in previously. In June, Vermont's Water Resources Board came close to voting down the presumption that compliance with the AMPs necessarily results in maintenance of water quality standards. The Board was responding to several criticisms of Vermont's non-point pollution safeguards by the federal Environmental Protection Agency. However, the Board, after hearing from Commissioner Motyka that such a move would run counter to the interests of his "constituency" voted 3-1 to maintain the presumption. Motyka did assure the Board that FRAC would be subjecting the AMPs to review, so Fred Pratt's assessment of their effectiveness must have heartening to the Commissioner indeed.

Rural Economy

Nowhere has the lack of context for individual commentary created more missed policy opportunities than in the area of rural economic development. Individual members of FRAC and sub-FRAC work groups, several representing logging and sawmilling, have expressed general support for reforms such as yield taxes, curbing of exports, professionalization of logging, and implementing some form of mandatory harvest plans. While these have important implications for rural economy, even more significant has been the recognition that levels of technology, interest costs, and the lack of a comprehensive approach to health care all play a role in the increasing incidence of timber harvests geared toward short-term values. However, the Rural Development group's August report focused primarily on the high cost of workmen's comp and underfunding of current use—perennial subjects that seem to move no closer to resolution.

Comments from the audience on the challenges to rural economy were wider-ranging. Forester Allan Calfee suggested that liquidation cuts are symptomatic, that discussion needs to address fundamentals of the current situation. Among these, he continued, is the global market—in which, he concluded, are to be found opportunities as well as pitfalls. David Nepfeu, a Morrisville woodworker, noted that his family's business undertook furniture production in response to the "crappiness" of mass produced products from Asia. Policy must, he said, find a way around the "cash-out dilemma" (of farmers reaching retirement or burn-out) to keep land available for future generations. FRAC member Fred Burnett mentioned that interest costs alone preclude his sawmill business



An industrial clearcut in Western Maine. Is this sustainable? Photo © by John McKeith.

from purchasing woodland and he implied that they are sufficiently onerous to drive any purchaser to over-harvesting.

FRAC Claims Roundtable Status

Most of the constructive dialogue within FRAC has indeed emerged from discussion of supposedly tangential subjects. At the August 24 meeting, for instance, Commissioner Motyka was curious to know why Vermont's Use Value Coalition advocates the removal of stumpage prices paid for public timber from the formula which determines

"use value". John Meyer of the Coalition responded that such stumpage prices, reflecting the larger diameters attained on public lands, skew the values of timber from private lands where economic pressures force harvests of smaller diameter wood. Fred Burnett chimed in that a more open bidding process on public land and the average landowner's "incomplete knowledge of the market" contributes to the lower stumpage on private lands.

Such discussions, were there any context around them, would contribute to sound forest policy. Many of the obstacles to such policy formulation

Canadian Certification

Continued from page 25

Local wood suppliers, mill workers and the provincial government collectively gave up an equivalent amount in economic concessions and grants to keep the mill open. What Stora forgot to reveal was that it had been selling its pulp to other divisions of the company, at \$100 per ton below record low world prices. The policy cost the local mill over \$17 million. It is interesting to note here that earlier drafts of the CSA guidelines discussed provisions for the protection of confidential business information by auditors. The draft released for public comment ignores this issue entirely.

It is also questionable how the CSA standards will help preserve biodiversity in this region. Nova Scotia recently completed an extensive analysis, identifying more than 75 distinct ecological habitats which require the protection of representative areas to preserve existing species diversity. More than half of these are found on privately controlled lands. Multinationals like Scott, Bowater, Irving, and Stora control more than 2.5 million acres in the province. As yet, these companies have failed to designate any more than token portions of their private holdings for ecological preservation. Bowater, in particular, is fond of promoting "pocket wilderness" over the real thing. The company recently even opposed protected areas on Provincial crown lands.

While the CSA guidelines make numerous references to the importance of provisions for the protection of biodiversity to gain certification, they also make it clear that "private landowners have the right to decide the goals of their organization and the purpose for which their land will be managed." Given a choice of options, it's not likely that many of these players will voluntarily trade timber values for the preservation of essential ecological features.

CSA certification is no guarantee that timber products will be coming from sustainably managed forests. It only means companies are managing a "system" which industry defines with vague and often contradictory criteria. This system is more about sustaining profit margins than it is about sustaining forests. Companies and downsizing governments here in Canada will of course find this a much more palatable option than the development of forest management regulations with legal accountability. One pulp company woodlands manager expressed the opinion that it would take companies from two to three years to develop a system that would meet even the CSA standards. Given their track record, it will probably take Canadian companies promoting CSA certification a lot longer to achieve the goal of genuine sustainable forestry.

Charles Restino is a forest activist in Baddeck Nova Scotia.

boil down to lack of dialogue within the forest community. In Vermont, it is apparent this lack of dialogue is caused not only by the lack of a venue capable of bridging certain gulfs between interested parties but also by the seemingly firm conviction of many from an industry perspective that they only stand to lose should they budge from the position that the only problem is that there is no problem.

Most troubling to those in Vermont who, from a variety of backgrounds and perspectives, do in fact wish to participate in a meaningful dialogue that will lead to positive steps—whether undertaken privately or publicly—must be Commissioner Motyka's assertion that FRAC has already created this dialogue. In a recent article in the *Barre Times-Argus*, entitled "Vermont Citizen Group Examines Ways To Make Forestry Sustainable," Motyka termed FRAC "a good fit" to the Northern Forest Lands Council's concept of a Roundtable.

Surely this is a curious characterization. At no time during the legislative deliberations which led to the re-authorization of the Forest Resource Advisory Council did the Commissioner mention that FRAC would be Vermont's "Roundtable." As reported in these pages, the Commissioner in fact told a group of citizens in Guildhall that this was a matter for the legislature to decide. Although the legislature was clearly consulting with if not deferring to Motyka and chair Darby Bradley in matters of FRAC constitution, at no time did either of them suggest to the legislature that the Northern Forest Lands Council Roundtable charter be adopted for FRAC.

Conclusion

In the long term, it doesn't matter what we call FRAC. It does matter what it purports to have achieved. As it makes its recommendations in the coming months, and moves on in its chugging fashion to other areas of concern, Vermonters can have no confidence that results were arrived at in an open process where full ranging dialogue led to an exploration of all policy options. Several presumptions underlie the work of the Council. One is that all reforms are contingent on increased funding of the department of Forests and Parks. Another is that practical measures are by necessity modest and limited in scope. The greatest of the underlying presumptions has been the notion that Vermont's forests face challenges either too large to tackle or outside the purview of government.

As related in the article on page 7 about Boise-Cascade's plan to spray herbicides in Brunswick, however, events have outpaced FRAC's desire to contain the energy impelling forest reform in the state of Vermont. Contrary to the repeated assertion that clearcuts are a problem unique to Vermont's northeast corner, residents of the northern Green Mountains, the Lowell Mountains and Orange County are noting a disturbing trend toward "harvests seeking short term yields distinct from long term objectives." Members of the public who participate in both forest economy and ecology from the perspective of community and common wealth alike acknowledge the need for constructive, collaborative policy discussion. FRAC has fiddled while the woods have burned.

Corporate Greenwash & Sales Gimmicks Invade Schools

by Carmelo Ruiz

Evidently, in the quest for profit nothing is sacred. The intruding presence of capitalism and consumerism in all facets of human life threaten to turn citizens into mere consumers, self-starters into passive spectators, and our public spaces into shopping malls.

Not even education is safe from this deplorable trend. Religious right-wing fanatics with anti-gay, anti-choice, anti-science, pro-school-prayer agendas are not the only ones trying to elbow their way into the nation's classrooms. Many ad agencies are penetrating classrooms with a plethora of sales gimmicks disguised as "educational supplements". These firms, which include Lifetime Learning Systems, Whittle Communications, and Media Management Systems, assure their clients that bombarding kids with commercial messages is a sound business strategy since kids are tomorrow's consumers.

Procter & Gamble distributes a curriculum called *Decision Earth* to 75,000 schools nationwide. Its alleged purpose is "to raise student awareness of the complex consumer product choices they face and help them make informed choices". But some of its claims are outrageously false, such as: "Clearcutting [creates] new habitat for wildlife... [It is] economically and environmentally sound... because it most closely mimics nature's own processes"

With the help of ad agencies like Schoolastic Inc. and LucasArts Entertainment, the Discover, American Express and Visa corporations are introducing into high schools curricula on financial management and "practical money skills", complete with sample credit cards for students. Wouldn't we be better off if we just broke out of the vicious circles of instant gratification and conspicuous consumption? Wouldn't it be better to just stop buying useless consumer garbage and focus instead on personal needs that cannot be fulfilled by shopping? Such questions are not even considered in these "financial education supplements". Apparently, you're never too young to charge it to the max.

Exxon has provided thousands of American teachers with its *Scientists*



and the *Oil Spill* video documentary, which narrates the story of the 1989 Valdez oil spill. This "educational" film doesn't show a single animal poisoned by the oil, while concerns about environmental destruction are dismissed by the narrator and several "experts".

The American Nuclear Society offers to high school teachers a "Science/Social Studies Fair Kit" that gives students detailed instructions to build a nuclear reactor model. What about the radioactive wastes created by these monsters? No problem, it says that "Anything we produce results in some 'leftovers'... whether we're making electricity from coal or nuclear or making scrambled eggs". (I'm not making this up! That's what it says!)

Several years ago this organization

published a pamphlet that rejects energy conservation, using simplistic and completely Pseudoscientific arguments. The document in question claims that a reduction in the amounts of energy we consume is nothing less than a threat to our freedom and democracy and that nuclear power is the cleanest source of energy.

The American Coal Foundation offers an "educational aid" called "Let's Learn About Coal", whose contents are an insult to the intelligence of the average sixth grader. It says that coal is indispensable to modern society and that it is a clean source of energy. What about acid rain and global warming caused by burning coal? They're not even mentioned.

Keep America Beautiful, which

despite its name is a front for the packaging and waste management industries, offers "Waste: A Hidden Resource". This one teaches students everything from math to poetry, while making constant reference to garbage. The 225-page curriculum doesn't have one word about the controversies and confrontations caused by the incineration of solid waste.

Chef Boyardee offers schools a curriculum that is totally devoid of nutritional education, while encouraging them to just eat pizza. McDonald's has also entered the educational business with a package called "Nutrient Pursuit", which pretends to teach children about the four basic food groups, but is also low on informational value. This fast food chain also produces a magazine that "gives self serving misinformation about how recyclable foam packaging is", according to the Consumers' Union.

From General Foods teachers can get an "educational" poster called "The Vegetable Connection", which alleges falsely that frozen vegetables are as nutritious as those that are fresh.

Other corporations that are "contributing" to education in this manner are Polaroid, Kodak, NutraSweet, Tampax, and Colgate-Palmolive.

Concerned parents and teachers all around the country are not taking this one sitting down. Activist organizations like the Center for the Study of Commercialism (CSC), Unplug, the Environmental Action Foundation, and the Consumer's Union are campaigning to keep commercialism from intruding into the classrooms. In the words of Karen Brown of the CSC, "schools and communities need to realize that they are selling the minds of their students for negligible value. They are compromising their independence, their integrity, and educational value. Once they put their teaching methods in the hands of corporations that clearly have other motivations and allegiances, they've given up what public education should be."

Sources:

Consumer's Union. *Selling America's Kids: Commercial Pressures on Kids of the 90's*. 1990
Lapp, David. "Private Gain, Public Loss" *Environmental Action: Primavera* de 1994.
Weissman, Robert. "Corporate Greenwash" *Multinational Monitor*: April 1990.

Maine Woods Watch

Continued from page 3

***What a Way to Diversify:** As paper company towns try to figure out how to diversify their economies some strange ideas are surfacing that seem to have little to do with taking advantage of natural assets. To attract tourists, this summer Millinocket created the world's largest popsicle (17,450 pounds). Next year the town is going for the chocolate kiss record. Mt. Katahdin wrapped in aluminum foil? •Berlin, NH, is lobbying the state legislature to get a thousand-inmate prison and the 200 jobs that would come with it.

***Global Reach:** Maine still has the highest percent of foreign-owned land of any state according to the latest figures from the federal Economic Research Service. Foreign interests own over 2 million acres in Maine (15%) out of 14 million acres nationwide. However, it is more complicated than us-and-them. Land holdings are listed as foreign if as little as 10% of a company's stock is held by foreign investors. And most large landowners in Maine now are transnational corporations. So national affiliation has largely been supplanted in importance by the sovereign corporate state.

***Eyes on the Wise Guise: The Me First!** ("Wise

Use") groups in Maine are expanding their horizons. They have targeted the regional Northern Forest Stewardship Act, newly introduced into Congress by a bipartisan list of U.S. Senators from the Northeast, including Maine's two Republicans. Also, three user groups have formed a new contender for the most misleadingly named environmental organization in America. The "Sustainable Development Coalition" has been created by the Maine Conservation Rights Institute (MECRI) and Environmental Perspectives, Inc. (EPI), along with the Tennessee-based Environmental Conservation Organization (ECO). The coalition is supposed to be a counterpoint to the United Nations' Global Biodiversity Assessment and the U.S. President's Council on Sustainable Development. Mike Coffman, a former Champion International researcher who now runs EPI, is the mastermind behind the new coalition which is taking on the whole world.

***People:** Roger Milliken, President of Baskahegan Company, has completed his two year stint chairing the Maine Forest Products Council board. To keep busy Milliken has joined the Trustees of The Nature Conservancy Maine Chapter and the Land for Maine's Future Board. •Steve Schley is the new head of the MFPC board. Schley is known as a hardliner compared to Milliken. In the few months

since Schley took over the Forest Products Council has toughened its rhetoric notably. •Floyd Rutherford, former head lobbyist for the Maine paper industry, is scraping by on a \$101,000 salary as US Rep. Jim Longley's chief of staff. •Ted Johnston, former executive director of the Maine Forest Products Council, is now also a former staffer for US Rep. Jim Longley. Johnston resigned under criticism about being a state house lobbyist for private clients while also on the federal payroll. However, Longley has kept Johnston on his campaign payroll. •At deadline, the Sportsman's Alliance of Maine was locked in a power struggle over their chief hired gun George Smith. On the eve of the organization's twentieth birthday bash more than half the board resigned insisting that Smith should step down because of his outside political work and managerial shortcomings. SAM president Jim Gorman refused to fire Smith, and within hours the renegade board members were insisting they did not really resign. Once again the SAM leadership seems ready to shoot themselves in the foot. Maybe both feet this time.

Jym St. Pierre, *RESTORE: The North Woods*, 7 North Chestnut Street, Augusta, ME 04330, (207) 626-5635.

Who's Afraid of the Big Bad Wolf?

RESTORE-Bashing Subverts Public Dialogue Over Northern Forest's Future

by Jamie Sayen

Here we are, trying to engage our Northern Forest communities in a serious, respectful dialogue about promoting sustainable natural and human communities in the region. In such a discussion, all thoughtful ideas should be welcome—and so should thoughtful criticisms of these ideas. That's what democracy is all about. But, to judge from recent nasty attacks on visionary proposals, it seems that democracy in Maine is as degraded as its clearcut industrial forests.

In *The Northern Forest*, authors David Dobbs and Richard Ober write with apparent approval: "In northern Maine, environmental organizer Sandy Neily, working for the Maine Audubon Society, had to condemn a Restore (sic): The North Woods campaign to bring back the timber wolf before her neighbors would let her into their living rooms." (pages 308-309)

On February 11-12, *Bangor Daily News* outdoor writer Tom Hennessey blasted RESTORE's wolf proposal because of the threat it poses to white tailed deer, "a resource that has tremendous recreational and economic value to [Maine]." "If the management of wolves became a [Department of Inland Fisheries and Wildlife] obligation," he added, "it could mean reducing hunter harvest of deer to accommodate the prowling predator." Hennessey resents people from Massachusetts proposing ideas about Maine. Unfortunately, he apparently doesn't resent corporations headquartered in New York, Idaho, Georgia and South Africa from liquidating the forests of Maine, spewing dioxins into Maine's rivers (thereby ruining subsistence and sport fishing on many miles of rivers), and laying off thousands of mill workers without consultation with the victims of these decisions made in far-off boardrooms.

Shameful as the above attacks are, they pale in comparison to the right-wing militia-style attack on RESTORE launched in May by SAM, the Sportsman's Alliance of Maine. George Smith, Executive Director of SAM wrote: "This group's agenda is anti-hunting, anti-trapping and anti-Maine. They must be driven out of Maine, and now." Considering that this attack was issued by the Maine affiliate of the National Rifle Association, such threats should not be taken too lightly in the aftermath of the Oklahoma City bombing.

A September article in *The Maine Sportsman* says one reason Smith opposes the Park idea is that it "reduces the voice Maine residents have in their own destiny." Apparently he is unconcerned about the current state of affairs in which half of the state is owned by absentee corporations, speculators and heirs of 19th century timber barons.

The same article quotes William Vail, Executive Director of the Maine Forest Products Council, "They are symptomatic of a greater threat, primarily from people outside of Maine..." Vail apparently misses the irony of such a statement from the chief lobbyist of many of these absentee timber landown-



ers. Vail says "RESTORE and groups like it, really want to finish off the timber industry forever..." This is demagogic nonsense, as Vail well knows.

Wolf restoration really sets SAM's George Smith aquivering. *The Maine Sportsman's* biased story states: "One thing that is well known about wolves, however, and that would likely translate to Maine is their impact on livestock and other domestic animals, said Smith. That has been a source of constant friction in the west, where the federal government poisoned, shot and trapped wolves to control their numbers over the years." Smith calls RESTORE's arguments in favor of wolf restoration "crackpot biology."

Smith's 1920s biology has long been discredited. The federal government is now trying to restore wolves to Yellowstone. The impact on livestock is likely to be small. There is not much livestock in the uninhabited regions of northern Maine. Minnesota, which has successfully restored its wolf population has a landowner compensation fund if livestock is harmed by wolves. And, livestock owners can take protective measures through the use of guard dogs (See "Livestock Guard Dogs: A Non-Lethal Answer to an Old Problem" by Nancee French Amey, a sheep raiser in northernmost New Hampshire who has no problem with wolves returning to her neighborhood. *Forum*, vol. 3 #3, p. 30).

SAM's mean-spirited attack on RESTORE may have less to do with RESTORE's agenda, and more to do with SAM's NRA-style fundraising strategy. Smith tells "sportsmen" that the best way to fight RESTORE is to join SAM. Sounds like their patrons at the NRA. Smith gets a commission on every new member he lures into SAM. The biased *Maine Sportsman* article falsely described RESTORE as "a well-

financed group." I'll bet the folks of RESTORE would gladly swap budgets with SAM and swap salaries with George Smith any day.

Smith did make one true statement to *The Maine Sportsman*: "But we have to remind ourselves that the majority of people in Maine are not sportsmen." With such unsportsy leadership, Maine hunters are indeed in trouble as they become an ever smaller minority of Mainers. The non-hunting public, whether or not it supports the RESTORE proposals, is not going to sympathize with SAM's environmental McCarthyism for very much longer.

In mid-September 11 of 20 SAM board members resigned in a long standing dispute over Smith's leadership at SAM. SAM really ought to get its own house in order before launching a hate campaign against a group whose only crime is that it cares deeply about the welfare and rights of other species and future generations of all species, including humans.

What Are They Afraid Of?

Why the emotional attacks on RESTORE for their wolf restoration and national park proposal? The real issue facing Maine is: how do we preserve and protect the ecological integrity of Maine's forests, rivers, lakes and shores? RESTORE has been making an effective case that we must restore the full complement of species native to the state and we need large, wild, protected areas managed for ecosystem integrity.

Critics of these proposals have a right to oppose these ideas. But, responsible participants in the democratic process will: 1) offer sound, reasoned, documented arguments in opposition, and 2) propose alternative strategies that will better protect ecological integrity.

The disheartening spectacle of

Maine's largest sportsman's group, its oldest environmental group, and the lobby for the largest landowners bashing RESTORE with hysterical, false, and unsubstantiated charges rather than intelligently responding to the substance of RESTORE's proposals suggests that these critics can't figure out how to respond constructively. Thus: personality attacks, scare tactics and demagoguery.

Or, does this mean the wolf-bashers are really opposed to the goal of protecting Maine's ecological integrity?

The massive clearcuts by many of the members of the Maine Forest Products Council have inflicted long-term, often irreparable, harm to Maine forest, lake and river ecosystems. The willingness of some (but not all) hunters to defend the status quo of massive clearcutting of deer and moose habitat and winter yards suggests that some hunters are more concerned about killing deer than about protecting healthy habitat for deer, moose, wolves, and other critters. And the attacks by MAS may be due to MAS's ineffectiveness during the past two decades of deforestation.

Notwithstanding George Smith's refusal to allow RESTORE to respond to its vicious campaign in SAM's newsletter, the *Forum* would happily print ecologically responsible proposals by MAS, SAM, or MFPC for protecting the integrity of Maine forest ecosystems. However, if these three little piggies prefer to continue to trash good ideas while failing (or refusing) to offer better ideas, they expose themselves to the charge that they are members of a privileged order that has fattened itself on our life support system over the years with no regard for the welfare of other species and future generations.

We welcome a debate on the substantive issues.

Subject Index

(Volume Three of The Northern Forest Forum)

This idiosyncratic index to the six issues of Volume Three of *The Northern Forest Forum* is by no means systematic or comprehensive. All errors are the responsibility of the compiler, Erastus Erratum (who will accept a small fee from those contributors wishing to have middle names and initials included in subsequent renditions). The numbers preceding an entry (i.e., 1:29), refer to Issue # and Page #, respectively. A condensed title and author's name follow. Indexes to the preceding two volumes of the *Forum* can be found in volume 3, #1 & volume 2, #1.

Back issues are available for \$3 each from:

Forum, POB 6, Lancaster, NH 03584.

Please make checks payable to: Earth Island Institute.

Abenakis

- 1:29 *Abenaki Fish-in Challenges VT Over Fishing Rights*; Fife Hubbard
- 6:3 *Destruction of Northern Forests—Abenaki Perspective*; Tomas Obomsawin

Adirondacks

- 1:8 *Why Was Council Afraid to Investigate Adirondacks?*; Bill McKibben
- 1:9 *An Ethic Aborning*; dramatic text by Michael Wilson
- 1:13 *A Second Century Agenda for the Adirondack Park*; Robert Glennon
- 1:14 *State Acquires Morgan Property on Lake George*; Press Release
- 4:12 *State of Adirondacks: Political Transition*; Peter Bauer
- 4:14 *400,000 Acre Wilderness Proposal for Adirondacks*; Adirondack Council
- 6:11 *Acid Rain Problem Won't Go Away in Adirondacks*; John Sheehan
- 6:13 *Governor Pataki Appoints 3 to Park Agency*; John Sheehan

Aesthetics

- 4:23 *Aesthetic Considerations & Logging Regulations*; Andrew Whittaker

Agriculture

- 2:28 *New Direction for Forestry & Agriculture*; Andrew Whittaker
- 3:30 *Livestock Guard Dogs*; Nancee Amey

Atlantic Salmon

- 1:3 *Action Alert*;
- 3:5 *Conservationists Sue To Protect Salmon*
- 6:5 *Agencies to Propose Salmon Protection for 7 ME Rivers*; David Carle

Beech

- 1:26 *Beech Threatened By Caterpillar in Maine*; William Butler

Biodiversity

- 1:19 *Rec 21 Undercuts Biodiversity*; Jamie Sayen
- 4:20 *Inside Beauty Strip*; Mitch Lansky

Book Reviews

- 2:15 Bill McKibben's *The Comforting Whirlwind: God, Job, and the Scale of Creation*
- 2:29 Banuri & Marglin, ed., *Who Will Save the Forests?*
- 2:31 Ray Raphael's *More Tree Talk: The People, Politics, and Economics of Timber*
- 3:13 McGroarty-Klyza & Trombulak, ed., *The Future of the Northern Forest*
- 6:30 David Dobbs & Richard Ober's *The Northern Forest*

Clearcutting (also see "Vermont")

- 1:16 *1/4 of Concord, VT Clearcut Since 1987*
- 2:30 *Clear-Cut Action Needed*; *Rutland Herald* editorial
- 4:18 *Clearcutting for Biodiversity & Sustainability*; Dr. A.M. Lansky

Conte Refuge

- 2:26 *Ecosystem Management in Conn River Valley*; Andrew Whittaker
- 6:6 *Conte Refuge Wins Strong Support*; Jamie Sayen

Connecticut River

- 2:27 *Report Shows Need for Better Monitoring*; Andrew Whittaker

Corporations

- 4:30 *Corporate Front Groups—They're Everywhere*; Carmelo Ruiz-Marrero
- 5:14 *End Corporate Welfare—Invest in Communities*; Jamie Sayen

Cougars

- 1:3 *Cougar Scat Found in VT*; Fife Hubbard



Dioxin

- 3:7 *338 Groups Tell EPA to Ban Dioxin*

Ecological Inventories

- 4:24 *Citizens Keep Track of Vermont Wildlife*; Fife Hubbard
- 4:26 *A Primer for Community Sponsored Inventories*; Brad Meiklejohn

Ecological Reserves (also see Headwaters Wilderness Reserve)

- 2:16 *ME Audubon Proposal for Northern Forest*; Maine Audubon Society
- 2:19 *ME Audubon Society's Proposal—Flawed But Welcome*; Jamie Sayen
- 2:20 *'Resource Inventory' Lacks Ecosystem Perspective*; Sayen

Energy (also see "Hydropower" & "Windpower")

- 2:5 *Toward a Northern Forest Regional Energy Policy*; Jamie Sayen
- 2:6 *A Socially Appropriate Energy Policy for the Northern Forest*; Mitch Lansky
- 2:7 *Photosynthesis & 'Energy Cycling' in Northern Forests*; Greg Lowenberg
- 2:8 *New England Energy System*; Conservation Law Foundation
- 2:10 *Electric Utility De-Regulation: An Environmental Strategic Response*; CLF
- 2:11 *Environmental Linkages—New England's Energy System vs. the Northern Forest*; CLF
- 2:12 *Legal & Economic Obstacles to Sustainable Energy Policy*; Pamela Prodan
- 3:27 *Solar Water Heating Technologies*; Sia Kanellopoulos
- 6:14 *Appropriate Development & Technology & Consumer's Role*; Pamela Prodan

Environmentalism

- 4:2 *Mainstream Environmentalism & Emperor's New Clothes*; Jamie Sayen

Ethic(s)

- 3:17 *Ecological Paradox: Ethics of Wilderness*; Mitch Lansky
- 5:2 *A New Wild Land Ethic*; Jamie Sayen

Green Certification

- 6:28 *Certifying Forests Sustainable & Green*; Mitch Lansky

Green Mtn. Natl. Forest

- 3:22 *GMNF: Fall from Grace*; Lowell Krassner
- 6:31 *Court Considers Only Forest Service Testimony*; press release
- 6:31 *Robert Frost Restoration Project*; Mathew Jacobson

Headwaters Wilderness Reserve

- 5:3 *Transition Strategy or, You Can Get There from Here*; Jamie Sayen
- 5:4 *Proposal to Establish Headwaters Wilderness Reserve System*; Sayen
- 5:5 *Why Do We Need Big Reserves?*; Sayen
- 5:7 *Reserve Strategy for Developed Areas of ME, NH, VT*; Sayen

VT; Sayen

- 5:11 *Wildlands Create Context for New Economic Direction*; Andrew Whittaker
- 5:16 *Headwaters Restoration—Questions & Answers*
- 6:32 *Second Chance for Northern Forests*; (proposal outline)

Hydropower (also see "Energy")

- 1:29 *Fight Over Breached Clyde River Dam Continues*; Fife Hubbard

Interview

- 6:22 *A Conversation with Charles Niebling of NHTOA*

Labor

- 3:14 *Labor & Envois Must Join*; Andrew Whittaker
- 3:16 *Conference on Log Exports Sponsored by Labor-Enviro Coalition*; Fife Hubbard

Legislation

- 4:11 *Takings Bills Killed in NH & VT; Still Alive in ME*; Richard Ober
- 4:10 *Keeping Track of Vermont Legislature*; Andrew Whittaker
- 6:21 *ME Legislature Rejects New Forest Regulations*; Mitch Lansky

Low Impact Forestry

- 1:26 *Intensive Forest Management Based On Low Impact*; Dana Marble
- 1:27 *Sam Brown's Low-Impact Forestry*; Mitch Lansky
- 6:19 *Low Impact Forestry: Managing as if Future Mattered*; Lansky

Maine (also see "Paper Industry")

- 1:7 *Maine Woods Watch*; Michael Kellett & Jym St. Pierre
- 1:28 *20 Year Assessment of LURC*; Mitch Lansky
- 2:3 *Toxic Vacationland*
- 2:4 *Maine Woods Watch*; Michael Kellett & Jym St. Pierre
- 3:19 *Maine Woods Watch*; Kellett & St. Pierre
- 4:4 *ME Forest Service Evaluation of Forest Practices Act*; Mitch Lansky
- 4:6 *Greenbacking the ME Legislature*
- 4:31 *Maine Woods Watch*; Kellett & St. Pierre
- 6:4 *Maine Woods Watch*; St. Pierre
- 6:8 *Toxic Vacationland Politics*; Jamie Sayen
- 6:26 *ME Council on Sustainable Forestry Dominated by Industry*; Mitch Lansky

Marine Issues

- 3:5 *Wild Atlantis—Down But Not Out*; Ron Huber
- 6:2 *Lessons in Sustainability from Collapse of Fisheries*; Andrew Whittaker

New Hampshire

- 1:25 *NH Forest Resources Planning Process Underway*
- 1:25 *A Vision of NH's Forest Resource*
- 2:3 *NH Governor Wants to End Funding Natural Heritage Program*; Jamie Sayen

Northern Forest

- 3:8 *Ecological Health of Northern Forest*; Stephen Trombulak

Northern Forest Lands Council

- 1:2 *NY's 'Forever Wild' Covenant . . .*; Jamie Sayen
- 1:18 *NFLC Fails to Address Regional Crisis*; Sayen
- 1:24 *NFLC Economics: A Fundamentally Flawed Report*; Eric Palola

Old Growth

- 1:15 *Old Growth at Baxter*; Mitch Lansky
- 4:22 *What We Can Learn From Baxter Old Growth*; William Butler

Otter

- 4:32 *The River Otter*; Rob Baldwin

Paper Industry (also see "Maine")

- 1:4 *South African Co. Buys 900,000 Acres of Maine*; Jym St. Pierre
- 1:5 *Junk Bonds Finance Sappi's Purchase of SD*; Warren; St. Pierre
- 1:23 *ME Legislature Studies Paper Industry Decline*; William Butler
- 3:23 *Does Decline Mean Demise for Paper Industry?*; Butler
- 4:8 *Commission Ignores Wood Shortage*; Butler
- 4:8 *Paper Industry—More Subsidies, Fewer Taxes*; Mitch Lansky

Parks

- 4:15 *Of Parks & People & Connection to Place*; Mitch Lansky

Public Discourse

- 2:2 *Politics of Anger Won't Solve Ecological Crisis*; Jamie Sayen

Public Land Acquisition

- 5:14 *Land Acquisition—\$100 Million a Year for Two Decades Can Buy 7 Million Acres*; Jamie Sayen
- 5:15 *Public Land Acquisition—Greater Bargain Than Ever*; David Publicover & Tom Steinbach

Sears Island

- 1:29 *Fight Against Cargoport Continues*; Ron Huber

Soils

- 4:28 *Western Maine Wind Power Proposal—The Soils Issue*; Pamela Prodan
- 4:29 *Creating Awareness of Soils*; Andrew Whittaker

Vermont

- 2:30 *Cut & Run Logging Threatens Mad River Valley*; Lowell Krassner
- 4:5 *Vermont Snubs Public in Forest Policy Formulation*; Andrew Whittaker
- 4:10 *Keeping Track of Vermont Legislature*; Whittaker
- 4:24 *Citizens Keep Track of Vermont Wildlife*; Fife Hubbard
- 6:27 *Benchmarks of Sustaining Local Economies*; Andrew Whittaker

Water & Watersheds

- 2:22 *Thinking Like a Watershed*; Steve Perrin
- 6:2 *Notes from a Season of Drought*; Andrew Whittaker
- 6:8 *Toxic Vacationland Politics*; Jamie Sayen
- 6:11 *Acid Rain Problem Won't Go Away in Adirondacks*; John Sheehan

Wetlands

- 3:25 *Sins of Wetland Scientists*; Patrick Garner

Wilderness (also see "Ethic(s)")

- 3:2 *Wildness & the Children of the Northern Forest*; Jamie Sayen
- 3:3 *Economic Growth is Just Trashing Wildness*; David Brower
- 3:3 *Wildness Means Good Work*; John Davis
- 3:4 *Wildness—A Metaphor of Human Fate & Destiny*; Lissa Widoff
- 3:4 *The Adirondacks—Forever Re-Wild*; Michael DiNunzio
- 4:14 *400,000 Acre Wilderness Proposal for Adirondacks*; Adirondack Council
- 4:16 *Aim High—Wild Path Forward*; Green Web
- 4:27 *Term Wilderness Reserves*; Ish Kabibble

Wildlands Project

- 3:31 *Wildlands Project in Northern Forest*; Marcia Cary
- 3:32 *Wildlands Project Mission Statement*

Windpower

- 4:28 *Western Maine Wind Power Proposal—The Soils Issue*; Pamela Prodan
- 6:15 *Kenetech Windpower Can Produce Benefits*; Daniel Sosland
- 6:16 *King Administration Meddles in Windpower Project*; Sam Hands
- 6:16 *Q & A About Kenetech Wind Project*; Pamela Prodan

Wolves

- 2:21 *Grassroots Coalition Promotes Wolf Restoration in Maine*; Fife Hubbard
- 3:28 *The Land of Absence*; Mollie Matteson
- 3:30 *Livestock Guard Dogs*; Nancee Amey
- 6:13 *Wolves Return to Maine*

Wood Turtle

- 3:6 *Wood Turtles*; Peter Cross
- 3:6 *Petition Filed for Listing Wood Turtle Endangered*
- 6:5 *Wood Turtle Denied Protection*; David Carle

Illustration Credits

- P. 28, 29—Fife Hubbard
- Cover, p. 19—Jon Luoma
- Mast, p. 2, 30—Rachel O'Meara
- P. 25—Suzy Restino
- P. 23—Robert Shetterly
- P. 8, 9, 11—John Springer
- P. 3—Sue Szwed

Back Issues of Forum Available

Back issues of the Forum are available for \$3 each, or \$50 for a complete set of the first 18 issues. Below are listed a few of the lead articles in each issue.

To order back issues, please indicate which volume and which issue (for instance: vol. 1 #1). Please make checks payable to Earth Island Institute and send check and order to: Forum, POB 6, Lancaster, NH 03582.

VOLUME 1 #1 THE WORKING FOREST

The Search For Sustainable Natural and Human Communities, Jamie Sayen;
Amphibians of the Northern Forest, Dr. Stephen Trombulak.
Honoring Wabanaki: Land of the Dawn, From an interview by Robin Lloyd with Wolf Song;
Wilderness: Our Life Support System, A Forum interview with David Brower.
Conservation Is Good Work, Wendell Berry.
Ecologically Sustainable Community Economics, Deborah Brighton
Wilderness Recovery: Thinking Big in Restoration Ecology, Reed Noss.

VOLUME 1 #2 BUY LAND- THEY DON'T MAKE IT ANY MORE

Buying Land: An American Tradition, David Miller.
Bleak Paper Industry Future, Jamie Sayen.
Buy Land-They Don't Make It Any More, Jamie Sayen.
Does the GMINF Adequately Protect the Ecological Integrity of Vermont?, Sandra Coveny.
Shades of Gray: The Debate Over Clearcutting in NH Continues, Tammara Van Ryn.
New Forestry in Eastern Spruce Fir: A Critique of the Seymour/Hunter Proposal, Mitch Lansky.
A Sustainable Resource Based Northern Forest Economy for the Future, Andrew Whittaker.

VOLUME 1 #3 BIOLOGISTS TELL NFLC-ESTABLISH ECOLOGICAL RESERVES!

Temporary & Transitional: The Real Forest Primeval: The Evolution of Maine's Forests over 14,000 Years, George Jacobsen and Ronald Davis.
Biotic Integrity in the Northern Forest, Dr. Stephen Trombulak.
Enhancing Wildlife Diversity in the Northern Forest, Rainer Brocke.
The Northern Forest Lands Council Questions Biologists
Saving Maine's Forest: Should We Regulate it or Should we Buy It, Mitch Lansky.
Large Timberland Owners Barely Pay Taxes in Maine, William Butler.
A Talk With John Collins—Chairman of Adirondack Park Agency

VOLUME 1 #4 RESTORING NORTHERN APPALACHIAN COMMUNITIES

Beyond Beauty Strips, Criteria for Ecologically Sound, Socially Responsible, Economically Viable and Sustainable Forestry, Mitch Lansky.
Northern Forest Lands Council Promotes Regional Dialogue, Jamie Sayen.
Cultural Restoration: The Key to Ecological and Economic Responsibility, Jamie Sayen.
When a Forest Falls, The Ocean Listens, Ron Huber.
Atlantic Salmon—A Species on the Brink of Extinction, David Carle.
Second Chance Wilderness—The Adirondacks as a Home, Mark Lapping.
The Ancestral Forest, Charles Cogbill.

VOLUME 1 #5 WOLVES

Wolves—The Reflected Image of Ourselves, Jamie Sayen.
An Introduction to Wolf Ecology, Mollie Matteson.
Restore Wolves to the Northern Forest, a Proposal, Michael Kellett.
Ecological Issues for the Reintroduction of the Timber Wolf, Dr. Stephen Trombulak.
Wolf Recovery and the Adirondack Park, Michael Kellett.

VOLUME 1 #6 FINDING COMMON GROUND

New York State Legislature Funds Land Protection, John Sheehan.
Finding Common Ground—An Interview With Hank Swan.
NFLC Credibility Undermined by Refusal to Study Forest Practices, Mitch Lansky.
Natural Resources Council of Maine Proposes 'North Woods Conservation Area'—Existing Use Zoning, A Tool to Preserve Maine's Traditional Forest Uses, Cathy Johnson.
The Red Spruce-Balsam Fir Forest of Maine, Robert Seymour.
A Brief Account of How Maine's Public Lands Were Sold or Given Away, John E. McLeod.
The Public's Interest In Private Land, Steve Perrin.
The Economics of Place, Andrew Whittaker.
A Brief History of the Forever Wild Adirondack Park, Philip Terrie.
The Northern Forest in the Age of Ecological Restoration, Michael Kellett and Jym St. Pierre.

VOLUME 2 #1 A CRITIQUE OF NFLC'S FINDINGS AND OPTIONS

The Key to Forest Health was Unexamined by Council, Mitch Lansky.
We Must Establish a System of Ecological Reserves, Dr. Stephen Trombulak.
Full Fee Acquisition is the Most Effective Land Conservation Strategy, Bob Perschel.
Economic Status Quo Failing Northern Forest Region, Spencer Phillips.
More Land 'Converted' by Destructive Forestry than by Development, Mitch Lansky.
A Conversation with Baskabegan's Roger Milliken, Jr...

VOLUME 2 #2 BUY LAND—ESTABLISH A NETWORK OF ECOLOGICAL RESERVES

22 Northern Forest Conservation Groups Call for Acquisition of 810,000 Acres.
Wolf Shot In Western Maine, Stephen Gorman.
Maine's Forest Practices Act: Is It Working?, Mitch Lansky.
Why Restore the Wild Atlantic Salmon, George Wuerthner.
Clinton Plan Sacrifices Pacific Northwest Ancient Forest Ecosystems, Jim Britell & Tim Hermach.
Sears Island Woodchip Port Will Degrade Forest and Marine Ecosystems, Ron Huber.
Democracy, Ecology, and Growth at any Cost Economics, Andrew Whittaker.
Hamlet Stewardship in the Adirondack Park, Claire Barnett.

VOLUME 2 #3 NFLC RECOMMENDS ECOLOGICAL RESERVES

Council Recommends Ecological Reserves Ecological Reserves, Abandons Regional Approach, Jamie Sayen.
Maine Issues Health Advisory on Dioxin In Lobsters, Ron Huber.
Industrial Forestry: Is It For the Birds, Mitch Lansky.
Cougar Kitten Shot Near Adirondack Park, Jason Kahn.
Support Is Growing for Wolf Restoration in Northern Forests, Michael Kellett.
Grassroots Citizen Participation: The Connecticut River Experience, An Interview with Sharon Francis.
The Humbug Hatch: The Wise Use Movement Spreads East, Ted Williams.

VOLUME 2 #4 FORUM CRITIQUES NFLC'S DRAFT RECOMMENDATIONS

Council Draft Recommendations Will Not Sustain Biological Diversity, Dr. David Publicover.
Public Supports Establishment of Large Ecological Reserves: Excerpts from Letters Written to the NFLC.
Council Acknowledges Industrial Forestry Can Be Destructive, Spencer Phillips.
Maine's Low Property Taxes Have Not Promoted Good Forestry, Mitch Lansky.

VOLUME 2 #5 THE NORTHERN FOREST—A REGION UNDER SIEGE

NFLC Listening Sessions—Democracy in Action, Jamie Sayen.
Maintaining the Present Level of Biodiversity Is Not Sufficient, UVM Conservation Biology Group.
Recommendations for Regional Economic & Ecological Revitalization, Mitch Lansky.
Raise Taxes for Absentee Owners—Give Relief to Towns and Small Owners, Jamie Sayen.
Council Must Promote and Support Local Agriculture, Michael Phillips.
We Need a Northern Forest Restoration Council, Jamie Sayen.
Maine Woodsman Laments Destruction of Maine Woods, Martin Leighton.
Public Demands Land Acquisition, Ecological Reserves & Good Forestry—An Account of the NFLC's Listening Sessions, Fife Hubbard.

VOLUME 2 #6 MAINE WOODS UP FOR GRABS—AGAIN

Political Tradition Must Reflect Scientific Reality, Dr. Stephen Trombulak.
Scott Paper to Unload 910,000 acres and Two Mills in Maine, Jym St. Pierre.
A Reserve System For Maine: Big Wilderness Meets Property Rights, Mitch Lansky.
Maine Woods National Park—A Proposal, Michael Kellett.
Maine Wind Power Proposal To Scar Three Remote Mountain Peaks, Fife Hubbard.
Property Rights & Responsibilities: A Survey of NH Timberland Owners, Charles Niebling.
New Brunswick's Last Wilderness Threatened by Roads and Clearcuts, David Coons.
The Eastern Cougar: Big Cats Need More Research and Protection, Fife Hubbard.
Group Works To Restore Wolves to Adirondack Park Region, Scott Thiele.
State Warns Dangerous Levels of Mercury Found in Maine's Fish, Ron Huber.

VOLUME 3 #1 SOUTH AFRICAN GROUP BUYS 900,000 ACRES OF MAINE

Fish & Wildlife Confirms Cougar Scat Found in Craftsbury Vermont, Fife Hubbard.
South African Paper Company Buys 900,000 Acres of Maine, Jym St. Pierre.
Why Was Council Afraid to Investigate Adirondacks? Bill McKibben.
An Ethic Aborning: An Impressionist History Celebrating the Centennial of the Adirondack Park, Michael Wilson.
Old Growth at Baxter State Park's Scientific Forest Management Area, Mitch Lansky.
NFLC's Final Report Fails to Address Regional Crisis, Jamie Sayen.
A Proposal For Intensive Forest Management Based on Low-Impact, Low-Cost Technologies, Dana Marble.

VOLUME 3 #2 NEEDED—A REGIONAL ENERGY POLICY

Toward a Northern Forest Regional Energy Policy, Jamie Sayen.
The New England Energy System: What Happens When You Turn on a Light? The Conservation Law Foundation.
The Legal and Economic Obstacles to a Sustainable Energy Policy, Pamela Prodan.
Maine Audubon Offers Proposal For Protecting the Best of the Northern Forest, Maine Audubon Society.
Grassroots Coalition Promotes Wolf Restoration in Maine, Fife Hubbard.
Thinking Like A Watershed, Steve Perrin.
Silvio Conte National Wildlife Refuge: Ecosystem Management in the Connecticut River Valley, Andrew Whittaker.
New Directions for Forestry & Agriculture—Perma(nent) Culture, Andrew Whittaker.

VOLUME 3 #3 IN WILDNESS IS THE PRESERVATION OF THE WORLD

Economic Growth is Just Trashing Three & a Half Billion Years of Wildness, David Brower.
Wildness—A Metaphor of Human Fate & Destiny, Lissa Widoff.
Wild Atlantis: Down But Not Out, Ron Huber.
Ecological Health of the Northern Forest, Dr. Stephen Trombulak.
Labor & Envoiros Must Join to Defend Both Jobs and Environment, Andrew Whittaker.
Green Mountain National Forest: A Fall From Grace, Lowell Krassner.
Does Decline Mean Demise For Paper Industry in Maine? William Butler.
Sins of a Wetland Ecologist, Patrick Garner.
The Land of Absence, Mollie Matteson.
Livestock Guard Dogs: A Non-Lethal Solution To an Old Problem, Nancy French Amey.

VOLUME 3 #4 INDUSTRY, POLITICIANS COLLUDE TO UNDERMINE ENVIRONMENTAL PROTECTION

Mainstream Environmentalism and the Emperor's New Clothes, Jamie Sayen.
Vermont Snubs Public In Forest Policy Formulations, Andrew Whittaker.
Greenbacking the Maine Legislature, Jym St. Pierre.
State of the Adirondacks: A Political Transition Begins a New Chapter for the Adirondack Park, Peter Bauer.
Aim High—The Wild Path Forward: Wilderness Recovery In Nova Scotia, David Orton.
Clearcutting for Biodiversity & Sustainability in the Acadian Forest, Mitch Lansky.
What We Can Learn From the Baxter Old Growth Forest, William Butler.
Citizens Keep Track of Vermont Wildlife, Fife Hubbard.
Corporate Front Groups—They're Everywhere, Carmelo Ruiz-Marrero.
The River Otter, Rob Baldwin.

VOLUME 3 #5 8-MILLION ACRE HEADWATERS WILDERNESS RESERVE SYSTEM PROPOSED

A Proposal to Establish a Headwaters Regional Wilderness Reserve System, Jamie Sayen.
Wildlands Create Context for a New Economic Direction, Andrew Whittaker.
Public Land Acquisition—A Greater Bargain Than Ever, Dr. David Publicover & Tom Steinbach.

VOLUME 3 #6 TOXIC VACATIONLAND POLITICS

The Destruction of the Northern Forests—An Abenaki Perspective, Tomas Obomsawin.
Conte National Wildlife Refuge Wins Strong Support Throughout Connecticut River Watershed, Jamie Sayen.
Toxic Vacationland Politics: Protect the Polluters, Not Maine's Water Quality, Jamie Sayen.
Acid Rain Problem Won't Go Away in Adirondacks, John Sheehan.
Low Impact Forestry: Managing as if the Future Mattered, Mitch Lansky.
Maine Legislature Rejects New Forest Practices Regulations, Mitch Lansky.
A Conversation with Charles Niebling of the NH Timberland Owners Association.
Certifying Forests Sustainable and Green, Mitch Lansky.

SUBSCRIBE TO THE FORUM

*A one-year subscription to the Forum costs \$15 (US) or \$25 (Canadian) for six issues.

*We will send you a freebie if you can't afford to pay on the condition that you become actively involved in the search for sustainable natural and human communities.

*We urge our more affluent subscribers to send us \$30 or more to sponsor a freebie.

*Please consider becoming a lifetime subscriber with a donation of \$1000 or more.

**Enclosed is \$_____ to cover _____ subscription(s).

**_____ I can't afford a subscription right now, please send me a freebie. I promise to roll up my sleeves and get to work on behalf of the Northern Forest Communities.

**_____ Here's some extra cash to cover the cost of freebies.

**_____ Enclosed is \$1000 (or more). Please sign me up as a lifetime subscriber.

Name _____

Address _____

Town _____

State _____ ZIP _____

Contributions to the Forum are tax-deductible. Please make checks payable to Earth Island Institute and send to:
The Northern Forest Forum, POB 6, Lancaster, NH 03584

REFERENDUM TO STOP CLEARCUTTING & PROMOTE FOREST REHABILITATION IN MAINE



Photo © by Stephen Gorman

For years there have been efforts to enact meaningful regulations to restrict the worst forest practices and to encourage sustainable timber harvesting in the Maine Woods. But every time, the powerful forest industry has killed those efforts in the Maine Legislature. It is time to let people across Maine vote directly on ending clearcutting and restoring health to our forests.

A grassroots drive is being launched to let Maine citizens vote on a new referendum. The Maine Initiative to Promote Forest Rehabilitation and Eliminate Clearcutting would:

*prohibit clearcutting on the ten and a half million acres of forestland within the jurisdiction of the Land Use Regulation Commission where most clearcutting has been occurring;

*allow harvesting of one-third of the forest trees every 15 years to maintain forest cover but allow sustainable management;

*set minimums for tree stand volume following harvesting using scientifically-based standards;

*limit new openings in the forest canopy to one-half acre in order to protect habitat for deep woods species;

*require that a healthy, well-distributed stand of trees remain after harvesting.

We need to collect more than 52,000 signatures from Maine voters to send this referendum to the people next year.

YES! I want to help stop clearcutting and promote forest rehabilitation in Maine.

I will:

- Collect signatures at the polls on Election Day, November 7, 1995.
- Coordinate gathering signatures in my community.
- I would like more information about the Forest Rehab Campaign.
- Enclosed is a contribution to the Green Institute for _____ to support this important work.

Name _____

Address _____

Town _____ Zip _____

Phone _____

Please return to: Green Institute, 620 Back Road, N. New Portland, ME 04961

Please Join the Maine Forest Rehab Campaign.

For more information, or to send a donation, contact:

Green Institute
620 Back Road
N. New Portland, ME 04961
207 628-5741 or
Maine Greens—207 623-1919