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Volume 6 No. 5

A Forestry For The Northern Forest

Special Focus on Forestry

☞ Forest Ecologist David Perry helps launch Vermont Loggers' Guild
page 13

☞Standards for low impact logging
pages 14-16

☞The disaster of industrial forestry in Canada
pages 22-23

☞Paper Industry's SFI in NH
page 17

& more, pages 13-23

Plus more news and features from around the region

Adirondack Economics (pages 10-12)
Coastal Waters Watch (page 7)

News Flash!

Sappi to Sell 911,000 Acres of Land in Western Maine

(see page 3)

Forestry for the Future

In this issue of The Northern Forest Forum we take a focused look at a new forestry for the Northern Forest.

On pages 14-16 are the draft standards for low impact logging of the Hancock County Low Impact Forestry Project in eastern Maine. On page 16 are guiding principles developed by the Vermont Loggers' Guild over the past winter, which members of this new collaborative hope will lay the basis for salutary landowner-logger relationships in northern Vermont.

These two grassroots efforts are part of a broader cultural movement in the wider region to empower people and communities working with and reliant on natural resources. Most promisingly, and contrary to the conventional wisdom of the market-dominated 1990s, the progress represented in these grassroots projects has not had to have been based on a compromise of ecological truth.

Special Forestry Section Begins on Page 13.

Common Ground

The premise common to both has been that inherent in rural communities is a conservation ethic and attitude skeptical toward the exploitation of natural resources encouraged by industrial markets. This points a way forward from the downward spiral of forest quality that is so widely recognized by people familiar with the forest of Maine's North Woods, New Hampshire's North Country and Vermont's Northeast Kingdom.

Through a commitment to education, and to new economic arrangements that recognize and reward conservation, we can widen the example and practice of a "new" forestry that actually is quite traditional to this landscape's small, stewarded private ownerships. "Ecosystem management" ends up looking like a very familiar silviculture—as participants at a weekend course with forest ecologist David Perry recently learned (page 13).

History of Exploitation

Neither is de-forestation new to the states in which the Northern Forest lies. On page 18, is a description of what a forestry commission of 1884 found in the reports of numerous town officials across Vermont.

It is a commonplace that old timers of today and past times have referred to deeper, colder and more even flow of brooks and rivers that today run high after rain, only to run dry soon thereafter. The destruction of organic matter, the loss of coarse woody debris on the forest floor, compaction by equipment and the roading of the woods, have all contributed.

As Janet Cormier commented shortly before her death last year, we have traditionally and repeatedly underestimated the impact of rain and water in our topography—as evidenced by our cavalier attitude toward soil. (There is a story of one paper company agent of some time past boasting that "we'll log it down to bedrock!" His son who followed in the man's footsteps has said that "Trees grow, what else is there for them to do?").

Current Obstacles

Growth economics, prosperity itself, and industrial methods of production all pose obstacles to the implementation of a truly conservative economics. Small may be beautiful but we are no longer interested, societally, in beautiful (see Michael Colby's commentary on agriculture in Every Person's Need on page 29).

To New Hampshire, there is a place for municipal sludge in field and forest (page 6); to International Paper, the burning of tires is a good way to generate power (page 8). We learn more about the toxification of the very food chain by dioxins and mercury (pages 7 and 8) every day.

Farmers, and we may add loggers and fishermen and all who are intimate with Nature in their working lives, are indeed the canary birds of culture. Collectively, they are aware as the rest of society may not be, that certain values will not persist if the small scale producer cannot prosper. Among these is the opportunity to fashion an economics that connects us to our surroundings.

We should therefore all take great encouragement from the advances being made in establishing low impact forestry. It is a forestry that serves the community and the forest. If it can take root, the benefit to the Northern Forest will endure.

A.W.

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NARP Mission Statement

The Northern Forest Forum is the voice of the **Northern Appalachian Restoration Project (NARP)**, a non-profit grassroots activist network dedicated to promoting sustainable natural and human communities throughout the Northern Forest region of New York, Maine, Vermont and New Hampshire. For information about NARP or its individual projects, please write to: NARP, PO Box 6, Lancaster, NH 03584.

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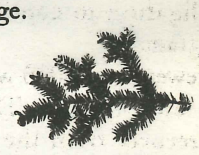


Forum Editorial Policy

The Northern Forest Forum journal is published bi-monthly and provides news, features and analysis of issues important to the Northern Forest and adjoining regions. Its editorial views are those of the Editorial Staff, and not necessarily those of other groups or individuals associated with the **Forum**. The **Forum** welcomes submissions of articles and news relating to the sustainability of life in the region; these are most appreciated on Mac-readable disk. Please address material to: POB 72, East St. Johnsbury, VT 05838.

SAPPI to Sell 911,000 Acres in Western Maine

by Jamie Sayen

"Sappi unloading Moosehead Lake acreage," read a headline in the Bangor Daily News on June 3, 1998. Yes, the South African Pulp and Paper Corporation, which purchased 911,000 acres when Scott Paper dumped its ravaged holdings in Maine in 1994, is selling off nearly a million acres in the Moosehead and Flagstaff Lakes region.

All the Sappi lands lie within the 8 million acre HEADWATERS Wilderness Reserve proposed in 1995 by the Northern Appalachian Restoration Project. About half of the Sappi lands lie within the Maine Woods National Park proposed by RESTORE: The North Woods in 1994.

Chuck Gadzik, director of the Maine Forest Service, conceded to the **Bangor Daily News** "that the land in question is some of the most intensively harvested in the state, with the highest proportion of clearcuts."

The Natural Resources Council of Maine issued a statement declaring that "Sappi has been the state's most egregious clearcutter. They have hammered their lands harder than any other paper company, claiming all the while that they were adhering to a long-term strategy of high-yield management based on clearcutting and plantation establishment. Yet now we can see that Sappi's real strategy has been to maximize profits through over harvesting in the short-term and then to get out of the tree harvesting business altogether."

NRCM went on to note that Sappi and its predecessor, Scott Paper, clearcut twice as much land as any other landowner, "and most of the land they now want to unload is located in Somerset County, a county where the most valuable trees—spruce and fir—have been cut at a rate four times as fast as they grew over the last 13 years..."

Sappi, one of the corporate all-stars that promotes the paper industry's Sustainable Forestry Initiative, announced that it would only sell to another corporation that practices sustainable forestry.

Despite the scandalous condition of these lands, 'experts' speculate that it will fetch approximately $250 per acre, or about $23 million. People familiar with the condition of the land believe that Sappi ought to pay the citizens of Maine $23 million to help begin to restore its ecological integrity.

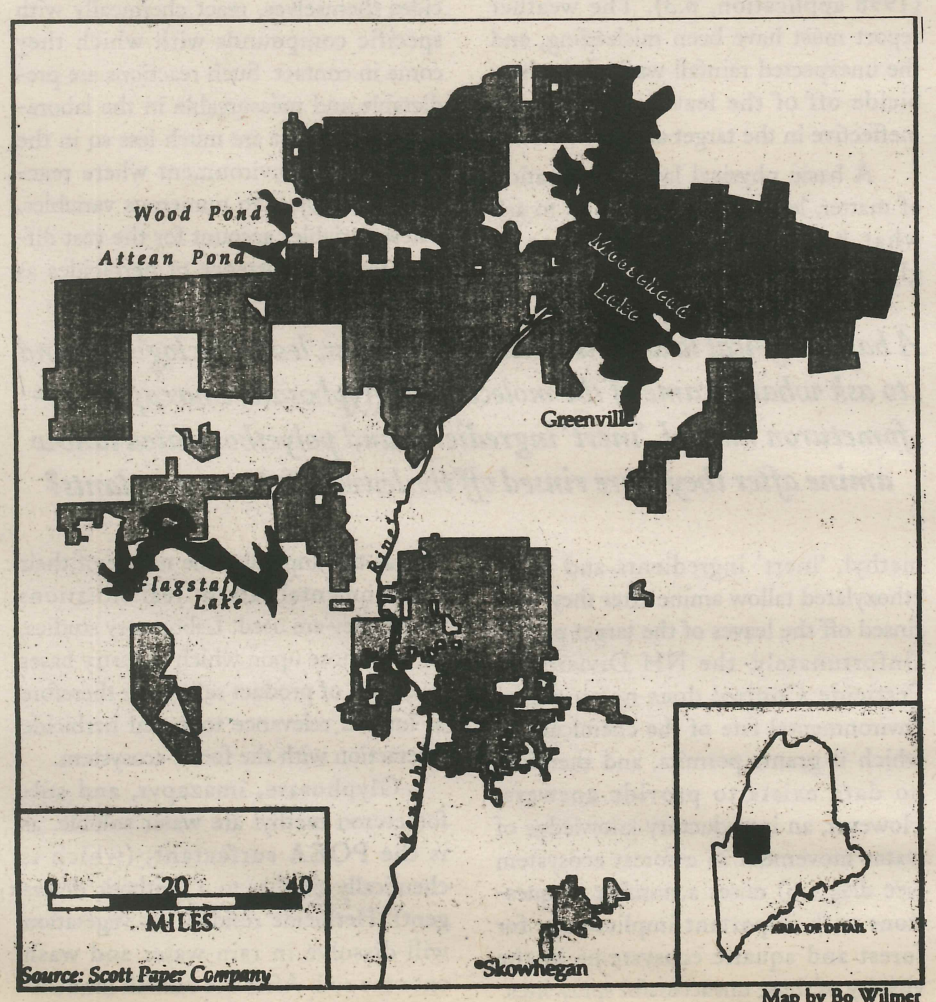
Because the US government and the State of Maine have little or no money to acquire these lands, public acquisition is not promising at the moment. However, intelligent timberland purchasers, aware of the condition of the land, may balk at paying more than $50 per acre, because there will be little enough to do on the land except pay (the admittedly low) property taxes of $0.60 per acre for the next 30 years.

One possibility is that 60 miles of Moosehead Lake shoreline and 24 miles of Kennebec River shorefront could be sold off for development purposes.

This is only the latest in a series of paper company land sales in the past decade in which over 5 million acres have been sold at least once; more than 3.5 million have changed hands twice. *(See chart on page 31.)*

Unfortunately, Maine politicians won't begin to understand what's happening till one or more mills shut down.

Meanwhile, "Paging Ted Turner! Maine is for sale!"



Map by Bo Wilmer

Wolf Protection in Question in US & Canada

by Kristen DeBoer

USA: ESA Delisting Threatens Wolf Protection

In early May, Secretary of the Interior, Bruce Babbitt announced that the US Fish & Wildlife Service will begin reclassifying or removing the eastern timber wolf from the Endangered Species Act (ESA)—effectively rolling back over 20 years of protection and recovery efforts. Without ESA protection, state and federal wildlife agencies have no obligation to continue wolf recovery programs.

Today, fewer than 3,000 wolves live in the entire lower 48 states. The wolf is starting to recover from the brink of extinction through active recovery programs. Recovery efforts could falter if our federal government doesn't protect wolves from hunting , trapping, and habitat destruction.

Here in the Northeast public support for wolf recovery is high and the Northern Forest provides enough habitat to support at least 1,300 wolves. Through public education and advocacy we will continue to create a public mandate for eastern timber wolf recovery. But support of the USFWS and the strength of the ESA will be critical to efforts to reestablish a viable population of eastern timber wolves in the Northeast.

Please write to the US Fish & Wildlife Service (Ms. Jamie R. Clark, Director, US Fish & Wildlife Service, 1849 C Street NW, Washington, DC 20240; tel. 202-208-4717), and tell them that instead of decreasing wolf protection, they should expand wolf recovery efforts. Urge them to maintain full Endangered Species Act protection for the eastern timber wolf and implement a formal wolf recovery plan for the Northern Forest of Maine, New Hampshire, Vermont, and New York.

Québec: Low Wolf Populations Cause Concern

In the Laurentide Reserve of Québec, there are only 30 wolves remaining in an 8,000 km^2 area. In response to this low population density, the trapping association of the province has recommended that the government institute a moratorium on trapping for three years in the region, with the condition that scientific research of the wolves continue. It is encouraging to know that the Canadian trapping association has demonstrated a commitment to the welfare of the wolf. Now it is up to the Québec government to implement this recommendation. The protection of Québec's wolves will be important to the long-term viability of recovering wolves throughout the North Woods of the US and Canada, as future wolf populations in Maine could be connected to Québec.

Please write to the Québec government and urge them to institute a wolf trapping moratorium in the Laurentide Reserve. Write to: Monsieur Paul Begin, Minister of Environment and Fauna of Québec, Edifice Marie-Guyart, 30e etage, 675 Boulevard Rene-Levesque Est, Québec City, Québec, Canada G1R 5V7.

LETTER TO THE EDITOR

Setting Record Straight

Dear Editor:

SPNHF would like to set the record straight regarding the information contained in a letter written by Ms. Caroline Snyder, published in your Mud Season 1998 issue. Ms. Snyder states that during a March 3 meeting in Sandwich, a representative of the Society For the Protection of New Hampshire Forests was the only supporter of a proposed timber sale in Sandwich Notch.

Contrary to Ms. Snyder's recollection, while representing the Forest Society at that meeting, I was careful to point out that SPNHF neither supports or opposes the proposed Algonquin Brook Timber Sale. Currently, the Forest Service has simply advanced notice that it is considering a harvest project in this vicinity. It is our understanding that further planning and decision making on the project has been postponed.

I did say that at this time, outside the context of the Plan revision process, SPNHF opposes changing the Forest Plan Management Area direction for the part of the Forest which includes Sandwich Notch. A petition containing such a proposal was circulated at the March 3 meeting. Changes of this type should be considered as part of a forest wide review of management area direction, and not to address concerns over a single timber harvest.

Sincerely,

Michael Seeger
Policy Specialist - SPNHF

NH Paper Companies Plan Summer Sprays & Re-Sprays

by Daisy Goodman

May brings the first leaves to the hardwoods in regenerating clearcuts in northern New Hampshire, and a new crop of aerial herbicide permit applications to New Hampshire's Division of Pesticide Control in Concord. Applications from Mead Corporation and Champion International are already in the process of review by five State agencies and the State Entomologist's office.

Mead plans to spray 879 acres, in blocks ranging in size from 7 to 71 acres; Champion plans to spray 725 acres, in blocks ranging from 11 to 214 acres. The herbicides proposed for use are glyphosate and imazapyr, with the surfactant polyethoxylated tallow amine (POEA). These herbicides, mixed with unlisted inert ingredients, are combined before application.

Re-Sprays After Rain

Both Mead and Champion's 1998 applications include sites which have been treated with herbicides before, in 1996 and 1997. The same herbicide/surfactant combination was used during those years, with the addition of the herbicide sulfometuron methyl in 1996.

Both companies have stated in public hearings, in print, and in public information sessions, that herbicide spraying is utilized only once per rotation (theoretically 20-40 years), to 'release' softwoods in clearcut areas dominated by hardwood primary regrowth. However, aerial herbicide programs are apparently not infallible; to quote Mead's application "...two '96 blocks (16 and 38 acres) were rained on within two hours after spray and we know we had unacceptable efficacy. Three 1997 blocks (34, 7 and 7 acres) also were rained on with less drying time than we'd like after application" (1998 application, p.3). The weather report must have been misleading, and the unexpected rainfall washed the herbicide off of the leaves, rendering it ineffective in the target areas.

A basic physical law, conservation of matter, leads the logical mind to ask what became of the molecules of glyphosate, imazapyr, sulfometuron methyl, 'inert' ingredients and polyethoxylated tallow amine after they were rinsed off the leaves of the target plants? Unfortunately, the NH Division of Pesticide Control does not monitor environmental fate of the chemicals for which it grants permits, and therefore no data exists to provide answers. However, an introductory knowledge of water movement in a forest ecosystem (see diagram) raises a number of questions with important implications for forest and aquatic ecosystems in the vicinity of these unsuccessful spray sites.

A basic physical law, conservation of matter, leads the logical mind to ask what became of the molecules of glyphosate, imazapyr, sulfometuron methyl, 'inert' ingredients and polyethoxylated tallow amine after they were rinsed off the leaves of the target plants?

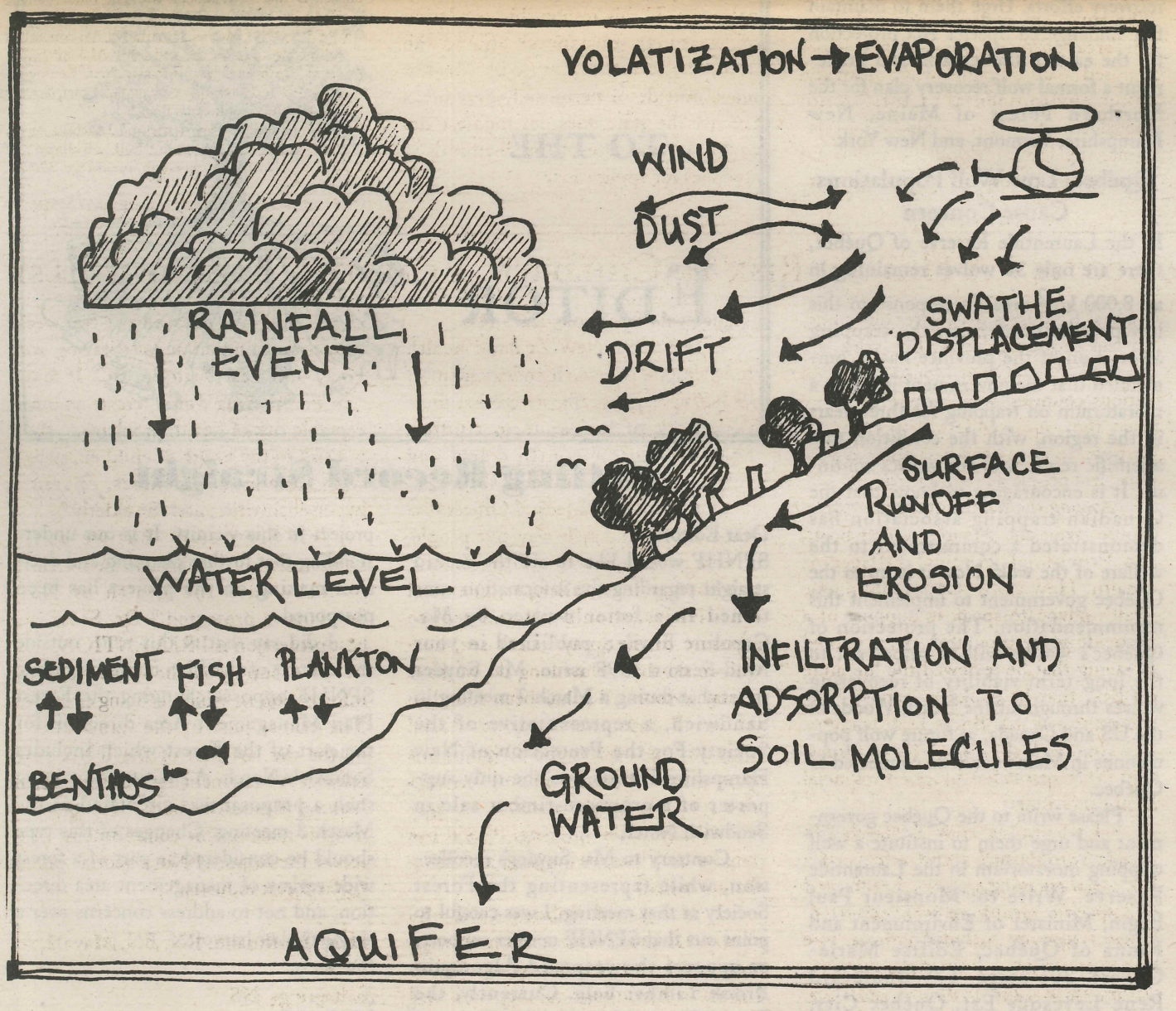
Environmental Fate of Chemicals

Herbicides, like other chemicals, react in distinct ways to environmental factors such as heat, light, oxygen, pH, and temperature changes. Each of the herbicides in use in Northern Forest aerial applications eventually break down to simpler compounds, known as metabolites. These metabolites, like the herbicides themselves, react chemically with specific compounds with which they come in contact. Such reactions are predictable and measureable in the laboratory setting, but are much less so in the actual forest environment where reactions are subject to numerous variables. These variables account for the vast differences in persistence of herbicides as well as the unpredictable nature of their environmental fate in real situations where they are used. Laboratory studies, such as those upon which industry bases its claims of product safety, are therefore of limited relevance to actual herbicide interaction with the forest ecosystem.

Glyphosate, imazapyr, and sulfometuron methyl are water soluble, as is the POEA surfactant, (which is chemically similiar to a synthetic detergent). Herbicide residues on vegetation will dissolve in rain water and wash onto the soil. After the rainfall immediately following spraying in 1996 and 1997, all four active ingredients most likely reached the soil in the spray areas. Here they would be likely to affect the function of soil microorganisms found in the surface soil layer. Due to metabolic similarities between bacteria and higher plants, herbicides negatively affect growth and function of bacterial colonies critical to nutrient recycling (Chakravarty, 1986).

Sulfometuron methyl, in fact, is so effective at inhibiting micro-organism growth that it is utilized as a soil sterilant (manufacturer's Material Safety Data Sheet). From this point on the three active ingredients are likely to behave differently based on their chemical properties. Imazapyr shows relatively weak adsorption to soil particles, especially with pH greater than 6.0, leading to high mobility in water (Shaner, 1991). This herbicide has been described as having higher soil mobility rating than atrazine, a controversial herbicide which leaches through soil readily and has been detected in ground water in numerous instances (Shaner, 1991). At a depth of 45 cm, imazapyr has been found at a concentration of 40-70% the applied rate (Vizantinopolous, 1994). Furthermore, in anerobic soil conditions, such as are found at a certain depth, this herbicide is known to be relatively stable (Shaner, 1991). Some researchers have calculated its half life in years (Vizantinopoulos, 1994).

Glyphosate, although highly soluble in water, adheres strongly to soil particles. The degree to which it leaches through soil is subject of some controversy, but it is apparently more likely to



Movement of Pesticides in an Ecosystem

Nova Scotia Woodlot Owners Liable for Aerial Spray

The Green Web has placed an advertisement in two Pictou County newspapers to highlight the personal liability of woodlot owners who have signed-up for the tussock moth aerial forest spraying program.

A reported 600 woodlot owners have signed-up for the aerial tussock moth forest spraying program using Btk (Foray 48B). These owners have, out of ignorance or wilful blindness not only disregarded the known public health and environmental risks associated with this particular spraying program, but have not considered their own personal liability. Woodlot owners are clearly liable, according to the Application Form they have signed to be part of this spraying program, should the province be sued.

Paragraph 8 of the Application Form is summarized as follows:
Should the province be sued, or have any claims made against it, as a result of the program, the landowner will be responsible for any costs to the province arising from such claims.

For further information, contact: David Orton (925-2514) or Bernadette Romanowsky (351-2826). David Orton is the coordinator of the Green Web and Bernadette Romanowsky is a Pictou County lawyer, with a particular interest in environmental matters.

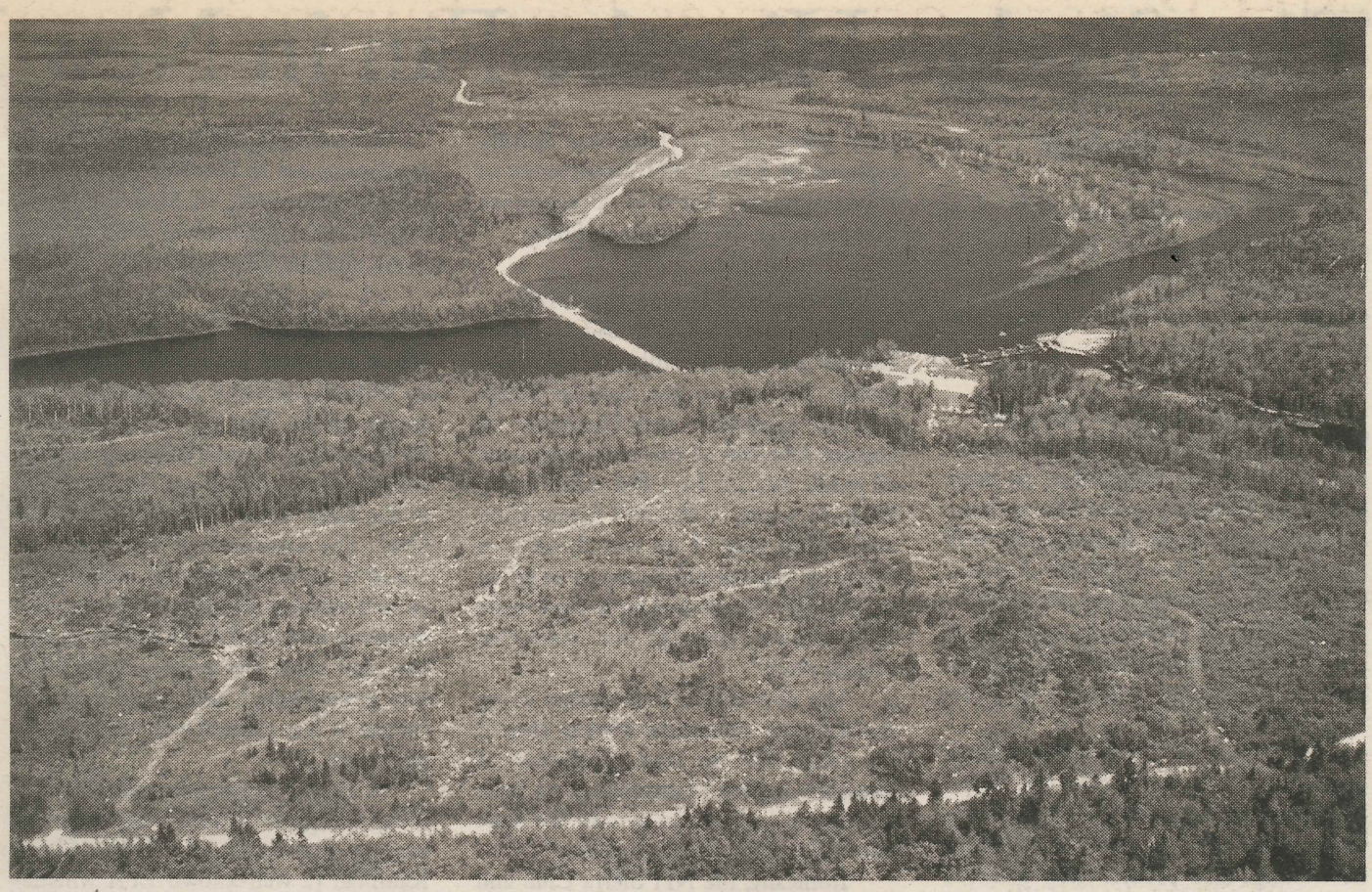
remain in upper soil strata. Sulfometuron methyl is rated more mobile in water than imazapyr (Shaner, 1991), and persistence in soil at one year post application has been documented (Turner, 1987). POEA appears to move with water rather than adsorbing to soil.

It is certainly possible, although the data does not exist to confirm or refute this, that at least the herbicide imazapyr and POEA leached through the relatively thin soil layer of the northern NH forest to the relatively high water table, contaminating the ground water. Groundwater, and dissolved contaminants, move by gravity to lower lying open water (see diagram).

Surface runoff is another likely method of downhill transport for dissolved herbicides. The Androscoggin and Connecticut headwaters region, where aerial spraying is a yearly event, has both a high water table and numerous wetlands, vernal pools, and intermittent and small streams. Both surface runoff and groundwater feed these areas, and contamination by herbicide residues is particularly likely when herbicide-treated areas are sloped. Given the well documented erosion potential of recently clearcut land, herbicides adhered to soil particles could also be expected to move down toward surface waters.

Imazapyr is particularly stable in water, remaining relatively unchanged after one year both in aerobic conditions and in anerobic conditions in Canadian forest lakes (Shaner, 1991); such conditions are similar to those found in the lakes and ponds of northern New Hampshire.

Both imazapyr and sulfometuron methyl are extremely potent herbicides, causing phytotoxicity at concentrations too low to be detected with standard testing (EPA, 1994). Without extremely sensitive and expensive analysis, low levels of these persistent herbicides will remain undetected while continuing to damage plants, bacteria, fungi and other flora and fauna. Plant mortality caused by low level herbicide contamination of small ponds and wetland areas may contribute to the vicious cycle of eutrophication, decrease in dissolved oxygen content of water, and widespread effects throughout the aquatic food web.



1997 Dummer, NH 70-acre clearcut spray area in lower half of picture (looking to east). Note residence at edge of spray area and Pontook Reservoir above (left) and Androscoggin River (above center). Photograph was taken May 15, 1998. The sprays clearly work; the spray area was brown, while all around was the green of spring. A stream crosses the spray area, and although the weather in early May had been unseasonably warm and dry, several pools of water were observed within the dead zone. Photo © Alex S. Maclean—Landslides.

State Monitoring Inadequate

The NH Division of Pesticide Control monitors herbicide residues on foliage in and adjacent to some spray target areas while spraying is occurring. The environmental fate of metabolites, the breakdown products of herbicides exposed to air, sunlight, water, heat, and other environmental factors, is not monitored at all. Citing funding limitations, the Division does no follow up water quality monitoring, and no testing after rainfall events to follow possible movement.

The agencies involved in the review process, the Division of Pesticide Control, the Department of Environmental Services, the Division of Forests and Lands, the Department of Fish and Game, the Department of Health, and the State Entomologist's Office approve aerial spray permits each year. None of these agencies performs follow-up monitoring of aerial spray programs. Is this responsible regulation of hazardous substances? Should the public believe that herbicides do not move outside of permitted spray areas because the state does not monitor the environmental fate of the chemicals it approves for application?

Until the Division of Pesticide Control is able to effectively monitor the applications it approves, it is failing to fulfill its mandate to guarantee the safety of human health, water quality and the environment.

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OUST (sulfometuron methyl) manufacturer's MSDS

Btk Spraying in Nova Scotia—A Health Risk to Children, Elderly & Everyone Else

I am upset! Aerial insecticide spraying will take place in a large area of Nova Scotia this summer. The spray—Btk, or Bacillus thuringiensis kurstaki—said to be a biological spray, also contains some seven chemical additives, which are 'trade secrets.' The trade name of this spray is Foray 48B.

I am upset, not only about the ecological damage this spray will cause, but also because of concerns about the effects of the spray on our health. The Btk spraying will affect many people living in rural areas of Pictou, Colchester, Antigonish, Guysborough and Halifax counties. I myself and my family, living in Pictou County, will also be directly affected.

I am a nurse. One of the reasons I went into nursing, was to help others maintain their health and prevent illness. This spray program goes counter to health values I believe all those involved in health care should promote. Yet public health nurses are being forced to defend the spraying program!

I was fortunate to find out about an "Open House" held by the Dept of Natural Resources to "answer questions" on the proposed aerial Btk spraying program. The "Open Houses," held in various counties, were so poorly advertised that one wonders if this was on purpose, so as to keep it as quiet as possible, lest people get concerned.

Among the hand-outs at the "Open House" were the remarks by Jeff Scott, the Provincial Medical Officer of Health. How can a supposedly public health advocate speak in support of a pesticide spray program? He is quoted as saying that he reviewed the literature on Btk, that he spoke to experts, etc. and assures us that Btk is a safe spray.

Here is a glimpse at the information NOT provided by our Provincial Medical Officer:

• Last year in New Zealand, 278 people complained about effects of a Btk aerial spraying on their health, and 682 specific symptoms were reported. These symptoms included asthma, sore throat, runny nose, headaches, skin irritation, rashes, eye irritation, diarrhea, and other more general symptoms, such as lethargy, malaise, etc. There was also a high level of psychological stress.

• The 1997 New Zealand health study, despite its overall endorsement of the NZ spray program, stated that there was a lack of longer term studies, including those for birth defect and mutations (cancers) for Foray 48B.

The Provincial Medical Officer dismisses environmentally sensitive people, by saying: "People with skin conditions, asthma, hay fever, allergies, chemical sensitivities, should try and reduce exposure to the spray." Let's see, how will we do that? How long do we have to stay indoors? Btk has been found in the air 17 days after spraying. Aerial spray drift has been found 80 km from a spray site, and found in soil 8 weeks after spraying. In lake water, it was present 60 days after spraying. (Good bye outdoor activities, swimming, and using shallow wells!)

I have heard nobody from the provincial government acknowledge that on at least two instances the British Columbia Environmental Appeal Board has ruled AGAINST Btk spraying based on human health concerns. The latest ruling was released just two weeks ago, concerning an aerial spraying with Foray 48B near Victoria, BC. It found that the spraying would "create an unacceptable risk of health problems..., there is a risk to the health of children, people with immunodeficiencies, chemical hypersensitivities, and the elderly."

Jeff Scott said "But we at the Department of Health will be watching to make sure the health of Nova Scotians is protected." Dr. Scott, the best protection is PREVENTION!

It is outrageous how one-sided the information is, which is being provided. The truest part of the hand-outs is maybe the last part of the DNR news release. A statement by the minister of Natural Resources said: "Our government is making this commitment. . . to secure the future of Nova Scotia's billion dollar forest industry."

Helga Hoffmann, RN, BN, May 02, 1998
Saltsprings, NS
B0K 1P0
(902) 925-2514

The Sludge Hits the Fan in New Hampshire

by David Ellenberger

The NH Sierra Club and other state environmental groups have taken a strong interest in the potential dangers of agricultural spreading of sewage and paper mill sludges.

Coalition Against Sludge

This sudden explosion of heated debate over the issue of sludge has, in large part, been fueled by grassroots environmental organizations, including the NH Sierra Club, Clean Water Action, Citizens for a Future New Hampshire, and Working on Waste, who are tired of New Hampshire heralding the dubious title of "the sludge-dump of New England."

On March 17, the NH Sierra Club organized a "Victims of Sludge" press conference in which three NH citizens related their very personal stories about how sludge had permanently affected their lives, families, communities and livlihoods.

Hazardous Waste

One of the speakers at the press conference was Joanne Marshall, of Greenland, NH, who was recently featured in an article by the Boston Globe. Her son Shayne died on November 24, 1995, a few weeks after he walked through a hayfield where some 4,000 tons of sludge from a waste treatment plant in Portland, Maine had been spread. She also told of how her eight neighbors suffered rashes, nose bleeds, nausea, severe diarrhea and other symptoms, and how five neighborhood cats died from tumors shortly after the spreading.

Joanne Marshall was followed by Canaan dairy farmer Robert Withington. He told the members of the press how 33 of his cows became ill and slowly died off after he fed them on silage tainted with sludge. And it wasn't just his cows who were affected. Both he and his wife have been left unable to work after the incident, citing a host of health problems, which they firmly believe are sludge-related.

Last up at the podium was Harry Seidel of Newbury. An active member of the town's planning board, Harry watched as a gravel pit (ironically located directly over the townís water aquifer) was reclaimed using a mixture of sewage sludge, paper-mill sludge, and ash compounds. Apparently the reclamation's odor alone was enough to raise eyebrows across the town, but that may end up being the least of their worries. As Mr. Seidel was quick to point out, the gravel pit had been excavated below the high water mark for the town's aquifer, leaving it vunerable to contamination from the sludge fill.

Senate Kills Moratorium

Senator Jim Rubens (R-Etna), a candidate for Governor, closed the press conference on a high note by proposing a moratorium, backed by the NH Sierra Club, on sludge spreading in New Hampshire until such time as our weak sludge rules were made as strict or stricter than our neighboring Northeastern states'.

That bill, after weeks of being compromised to death by members on both sides of the aisle, was finally replaced by a weak NH Department of Environmental Services compromise that passed at the beginning of May.

Governor Minces Biosolids

The NH Sierra Club and Senator Rubens have been critical of Governor Jeanne Shaheen on the issue of sludge for her apparent unwillingness to become involved on this important issue of public health. In a Feb. 18th letter, Shaheen wrote to the NH Sierra Club and stated that "I do not think it is timely or appropriate for me to weigh in unilaterally by instituting a state-wide moratorium through an executive branch order."

She also referred to sludge using the industry vernacular stating that "I am aware that the land application of biosolids in New Hampshire is an issue that many individuals around the state have very strong opinions about."

Ironically, the NH Sierra Club and others led a successful campaign earlier this year in the legislature to prevent industry from officially changing the name of sludge to the more innocuous and green sounding "biosolids" in our state law and regulations.

Setback-Setback Set Back

On April 2, 1998 the state Senate killed a bill which would have removed sludge and septage from the land application setback requirement of the New Hampshire Rivers Management Program. This bill sponsored by Sen. Carl Johnson (R-Meredith) would have allowed sludge to be spread on soil as little as 50 ft.(depending on the slope of the bank) from the high water mark of our rivers—an obvious hurdle for river clean-up efforts within our state.

As an example of how pitiful our regulations are in this state, our neighbors to the south, in Massachusetts, have a required setback of 1000 ft. from rivers, streams, lakes and wells.

Where Do We Put It?

Many interested individuals have asked an obvious question as a result of the sludge debate. That is, if we are successful in placing a moratorium on sewage sludge, where will we put it? According to the book **Toxic Sludge Is Good For You***, the alternatives are few. The available methods include: incineration (which releases pollution into the air), dumping into landfills (which is expensive, and often lets contaminants leach into groundwater), and ocean dumping (where it has created vast underwater dead seas).

A fourth approach—gasification, using sludge to generate methanol or energy—is favored by EPA's Hugh Kaufman [a well-known EPA whistleblower and opponent of sludge] as "the most environmentally sound approach, but also the most expensive."

The EPA, however, has been the champion of a fifth alternative for nearly two decades now. That is, using sludge as a plant fertilizer—a practice they considered hazardous to health and the environment until the early 1970s. Land spreading of sludge was apparently attractive to the agency as it is by far the cheapest method available of disposing of the substance.

EPA PR Campaign

As sewage treatment plants were faced with mounting costs and dilemmas for disposing of their rapidly accumulating waste, the EPA generously offered them the solution of land spreading. And so began their campaign of pressuring sewage plants to encourage farmers to spread it on their farm fields.

The EPA is still currently involved with a multi-million dollar PR campaign with the notorious Powell-Tate communications firm in Washington, DC. They are also responsible for helping fund the Water Environment Federation (WEF), a coalition of municipal waste operators, as well as groups in our own back yard like the newly-formed New England Biosolids and Residuals Association, who recently held a conference of industry groups entitled "Can't We All Agree? Biosolids Recycling is Environmentally Correct!"

Moratorium Justified

So we, the citizens of the State of New Hampshire, are now left with a dilemma. Do we allow the sludge industry to continue unchecked as they have been for years? Or do we call a time-out on this substance and address the merited concerns of our citizenry on this issue?

The choice is ours to make. However, with 53,600 wet tons of sludge being spread on 2,300 acres of land within the state in 1996 alone (40% of which came from our neighboring states such as MA, ME, and VT—all of which have more stringent regulations on spreading than we do), I believe there is a cause for alarm and sufficient evidence to justify a moratorium.

David Ellenberger is Conservation Organizer for the New Hampshire Sierra Club

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*Stauber, John and Sheldon Rampton. **Toxic Sludge is Good For You.** Common Courage Press. Monroe, ME: 1995.

Sludge Regulators Not Accountable

Environmentalists have released evidence that highly contaminated, out-of-state sludges that are known to contain priority pollutants identified by the Environmental Protection Agency are being applied in the State of New Hampshire.

According to NH state hazardous waste law, any material that is contaminated with pollutant levels greater than 100 ppm must be designated as hazardous waste and cannot therefore be land applied.

Environmental groups including NH Sierra Club, Clean Water Action, Citizens for a Future NH, and New England Environmental Voters continue to have concerns with the credibility of NH Department of Environmental Services, both with their understanding and enforcement of state rules.

Waste Levels Exceeded

Testing on 5/28/97 of Lowell, MA sludge spread on a Gilmanton, NH dairy farm showed that this sludge contained 77 ppm of priority pollutants. With the minimum detection (reference) levels of ten other pollutants at 3.9 ppm, five others at 1.5 ppm, and the rest at 0.8 ppm, it is highly likely that this sludge contained priority pollutants in excess of 100 ppm and therefore should have been classified as hazardous waste.

A test taken on 11/26/97 of Lowell, MA sludge that was scheduled for land application in New Hampshire detected 4-methylphenol at 160 ppm, and DEHP at 210 ppm. DEHP is a chemical known to affect reproductive and developmental health of the unborn.

Hidden Hazard

Worse, the reference levels for the tests were so high that the lab was unable to detect possible pollutants until they reached concentrations of at least 56 ppm or more. With pollutants like benzoic acid, the tests were unable to detect the substance at levels below 280 ppm (nearly 3 times the hazardous level). Such high reference levels may have masked many additional priority pollutants. This alone would have made it nearly impossible to conduct an accurate test.

Mill Sludge Leaching

A 2/10/98 sample of Vermont paper mill sludge taken from a Hooksett gravel pit contained acetone and the industrial solvent methyl ethyl ketone at hazardous waste levels (199 ppm) and, by law, should not have been land applied. These are the same pollutants that recently leached from a paper mill sludge stockpile into groundwater in Pelham, NH. NHDES discovered the Pelham contamination in the Fall of 1997, but did nothing to stop the Hooksett reclamation project from proceeding.

From the examples above, it is clear that neither a Sludge Quality Certificate nor limited random testing is preventing highly contaminated sludges (i.e. hazardous waste) from being illegally land applied in this state. "Until the state drafts more protective legislation, we urge farmers to request a dioxin test as well as a priority pollutant scan of any out-of-state sludge that is scheduled to be applied to their land," said Caroline Synder, president of Citizens for a Future New Hampshire.

For more information, contact:

David Ellenberger, NH Sierra Club: 603-224-8222

Doug Bogen, Clean Water Action:603-430-9565

Caroline Snyder, Citizens for a Future NH: 603-284-6998

COASTAL WATERS WATCH

by Ron Huber

Oil and Lobsters Don't Mix: Maine faces off oil tanker industry over state's right to regulate oil tankers in Maine waters.

A major struggle between the Maine Department of Environmental Protection (MDEP) and the U.S. Coast Guard and the global oil shipping industry has grown ugly, as the feds and tanker advocates threaten litigation if MDEP fails to officially relinquish state authority over the operation of oil tankers in Maine waters.

But emboldened by recent triumphs over the oilers by Rhode Island and Washington state, a defiant MDEP has essentially fired back: "Nuts!" and will bring the proposed regs as written before the Board of Environmental Protection for adoption.

After an oil barge spill killed more than a million Rhode Island lobsters, that state passed the toughest tug and oil barge safety regs in the country, despite what turned out to be empty threats by industry and the Coast Guard. Washington State, too, has drafted oil tanker regs, in defiance of the Coast Guard and INTERTANKO, the political advocacy group for most of the world's oil tanker industry.

Maine's own George Mitchell, as U.S. Senator, set the stage for this fed vs. Maine conflict. Mitchell was instrumental in seeing that a "non-pre-emption" clause (granting the states authority over tankers and oil barges in state waters, that could not be pre-empted by federal laws), was made part of OPA-90, the federal Oil Pollution Act of 1990. Specifically, Section 2718 of OPA-90 "Relationship to other law" bluntly states:

"Nothing in this Act . . . shall affect, or be construed or interpreted as preempting, the authority of any State or political subdivision thereof from imposing any additional liability or requirements. . ."

Under Maine's proposed regs: "No person may operate, or cause to be operated, any tank vessel or tank barge in the waters of the state unless the vessel or barge:" [summarized]

1) is seaworthy
2) in possession of all required navigational safety and spill control equipment
3) has an English speaking crewmember on the bridge when the ship is under way in state waters;
4) has the onboard capability to transfer oil to or from another vesel if necessary (i.e., if the vessel is leaking); and
5) has an oil spill response plan on board.

In addition, if the state would discourage oil tankers from entering or navigating within Penobscot Bay or River if visibility is less than one mile or if major storm conditions prevail.

Caveat: MDEP's tough stance is the position of the state's oil bureau staff in Augusta, who worked more than a year on the new regs, along with stakeholder groups, including NARP's Coastal Waters Project, Conservation Law Foundation and industry and municipal reps.

But INTERTANKO's heavyweight legal team of Eckert Seamans Cherin and Mellot warned Governor King in a May 1st letter that oil tanker regulation is "within the plenary responsibility of the federal government of the United States under the Supremacy Clause of the Constitution . . . State and local activity, however benign or well intentioned, violates the Constitution . . . The State cannot insulate from constitutional attack its intrusions into this area . . ."

At press time, the head of Maine DEP's Oil Bureau is scheduling a meeting with the Governor to lobby for adoption of the oil tanker regulations. ECS&M is planning a prallel meet with the State Attorney General's office. Whether the governor will side with the interests of his state or the global oil industry remains to be seen. Stay tuned.

Oil and Clams Don't Mix, Either

On April 7th, hazardous waste experts Clean Harbors Inc removed more than 3,000 gallons of petroleum muck from an overfilled catchbasin at the mouth of an industrial outfall perched directly over the clamflats in Stockton Harbor, a semi-enclosed embayment of Penobscot Bay near Sears Island in Searsport, which thirty years ago boasted the richest clam flats of all of Penobscot Bay.

The action came following a complaint by NARP's Coastal Waters Project. In a refreshing departure from their disagreement over oil tankers, the Maine DEP and the U.S. Coast Guard worked together, examining the site and then pressuring the outfall's owner, Ohio-based General Alum and Chemical Corp., into contracting with Clean Harbors.

Following the April 7th cleanup, state marine pollution expert John Sowles investigated the 70 year old facility, and the clamflats below it. He found additional pollution problems, including contamination of the clamflats with a shoreside dump of aluminum tailings from the company's industrial process, a lack of protective berms around the the company's huge sulfuric acid tanks, and an apparent unpermitted white plume coming from a second outfall at the plant that supposedly discharges only water. Sowles' report (available by mail, fax or e-mail from the Coastal Waters Project) concludes the site "is not supporting a biological community typical of a mixed substrate habitat of this type and season" and recommends:

- Further investigation of the pipelines leading to the outfalls (the company claims it lost the blueprints of the pipeline complex underneath their factory);
- Removal of oil-contaminated soil from the shore below oiutfall #2;
- Construction of containment structures to reduce the risk of spills from General Alum's onsite sulfuric acid tank;
- Prevention of further erosion of acid-rich aluminum spoils from the company's shoreline dump into the clamflats below by partially removing the spoils and then covering the remainder with vegetation.

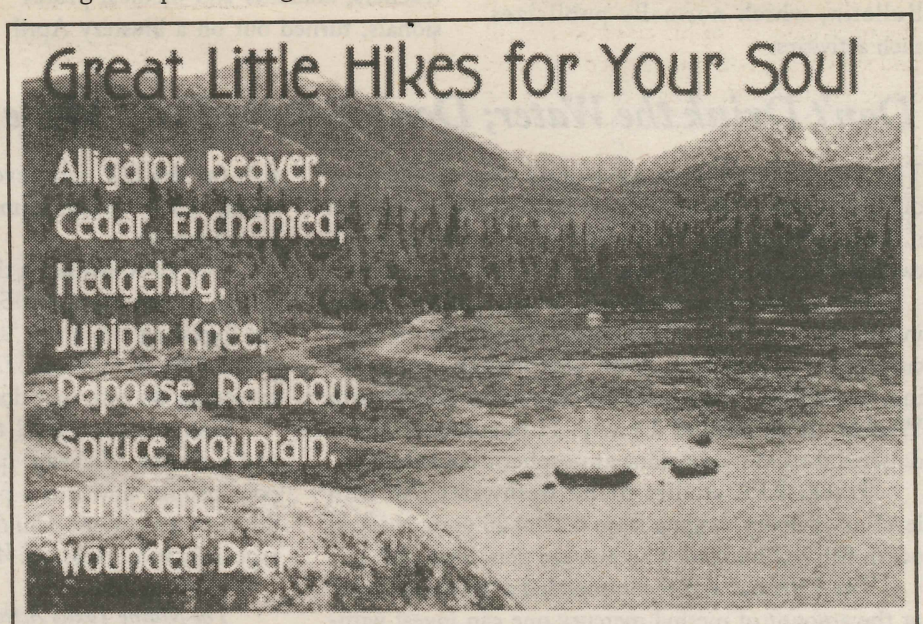
Soylent* Greencrab?: Coping with Maine's least welcome immigrant

On July 20th, delegates of the National Aquatic Nuisance Species Task Force, set up by the federal government to combat the spread of exotic species into U.S. waterways, will consider approving a multi-state green crab managment plan. The green crab was first introduced into the Gulf of Maine at the turn of the last century; subsequent ballast-water injections of green crab larvae have enabled the palm-sized predator to thrive, dramatically reducing the number of softshell clams and other shellfish throughout the Gulf in the process, including all of the Maine coast.

The Task Force proposal would provide money for R&D of ways of reducing the spread of green crabs through the Gulf of Maine region and elsewhere. If someone, somewhere on earth, would find them a tasty crustacean, the resultant fishing stampede would likely lower its population here to negligible levels. For more information, contact the Coastal Waters Project or Bob Peoples, executive secretary of the National Aquatic Nuisance Species Task Force, at 703-358-2025; e-mail <robert_peoples@mail.fws.gov>

To contact the Coastal Waters Project:
Coastal Waters Project
60-A Grace St.
Rockland ME 04841
(207)-594-5717 phone/fax
e-mail <coastwatch@acadia.net>

*The writer alleges that this literary allusion will be understood by the general readership [ed. note]



names that conjure up all kinds of images of Maine's backcountry. They are part of the 177 remote ponds, places protected against motorized access and where one is supposed to be able to experience the wild and a sense of solitude. The ponds are protected by law, but without anyone enforcing regulations, what's happening to them?

This summer, Maine Times wants to answer a lot of questions. Are gates or other barriers to stop vehicles within a half-mile of the ponds being breached? Is there ATV traffic? Are users dumping garbage? We need volunteers to participate in the field survey, with each person visiting two or more of the ponds over the next few months. We will supply a questionnaire as a guide, and we guarantee an uplifting day for your spirit.

Please sign up with Phyllis Austin at 941 Mere Point Road, Brunswick, ME 04011, or call 725-8878.

NY DEC Grants International Paper Permission To Burn Tires

by Peter Sterling

Robert Frost's famous observation that "good fences make good neighbors" reminds us to respect each other's rights. International Paper (IP) openly violated this trust when it was discovered they had secretly conducted a test burn of four tons of tires at their Ft. Ticonderoga mill on the western shore of Lake Champlain from September 30 through October 3. Vermont officials were never notified of IP's plans to burn tires—the Vermont Public Interest Research Group (VPIRG) was the first to find out about the burn from a source in the tire recycling industry.

Unfortunately, the state of New York seems to be using its regulatory authority to encourage this practice. The NY Department of Environmental Conservation (DEC) granted tire incineration a Beneficial Use Determination (BUD). A BUD allows IP to burn up to 45% of their fuel as tires. Since their mill has a boiler capacity of 375 tons/day, they are legally allowed to burn 168 tons of tires every day.

A BUD also eliminates several important environmental and public health protections including conducting an Environmental Impact Statement, adequate emissions testing and environmental review by DEC, eliminating requirements for public input and curtailing efforts to seek alternative methods for recycling tires. DEC continues to downplay the issue: "I'm not sure the nature of this test and the size was such that it was viewed by our folks as essentially significant. It's not something we'd go out and tell the world about," callously stated DEC regional coordinator Stewart Buchanan (Rutland Herald 4/5). DEC also failed to list the test in the state's Environmental Notice Bulletin, which normally publicizes such activities.

Mostly Steam

Mill Manager Calvin Staudt assures us that International Paper's filtration system "greatly reduces air emissions so much so that what comes out of the stack is mostly steam" (Burlington Free Press January 8). If this were only so. According to International Paper's air permit, the plant, which runs 350 days a year 24 hours a day, emits 41 pounds each hour of particulate matter, 190 pounds per hour of sulfur dioxide, 130 pounds per hour of nitrogen oxide, 300 pounds of cadmium each year and 50 pounds of lead annually.

Even in an incinerator designed to burn tires, harmful levels of pollutants are released into the air. International Paper's boiler is not designed, operated, or intended to serve as a waste incinerator. It is not required to meet many of the federal Clean Air Act's Hazardous Air Pollutants standards for solid waste incinerators. This means International Paper is allowed to emit more toxic air pollutants under weaker emissions and operating standards than if it were a dedicated waste tire incinerator.

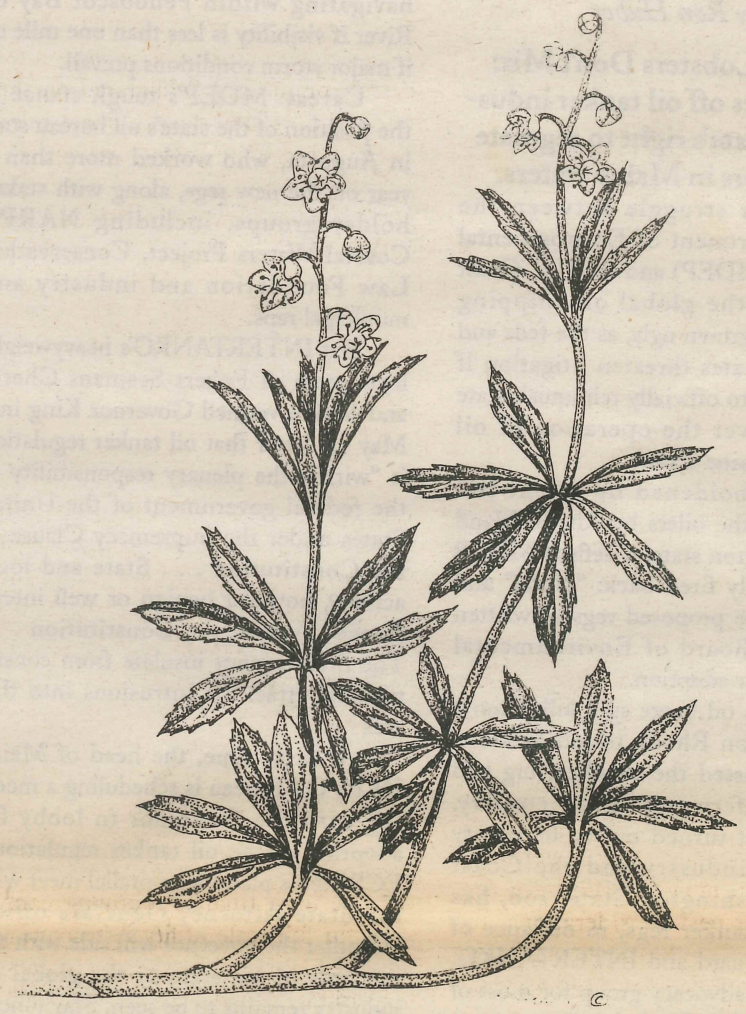
To soothe Vermont's concerns, Mr. Staudt reminds us that International Paper now uses an elemental chlorine free (ECF) paper making process which has had "...a positive impact on the environment." The chlorine used in the ECF process still produces dangerous levels of dioxin as a waste by-product. Yet, International Paper chose ECF over calls from environmentalists to utilize totally chlorine free (TCF) bleaching technology which produces no dioxin.

April March

Vermonters are organizing to stop IP. Over 90 people, including farmers, teachers, students and medical professionals, turned out on a blustery April morning to march across the Lake Champlain Bridge to protest IP's plans. Interestingly, the Burlington Free Press did not deem this event newsworthy though the story ran on the front page of other major newspapers. However, readers of the Free Press the next day did see a full page advertisement (at a cost of $4700) from IP touting the supposed merits of tire burning along with the company's version of its environmental record.

Despite the numerous concerns raised by Vermonters, IP refuses to publicly state they will not burn tires. IP spokeswoman Kelly Fitzpatrick told the Glens Falls Post Star that IP "wants to keep its options open." Until IP drops their plans to burn tires, VPIRG will continue to work alongside Addison County residents and other concerned citizens to stop this blatant disregard for the health of Vermont.

For more information on this issue, please contact VPIRG at (802) 223-5221.



Pipsissewa - *L: Chimaphilla umbellata*

Don't Drink the Water; Don't Eat the Fish; Move to a New Planet

The fish consumption advisories that accompany digests of state Fish and Game laws represent a pitiful if obligatory gesture: the food chain is screwed up, so eat lightly, especially you who are young or pregnant.

As the accompanying box shows, medical waste incineration is, ironically, a major contributor of mercury to the atmosphere. Such contributions are growing, according to **Rachel's Environment and Health Weekly**, at an annual 2% clip. Humans have about doubled the natural baseline atmospheric contribution.

Recent EPA studies found freshwater fish with levels of mercury ranging from 0.11-0.26 ppm; study of ocean fish has concluded an average ppm level of 0.2.

The EPA has also recommended a "reference dose" or the amount of methyl mercury one can ingest without harm: 0.1 micrograms per kilogram of body weight per day. **Rachel's** calculates that a woman of 132 pounds would want to eat no more than 30 grams of fish (at the 0.2 ppm level) per day or 7 ounces per week; or 11.5 ounces of more popular and less contaminated species.

The EPA estimates that in the critical population (U.S.) of women aged 15-44 (childbearing age), 25% are ingesting twice the "safe" dosage, and 15% much more. 20% or 3 million U.S. children are thought to be exceeding the reference dose as well.

Fish of course used to be considered brain food, and a source of cheap, quality protein especially for poor people; now it is a potential source of damage to the nervous system. Children under the age of six are especially vulnerable. *A.W.*

The Maine Toxics Action Coalition is leasding a campaign to alert the public to mercury danger. To join or learn more, contact Ed Friedman, Friends of Merrymeeting Bay, 207-666-3372.

Sources of Mercury	Emissions	Percent	Facilities
Medical Waste Incinerators	65 tons	27%	2373
Municipal Waste Incinerators	55 tons	23%	307
Coal-fired Power Plants	51 tons	21%	1043
Commercial/industrial boilers	29 tons	12%	~2000
Primary lead production	9 tons	3.7%	3
Secondary mercury production	7.4 tons	3.1%	NA
Chlor-alkalai manufacturing	6.5 tons	2.7%	14
Portland cement	6.5 tons	2.7%	112
Other manufacturing sources	36 tons	1.0%	NA
Area sources	3.1 tons	1.3%	NA
Other sources	6.4 tons	2.5%	NA

Tire Incineration Hazards

There are numerous health hazards associated with tire incineration. The rubber in tires contains 25% extender oils derived from Benzene, 25% Styrene, a derivative of Benzene, and 25% 1,3 butadiene. Both Benzene and 1,3 butadiene are suspected human carcinogens. Burning tires also releases dioxin which the EPA calls the most potent manmade carcinogen known. Unfortunately, dioxin does not readily break down in the environment but bioaccumulates in the food chain, concentrating in meat and dairy products.

The incineration of tires also emits numerous toxic heavy metals including mercury, lead, chromium, beryllium, cadmium and arsenic. A 1991 EPA report on burning tires for fuel found that a paper mill which burned tires as just 2% of its fuel had a 111% increase in mercury emissions, a 100% increase in cadmium emissions, a 53% increase in arsenic emissions and an 829% increase in chromium emissions.

Once burned, the tires may continue to harm the environment because the resulting toxic ash will be landfilled on-site near the shore of Lake Champlain. The EPA has already found dioxin levels of 59 parts per trillion in IP's on-site landfill well above the safe level of .000013 parts per trillion.
—*P.S.*

Report on the 1998 Vermont Legislature

by Adam R. Necrason, Esq.

Over the past several months, the Vermont Chapter of the Sierra Club and its activists were hard at work in both Montpelier and around the state encouraging Vermont lawmakers to preserve and protect our environment. This hard work paid off.

Below is a short update on the Club's lobbying priorities for the session (Factory Farms, Energy Policy, Towers, Brownfields, and On-Site Septic Reform) as well as what to look for in the coming year.

FACTORY FARMS: Temporary But Necessary Changes to Existing Law are a Bridge to Comprehensive Legislation Next Year.

In the waning hours of the session, a stripped down version of a bill that had been under consideration for several months was passed into law. Supporters of the last minute effort, which involved very unusual procedural maneuvering in both chambers, see the bill as a good bridge to the passage of a comprehensive factory farm bill during the next legislative session.

Under current law, the Commissioner of Agriculture is required to bring Vermont's 27 large farms into a waste management system permit review process. S.214, as passed, adds to the Commissioner's powers the ability to deny or condition permits based on odor, noise, traffic, insects, flies and other pest considerations. It also allows the Commissioner to revoke a permit in very narrow circumstances. These small but important changes are necessary to consider during the permitting of a factory farm like the new egg farm in Highgate, Vermont.

Sierra Club activists made a huge difference during the debate in the Legislature. Members from all around the State, particularly those in the Franklin County area, met and mobilized as an effective citizen voice.

At the heart of the dispute that blocked comprehensive factory farm legislation this session was the role of the public in the regulatory process. A broad coalition of consumer, community, farm, and environmental groups are calling on the Legislature to give those directly affected by a large, factory farm a real and meaningful role in the permitting of a new or expanding facility.

Unfortunately, the Club was forced to spend a lot of time lobbying against the plan backed by the Chairs of the Senate Natural Resources Committee and the Senate Agriculture Committee rather than for a good bill. Their proposal lumped all big farms, regardless of whether they are simply an animal factory with no land base or a big dairy farm with a large land base, into one permit process heavily controlled by the Commissioner of Agriculture. That plan did not provide community members directly affected by factory farming with a meaningful opportunity to be heard.

Over the summer, informal discussion amongst farm and environmental leaders will take place. The goal of the talks is proposed legislation acceptable to the big farm community and the neighbors of factory farms.

ENERGY POLICY REFORM: No Major Changes, But the Issue Looms, Certain to be Considered Again. Consumers and Activists Need to Keep Focused on This Issue.

Last year the Senate passed a bill that would have completely restructured the retail electric industry. This year, after several committees deliberated on the issue and the Public Service Board ruled GMP, a large Vermont utility, was imprudent when they locked into the Hydro-Quebec contract, the House did not act on an electric utility restructuring bill. The House appeared to be persuaded by those who held the opinion Vermont should not lead the country into the uncharted waters of utility restructuring, but should instead watch and learn from other states.

The Sierra Club is working to ensure any utility restructuring bill that passes contains strong environmental provisions. This includes leading the environmental community's call for a Green Rated Wires Charge system to be included in any restructuring bill considered by the Legislature. The Green Rated Wires Charge would collect the money Vermont needs to prevent the loss of consumer benefits in the electric industry in an environmentally friendly way.

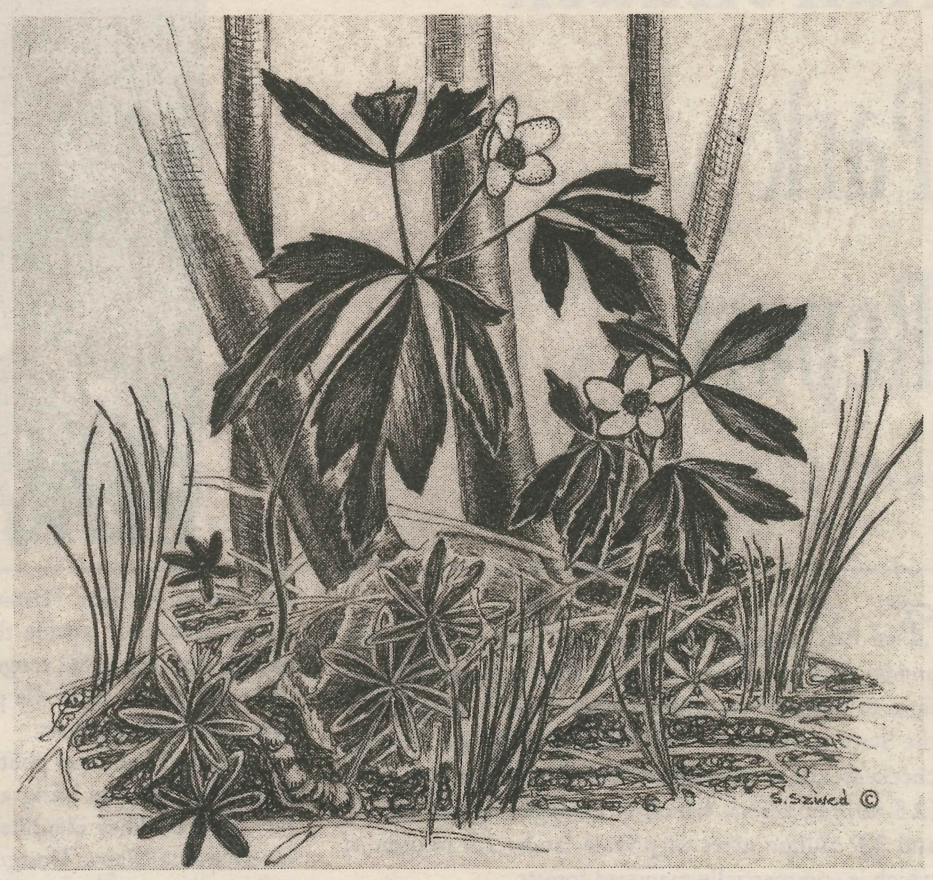
The high finance lobbying campaign for full scale utility restructuring sponsored by big corporations, business associations, and the utility companies will inevitably bring this issue back to the 1999 Legislature for reconsideration.

The Vt. Sierra Club is going to cosponsor an activist conference this coming fall to bring Vermonters together to discuss utility restructuring and energy policy.

While most of the recent energy policy reform attention has been focused on utility restructuring, the Vt. Sierra Club has been leading the environmental caucus's efforts to use tax policy as a way to create sound energy policy.

This past session, the Club pushed for lawmakers to adopt the legislative summer study recommendation that Vermont substitute an environmentally sound pollution and energy tax for the existing gross receipts fuels tax. This change would not raise new taxes. Instead, it would use existing taxes to create market-based incentives and disincentives for the use of specific energy sources. Unfortunately, unrelated political deal-making caused the tax shifting proposal to die in the Ways and Means Committee.

Over the past two years, the Sierra Club has been very successful in demonstrating to the Legislature that environmental taxes, like the pollution and energy tax, are a sound and important source of revenue that can be used to lower other taxes.



Wood anemone - L. Anemone quinquefolia

TELECOMMUNICATION TOWERS: The State Enabled Towns to Use Local Control Over the Siting of Towers.

Vermont faces enormous pressure to dot our mountaintops and ridge lines with huge towers and access roads to provide for the proliferation of wireless communication technology. Last year, the Legislature ensured the State has a say in the construction of towers by moving towers over 20 feet tall into Act 250 (the State's land use and development law). This year, the Legislature gave all town governments the power to control the construction of towers.

H.616 makes the following important additions to Vermont law: 1) allow towns, even those without zoning, to adopt provisions to regulate towers; 2) allow towns to enact a moratorium on new and pending tower permits while the town develops regulations; 3) allow towns to require a tower owner to provide a bond to pay for decommissioning of a tower once it is no longer needed; 4) allow towns to hire independent technical consultants to advise them on the review of tower permit application and bill the applicant for the cost of the consultant; and 5) require regional plans to address tower issues.

Citizens concerned about the construction of towers in their town should ask their town manager or select board if their town already has or plans to adopt tower regulations. The Vermont League of Cities and Towns offers assistance to towns interested in adopting such regulations.

BROWNFIELDS: The Redevelopers of Contaminated Properties Opened a Loophole that May Release Them From Environmental Standards.

H.209 became law this session and amended the State's underutilized 'brownfields program.' The brownfields program offers developers incentives to reuse existing sites rather than building new facilities on the outskirts of town.

The major provisions of the bill 1) allow an 'innocent current owner' of a property to use the program, rather than just potential owners, and 2) cap the developers financial exposure by restricting the State's authority to add unexpected costs to the cleanup plan agreed to by the developer.

The Sierra Club is very concerned about the implications of the cap on the State's authority to 'reopen' cleanup plans in H.209. What if the original plan with the minor amendments the State can make to it are not successful in meeting state and federal cleanup standards? What if unanticipated contamination is discovered during the cleanup process that requires work above the cost cap? The bill clearly puts a lot of pressure on the Vermont Department of Environmental Conservation to be very cautious when drafting cleanup plans.

These concerns led to the House Natural Resources Committee's decision to limit the 'reopener cap' to five sites, and guided the Club's unsuccessful attempt to amend the bill in the Senate. The amendment we offered in the Senate would have required the State to finish a cleanup if a developer at one of those five sites bumps up against the cost cap before a site is clean or safe.

Sierra Club activists should monitor the implementation of the pilot program in H.209 very carefully.

ON-SITE SEPTIC SYSTEM REFORM: H.206 Fails to Pass the Senate.

H.206, which passed the House but not the Senate, would have 1) closed the 10 acre loophole in the current septic system law, 2) allowed builders to use innovative septic system technology to open new land to development, and 3) cured defective property titles.

Adirondack Park Report

by PETER BAUER

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

The Forest Preserve is protected as lands "to be forever kept as wild forest" in the state constitution. This is the tightest wilderness protection in the U.S.; no timber harvesting, strictly limited use of motor vehicles. Created in 1885, lands in the Forest Preserve represent 85 percent of the total wilderness lands east of the Mississippi River.

130,000 people make their homes and livelihoods in the Adirondacks spread throughout better than 100 communities. All land uses in the Adirondack Park are managed jointly by the State of New York through various agencies and departments and local governments.

While there are many complaints all around, the Adirondack Park works extremely well and is not only a place where people and wilderness systems coexist, but represents a successful model for large-scale landscape protection. Each issue the Adirondack Park Report details the most pressing recent issues facing the Adirondack Park.

The Drumbeat for Community Development

Much of 1998 in the Adirondack Park has been dominated by the themes of economic and community development. The main engines of the Adirondack economy have been tourism, forest products, small business, and public sector jobs.

To date this debate has not been particularly illuminating or edifying. It intensified after a decision last December by Governor Pataki to abandon plans to construct a new maximum security prison to house 1,500 inmates just outside of the Village of Tupper Lake in the central Adirondacks.

The Governor had budgeted $132 million for the prison in 1997. After considerable opposition to construction of the prison in the Park, where there are already six others holding over 5,000 inmates, the Governor moved the prison to a site just outside the Adirondack Park boundary.

Bringing Home the Prisons

Ronald Stafford has been the state Senator from Plattsburgh for 28 years. He controls the Senate Finance Committee through which every piece of legislation must pass. His committee writes the state budget and it's a committee he rules with a iron fist. Stafford is local folk hero for his ability to bring back state money to his district. (Fully one-third of all jobs in the Adirondack Park are government jobs; local, county, state or federal.)

Prisons have been a big part of Stafford's legacy in the Adirondack Park and just outside its borders. He has been instrumental in bringing 13 to the region since he took office. Prisons employ thousands in the Adirondacks and outside the area and these are good paying jobs with a full range of benefits and retirement plans; items not generally part of employee pay packages in the Adirondacks.

Stafford and local political leaders in Tupper Lake had been trying to bring a prison to that community for 11 years. They identified a site on lands owned by International Paper Company and zoned the area as industrial use. The prison site would adjoin land owned by an Adirondack success story, Tupper Lake Hardwoods, a local value-added secondary wood products manufacturing company that employs about 40 people and which started in 1992.

Prison EIS

Though this site had been designated as an industrial use area it had never been subject to any studies with regard to the location of the water table, percolation tests, abundance of wetlands, among other things. Nor had village services, such as sewage treatment and electricity supply, which is provided by a municipal system, been studied to determine if extra loads could be handled. For instance, the prison was expected to generate an additional 300,000 gallons per day of wastewater. The village plant dumps treated waste into the Raquette River.

When the Governor made his decision to move the prison, local government officials cried out that a clean, non-polluting industry had been forced out of the environmental community.

Bad site conditions and a lack of municipal infrastructure hindered the Department of Correction's attempts to put together an environmental impact statement. The Adirondack Park Agency (APA) was the lead agency for reviewing this project. Opponents made their case based upon site characteristics and the negative impact of a maximum security prison on the character of the Adirondack Park. "What part of the word 'park' does the state not understand?' they asked.

Supporters made their case that a prison was a clean industry and supplied well paying, secure jobs and that the existing prisons had not hurt the Adirondack Park image any. (The Son of Sam is locked away in an Adirondack state prison; does this impact a climber of Mount Marcy?) Supporters also stated that the prison would "bring our boys home" e.g. provide local prison jobs for local folks who were already commuting to work in state prisons in other towns, both in and outside the Adirondack Park.

Challenge to Environmental Groups

When the Governor made his decision to move the prison, local government officials cried out that a clean, non-polluting industry had been forced out of the Adirondack Park by the environmental community. Moreover, they cried if the state can't build a large facility and undergo an APA review, then certainly no private industry would ever attempt to do so. These officials lamented that a terrible message had been sent to the Adirondack business community.

Following on the heels of these complaints came challenges to various environmental groups to articulate what economic activities they would support and what activities they've engaged to build the Adirondack economy. Some offered strong responses, others failed the test.

The fires lit by accusation and recrimination have produced a great deal more heat than light and the conversation on economic development has sputtered along. Given these recent events it would be a good time to take a look at economic and community development in the Adirondack Park.

A Tale of Two Parks

In his novels Affliction and The Sweet Hereafter, novelist Russell Banks writes about the frozen, working class, rural landscape of northern New Hampshire and the Adirondacks. These are places that routinely export the brightest and most attractive of their youth. Those who remain fail to thrive.

By working in restaurants, as guides, as carpenters, well drillers, in motels, at ski mountains, as caretakers they're dependent upon outside money which fails to trickle down very far. Those who return are failures who couldn't make it in the bigger world beyond. New folks who move in remain aloof from the community and generally make their living through various cottage industries like the production of arts and crafts, but are never fully sewn into the social fabric of the community. Overall, a bleak picture of a region. Part of me accepts Russell Banks' picture as, at its core, accurate.

Part of me is quick to reject these images and attempt to describe a broader, nuanced portrait of a more dynamic region where all sorts of different folks do all sorts of different things. A place where the happiness quotient is very high and where folks are bound together by their individual free choices to live, and make their living, in a rural, thinly populated area shaped by its abundance of wildlife, forests, mountains, lakes and wild rivers.

There are lots of folks who do make their living, and employ others, in all sorts of different ways. There are four colleges in the Park, seven papermills, specialty electronics manufacturing plants, and hundreds of small businesses that have nothing to do with tourism or wood products.

Obstacles Facing the Adirondack Economy

The Adirondack Park has some real obstacles in its way to building a larger economy. First, in a good year we have six months of winter. In a bad year we have more. Second, one of every five acres is a wetland. Third, we have 1,500 mountains over 1,000 feet, which makes construction of an IBM microchip manufacturing plant difficult.

The climate and the topography have made the Adirondacks the most thinly populated area in the

Northeast. Hamilton County, in the central Adirondacks, has a population density of three people per square mile and this is replicated through much of the interior Adirondacks in parts of Essex, Franklin, Herkimer, and St. Lawrence counties.

The small population has resulted a limited transportation system that is not effective for the delivery of goods and services. The small population has also resulted in a largely unskilled, unprofessional workforce. While political leaders talk about the terrific, eager workforce, employers speak of desperate searches for skilled people. Political leaders also talk about the need to stop the brain drain and build an economy where local kids can come home and make a living. (The Town Supervisor in Harrietstown stated that he has no problem keeping half his High School graduating class, it's just that it's the bottom half.)

New York State Mismanagement

The State of New York has never focused in any meaningful way on appropriate rural economic development in the Adirondack Park. Rural economic development in New York generally means something tied to agriculture and there's little of that in the Adirondack Park. Further, just 130,000 people live in the Adirondacks, which is geographically one-fifth of the state, but another 17 million people live outside the Park.

Many of them are also in depressed economies, and they tend to get more attention. The biggest obstacle is the state's Department of Economic Development (DED) chronic inability to focus appropriately in the Adirondacks. The DED cuts the Park into three different administrative regions headquartered in Albany, Ogdensburg (on the Canadian border) and Utica.

No DED staff in these offices are thinking in a serious way about appropriate economic development strategies for communities like Warrensburg, Tupper Lake or Indian Lake. In addition to cutting the Park up into regions, the DED refuses to create an Adirondack Park Office or to focus rural economic development specialists on the Adirondacks. There should be one administrative region for the Adirondacks Park and an office of sustainable rural economic development professionals to focus on the Park.

Economic Development Summit in June

In an effort to address the public debate on economic development, the Pataki Administration has just awarded the Adirondack Economic Development Corporation (AEDC) with an $855,000 grant, over three years, to pursue three main activities in the Adirondacks. All of these fall under the AEDC's Adirondack Initiative.

This Initiative is three-pronged. The first includes establishing an Adirondack Roundtable by holding an economic development summit. AEDC will facilitate this effort of bringing all Adirondack Park stakeholders together for the first time to focus on economic development.

The second item includes a program of providing matching grants to Adirondack communities for economic planning and development. This funding is intended to promote job retention and expansion by helping communities focus on business recruitment and retention efforts, development and investment strategies, and community planning. Funding for such community level planning efforts has never been provided before.

The third element is a coordinated regional business marketing strategy. This effort will be coordinated by AEDC and focus on using the Adirondack Park name to better promote and identify the region. Regional targeted marketing pieces will be produced to attract businesses as well as better promote existing businesses.

Why IBM Has Not Come

The AEDC has been the most successful economic development institution in the Adirondacks. It's been around for 14 years and its growth has been interesting. For much of its early years it focused on how it could bring IBM to Tupper Lake. This recruitment strategy had no successes. There are many reasons why IBM is not moving to Tupper Lake and they have nothing to with environmental regulations. They have more to do with work force, industrial infrastructure, and quality of life for company leaders, things like restaurants, theaters, country clubs, golf courses, high powered public schools—things in short supply in most Adirondack communities.

There should be one administrative region for the Adirondacks Park and an office of sustainable rural economic development professionals to focus on the Park.

A Community Development Bank

People who knocked on AEDC's door for help were small business people who needed training to either improve or expand their businesses or to start up a business. These were small shops of one to five folks. AEDC refocused on where the need was and has built up an impressive entrepreneurial assistance center.

AEDC also started a Community Development Bank and has $1.75 million in lending assets. This bank focuses on high risk loans appropriate for the area's tourism, forest products and small business economy and has been very successful. Both the Commission on the Adirondacks in the Twenty-First Century and the Northern Forest Lands Council recommended the creation of community development banks.

An Entrepreneurial Economy

Economic development is a job growth area. There are scores of different non-profit corporations, state offices of the Department of Economic Development, county industrial development agencies and planning offices, town level economic development coordinators and Chamber of Commerce staff, regional economic development organizations, state, county, and town tourism promotion offices, and various think tanks and incubation centers.

This array of activity doesn't get around the fact that our economy is largely driven by the person with an idea and the ability to marshal the resources to make it happen. Some towns are more active than others in attempting to facilitate growth. They identify and designate industrial use areas; locations without natural resource, residential, or commercial conflicts.

Some of the small towns of the Adirondacks act almost as venture capitalists by identifying land to be developed and the product to be produced and then market this package with varying successes hoping to find a business to move in. Others wait for an appropriate business to come to them. Others try and expand what's already there. Many simply bemoan their fate.

Making the Wilderness Experiment Work

Unfortunately talk about economic development is generally backwards. It's often stated that Adirondack communities need to build and expand their economies so that the communities' youth will have a future to live and work there.

I disagree with this goal. Young people move into the Adirondacks all the time and leave it as well. Life in the small communities of the Adirondacks is not for everyone, but it seems to be right for 130,000 out of 245 million people who live in the U.S. Whether people grow up here and choose to stay or choose to move here they exercise free choice. And it's a choice about living in quiet, safe, beautiful, rural communities with terrific access to wilderness, wildlife, lakes and rivers, mountains and forests. It's a free choice to live within a protected landscape.

The goal of Adirondack communities should be twofold: 1) how can we build strong communities that sponsor the development of authentic individuals who can go out into the world and live wherever and be whomever they choose? and, 2) how can we make this experiment of people living with wilderness continue to work?

Just the Facts, Please

In the past few years a couple of studies relevant to the Adirondack economy have been produced that standout from the usual sophistry.

In December 1994 the Rockefeller Institute of Government and the NYS Department of Labor (NYSDOL) collaborated on a study to detail the number of actual jobs within the boundary of the Adirondack Park. This was the first study of its kind and the results were surprising. One problem traditionally in the Adirondacks is that the Park includes parts of ten counties and contains just two in their entirety. Therefore most county-level data is not accurate for assessing conditions in the Adirondack Park.

The Rockefeller/NYSDOL study looked at various data sets for the Adirondack Park, for New York State, and for the U.S. For most data, the study looked at trends over the period 1985 to 1992. For overall job composition it found: in

The Hour Pond Outlet. Photo © Bob Koch.

the Adirondacks government jobs were 34%, trade 21%, services 25%, manufacturing 9%, and other 11%; in New York State government jobs were 18%, trade 21%, services 30%, manufacturing 13%, and other 18%; in the U.S. government jobs were 17%, trade 24%, services 25%, manufacturing 17%, and other 17%.

The industries with larger concentrations of jobs in the Adirondack Park than in New York State or the U.S. were local government, state government, hotels/motels/camps, paper products, eating/drinking establishments, recreational services, lumber/wood products, and religious organizations. In short, government jobs, tourism, forest products jobs.

For the years 1989 thru 1992 the study found that employment and payroll growth in the Adirondacks exceeded both the state and national averages. For employment figures, the Adirondack Park grew at a rate of 1.6%, whereas the state suffered a growth rate of -6.3% and the U.S. grew at just 0.4%. For payroll figures, the Adirondack Park grew at a rate of 2.2%, whereas the state grew at -1.7% and the U.S. grew at 1.8%. The average annual wage in 1992 was $20,621 in the Adirondacks, $25,145 in upstate New York, $39,787 in New York City, $32,411 in New York State and $25,903 in the U.S.

The job growth figures surprised many and challenged the oft heard lament of how the Adirondacks is in a constant depression and is the last area to benefit from a strong national economy and first to suffer from a national recession.

The Adirondack Condition

Earlier this year Environmental Advocates, from Albany, released a study called The Adirondack Condition, which sought to present data on a wide swath of economic, social and quality of life conditions in the Adirondacks. This report was prepared by Jim Northup, of Ad hoc Associates of Vermont, and is a top piece of work, but because it relies mostly on county-level information of just eight counties it's a better portrait of the overall condition of northern New York than the Adirondack Park. Information from the cities of Plattsburgh in Clinton County, Glens Falls in Warren County, Canton, Potsdam and Massena in St. Lawrence County, all on the edges of the Adirondacks, skew the data. Nevertheless this study is ambitious and provides valuable information about conditions in what is called the Adirondack Region.

A key finding in this report reaffirmed the Rockefeller/NYSDOL study that jobs in the

Estuary turned marina, Lake George, Adirondack Park. Photo © John McKeith.

Adirondack Region grew at a 2% rate from 1990 to 1994, whereas seven of eight other regions in the state suffered negative jobs growth (the Albany area was the only other positive growth area at about 0.5%). In 1994 the Adirondacks was tied with New York City for the highest unemployment rate.

For per capita income, the Adirondacks clocked in last at $11,190, while Syracuse at $12,928 and the Southern Tier at $12,100 were the closest; the highest was Westchester at $24,071. The Adirondack region led the state with people living below the poverty line in 1990 with 13.9%, whereas the Southern Tier at 12.9% and Buffalo with 11.9% were the closest; the lowest was Long Island with 4.2%. Revenues from the state and federal governments comprised 44.2% of local revenues in the Adirondack Region. The Southern Tier and Syracuse were close behind with 43.2% and 43.3% respectively. Long Island was the lowest with 22.8%. In data on the measurement of workers employed at home or less than 15 minutes from home the Adirondack region scored the highest with 51.6% (Long Island was the lowest with 27.6%).

In data on criminal activity the Adirondack Region scored well. This contradicts the generalized correlation between poverty and criminality. The Adirondacks was by far the lowest in motor vehicle thefts per 10,000 residents (65.4 compared with 1,300 in New York City) and in felony indictments per 10,000 residents (38.3 compared with 259.4 in New York City).

For teen pregnancies the Adirondack Region saw 13.2%, outpacing most other regions in the state (New York City had 12.9%, Buffalo had 12.9%, and the Southern Tier had 13.2%). In educational data the Adirondack Region ranked last in percent of population over 25 who had a Bachelor's Degree with just 8.6%. The closest other regions were over 10% and the highest was 18.9%. Adirondack pupils ranked last in expenditures per pupil, but best in pupil-to-teacher ratio.

And the Adirondack Region scored highest in all data for people living with the greatest amount of open space, wilderness, water, and for having the lowest incidence of toxic waste and lowest amount of treated wastewater. Of course, the highest black bear harvest and highest number of fishing/hunting license sales were in the Adirondack region.

National Wildlife Federation to Review New York State Forest Operations

From a NWF press release dated May 4th

The National Wildlife Federation (NWF) announced recently that it is beginning a nine-month evaluation to determine the sustainability of harvesting operations in New York state forests as part of a pilot educational project in conjunction with the New York Department of Environmental Conservation.

The evaluation, which will cover 700,000 acres of New York state's "multiple use" forest lands, builds on a growing national and international effort to certify sustainable forest management through the use of independent scientific review teams. Under this program, wood from "certified forests" can be labeled and marketed as coming from well-managed forests. Certified forests are deemed to successfully balance long-term timber production with the maintenance of critical wildlife habitat, forest biodiversity, and other ecological features.

The 700,000 acres of land to be evaluated comprise the 'working forest' portion of New York state forest lands. These lands are designated for logging, hunting, fishing and dispersed recreation. However, none of the forest lands to be evaluated fall within the state park system, or within the 'blue line' of the Adirondacks or Catskill Parks.

A four-person review team consisting of experts in forest ecology, wildlife biology, harvesting systems and social science will take to the woods in New York in August. The NWF team will supplement its field work with a series of public meetings and interviews with key forest and local interest groups throughout the state.

NWF's Northeast Natural Resource Center based in Montpelier, Vermont, will lead the certification review team. NWF has certified over 100,000 acres of private and public forest land in New England through a unique collaboration with the SmartWood program of the Rainforest Alliance.

Department of Interior Calls For Northern Forest Focus

Reprinted with permission from NWF's EnviroAction newsletter

In his 1999 land conservation budget request, Interior Department Secretary Bruce Babbitt makes an unprecedented call for a land-acquisition focus on the Northern Forest ecosystem—placing it lower in priority only to the Everglades region.

The 26 million acre Northern Forest is the largest remaining wild and working forest in the Eastern United States. Stretching from New York's Adirondack Mountains to Maine, it's home to diverse wildlife, and also provides rich opportunities to connect with nature for more than 70 million people living within one day's drive.

The Interior Department is recognizing both the national importance of this special place and the all-too-real threats to its continued well-being. The National Wildlife Federation and its Northeast Natural Resource Center (NNRC) have worked for years to protect this irreplaceable national resource, and have long been active members of the Northern Forest Alliance. The Alliance is a coalition of more than 35 state, regional and national organizations dedicated to protecting forests across the northern tier of New York, Vermont, New Hampshire and Maine.

A NNRC study released in 1996 examined options for conserving the Northern Forest's most ecologically sensitive areas, pointing out that the Northeast region has the smallest amount of public forest land per capita in the country [and relative to the overall land base as well; ed. note].

The Interior Department's official recognition of the value of the Northern Forest represents a substantial accomplishment on the part of Northern Forest Alliance members, the region's congressional delegation, and of course the citizens and friends of the Forest.

Dr. David Perry Helps Launch Vermont Loggers' Guild

Overcoming Dualistic (& Duelistic) Forestry by thinking across boundries, ecologic and otherwise

by Andrew Whittaker

Forest ecologist David Perry of Hawaii and Oregon came to Craftsbury, Vermont to lead a three day workshop on ecosystem management training at the end of May. The workshop represents over six months of preparation by the newly formed Vermont Loggers' Guild.

The VLG hopes to link low impact loggers and like-minded landowners in fruitful economic association. (See sidebar "VLG Standards.")

Perry's course, which involved 30 loggers, landowners, foresters and others, laid a conceptual foundation for future Guild efforts. Conference organizer and Guild coordinator Barbara Alexander of Craftsbury stated in her introductory remarks, "In order for us to plan together, we all need to speak the same language, which is the language of the forest."

Stand and Landscape

Perry's definition of ecological science as "a painful elaboration of the obvious" underlined his approach to the considerable material he presented over the next two days: an elaboration of familiar stand level dynamics in the context of the wider landscape and ecosystem structure, function and process.

What are ecosystems? How do they work? How can there be an ecological forestry? What are its basic assumptions and foundations?

Preserving Future Options

Perry suggested that the quest for an ecologically based forestry has emerged from increasing numbers of people stepping outside the machine of industrialism and questioning human impact on ecosystems. His experience of the spotted owl-old growth tensions of the Pacific Northwest has convinced him that sustainability of ecosystems is possible once communities agree on that which ought to be sustained.

A new forestry, in conjunction with unmanaged forest reserves, is key to achieving forested ecosystems that can sustain an array of ecosystem functions. Such forestry will for Perry exhibit sensitivity to place and preserve future options as part of an adaptive management approach. "Throwing out the textbook" of traditional silviculture entails an experimental approach based on observation of logging's stand level impacts—with recognition that these cumulate on the landscape level to a "tyranny of small decisions."

Basic Assumptions

The operative assumption of ecological forestry is that that "there is a way to depart from natural processes but remain within [our] objectives"—which include a logging that mimics natural disturbances, and managed forests that mimic natural forests.

"We are trapped in the assumption we can do this," conceded Perry, while noting that the assumption of industrial forestry is that "humans can replace [the forest's] natural functions" and sustain productivity through inputs of capital and energy while sacrificing "redundant" elements of biodiversity.

The risks of such an approach are increased susceptibility to disturbance by pests and disease, and a loss of biotic regulation of water, soil and such elements of food webs as top predators. All these impacts, Perry emphasized, ramify and ripple down through a complex system we only begin to understand.

Practical Considerations

With this as background, Maine's Mitch Lansky presented his slide show on Maine industrial (starring Georgia-Pacific) and low impact (co-stars Mel Ames and Sam Brown) forestry. Lansky offered his "managment tree" for silvicultural decisions: is there a need to cut at all? if so, can single tree selection work, if not, try patch cuts, and so on up to some (presumably) sane stopping point shy of township-sized clearcuts.

Discussions of forestry often come down to a debate of even-aged versus uneven-aged (or "selection") silviculture; the Craftsbury session was no exception. Here, logger Russ Barnes weighed in with his observed that tall trees smash regeneration and that, with individual tree selection, "the last cut (in a cutting cycle) is a highgrade."

Perry noted the silvicultural risks of selection and an uneven-aged approach. "The number of entries in a cutting cycle is as important a consideration as the patch size," he emphasized, citing in even-aged managment the advantage of minimal entry.

Perry also summarized another debate about the term "rotation" (some foresters tend to bristle at its use in the uneven-aged context) by urging that attention be paid rotation length, recovery time for forests' to return to old growth condition, and the proportion of forest that we desire to attain to old growth.

Perry also remarked that the evolution of silviculture, with new models for retaining structure from one rotation to the next, has blurred lines between even and uneven-aged management.

Barnes also noted that the small-scale logger is up against larger competitors who reap the "efficiencies of mass pillaging" by which they garner production premiums and also collectively dampen price (by overproducing). "It always comes back to the economic structure," observed Lansky.

Summing Up

It was in fact the disassembly of dualities that emerged as the implicit connecting theme of Perry's presentation and his class's engagement with it. "Is there something out there, Nature, separate from us?" mused one participant, taking note of the Vermont landscape's human history and its "human old growth." "That [duality] makes me feel uncomfortable," he concluded, while Perry responded that humans must in fact locate themselves within Nature through stewardship and observation.

Quoting his wife, he summed up, "We spend too much time as humans worrying about things smaller than ourselves and should think more about those that are larger."

[The conference concluded on the third day with a tour of the Moffatt family forest in Craftsbury. Coverage of this and other conference and VLG particulars next issue, including the emergence of a new world dominating organization, the Mycchorhizzal Association—with spiffy T-shirts available today! For more information about the Vermont Loggers' Guild, please contact VLG coordinator Barbara Alexander at 802-586-2288.]

Interest in Low-Impact Forestry Grows

by Rich Hewitt
[excerpted by permission from The Ellsworth American 5/21/98]

[Hancock County's Planning Commission, as **Forum** readers are probably aware, has been sponsoring a series of low impact forestry workshops. The latest, on May 16, included demonstrations on a new 185 acre model forestry site in Ellsworth. Demonstrators included Cambridge, Maine's Sam Brown:]

Brown has developed a method of logging the forests he works with, in the least intrusive manner possible. By using smaller machinery, which allows him to create narrower trails, a winching system, which allows him to create fewer trails, and by cutting the wood to length in the woods, he said he can work a forest and cause much less damage than with convenional logging methods.

There are tradeoffs in low-impact forestry. Because the practice encourages leaving the best trees to mature into high-quality and high-value timber, landowners need to be willing to accept less income and to make it worthwhile for a logger to cut the land.

Thomas Baier, a Swedish forester working with a Norwegian company in the U.S., encouraged loggers, foresters, and woodlot owners to take a closer look at their product before shipping it to market. While many loggers now consider the butt end of a tree to be more valuable, [potential veneer, ed. note] Baier suggested that the third cut on a tree can be more valuable if it is clear or contains "live knots." Those sections of trees, he said, can be marketed as high-end timber because they can be turned into interior lumber such us paneling and moldings.

Cutting to length in the woods allows a logger to pre-sort different quality logs more easily, making it more feasible to market them separately.

Baier also suggested the formation of a marketing association that would allow loggers and woodlot owners to present a united front to the industry buyers.

Teresa Davis, a forester from Otis, explained the forestry plan for the small section of the Black House forest that is being cut as a demonstration project. Davis explained that the woods had not been managed during the past 50 years and were in need of attention. Although the present project focuses on just a three acre section of the woods, Davis said she is working with the Black House trustees to develop a plan for the entire 185-acre forest. They are awaiting funding through the state's Forest Stewardship program to develop a plan for the rest of the parcel.

Sam Brown (right) of the Low Impact Forestry Project demonstrates his tracked skidder. Mitch Lansky of the Project (left foreground) listens attentively. Photo courtesy of Ron Poitras, Hancock County Planning Commission.

"The most crucial part of a forest management plan is what the landowner wants," she said. "In this case, aesthetics is the number one priority."

With that in mind, she has planned a cut that will remove less than one-third of the trees in the woodlot. The resulting openings, she said, will encourage regeneration of the forest.

"You usually would keep the best and cut the rest, in order to encourage the highest quality trees," Davis said. "In this case, where aesthetics are so important, we're leaving some trees that probably should be cut, just so we don't leave too big an opening."

New Standards for Forestry

There is an alternative to industrial forestry. Low impact forestry reduces known harmful impacts so that after the cutting is done, there is still a functional forest.

by Mitch Lansky

With Low-impact forestry, the whole forest is considered, not just its value for pulpwood or sawlogs. Foresters must look at the tree crowns, trunks, roots, the soil, the water, forest stand structure, and the distribution of wildlife habitat across the landscape.

For a forest to be functional, it must have all the required parts, and all the required processes. Forests, however, are always changing through human management and natural disturbances (such as wind, insects, diseases, or fire). LIF foresters must be prepared to accommodate this change so that over time, the parts and processes are still functioning in the forest landscape.

Goals of Low Impact Forestry

Low-impact practitioners will strive to manage for well-stocked (having optimal spacing for productivity and quality) stands with minimal crown damage. The forester will favor, over time, late-successional species and canopy structures. Large gaps and early-successional stands should be a minor part of the landscape.

Low-impact practitioners will encourage an increase in average diameter, and an increase in quality leading to the highest value forest products. They will also leave some large-diameter 'wildlife trees' for cavity-nesting species. They will take special care not to break the bark, especially during seasons of highest vulnerability.

LIF practitioners will reduce root damage by minimizing impacts of heavy equipment on the soil. LIF practitioners will also ensure that residual stands in vulnerable stand types are windfirm by avoiding opening the canopy too much and by leaving the dominant, windfirm trees.

LIF practitioners will strive to minimize soil disturbance, and where damage is unavoidable to isolate it to the smallest possible area. They will pay attention to timing of cut, entering stands when conditions are least vulnerable. They will leave plenty of organic matter, including tops, branches, and even trunks, to rot. Where there has been a soil disturbance or nutrient depletion, the LIF practitioner will allow ample time for recovery.

LIF practitioners will carefully control stocking and soil disturbance to maintain high quality water from the forest. Special attention will be paid to riparian zones, especially around the most sensitive streams where these management zones should be wider, not smaller.

LIF practitioners will strive to provide habitats adequate to support viable populations of all native species and assure the presence of these habitats in the landscape over time. This means having representation of all successional stages—with an emphasis on later-successional stages. This also means identifying habitats of rare or sensitive species and giving these a higher level of protection.

LIF Logging Guidelines and Standards

How does one get the generalizations of the principles and goals turned into more specific practices? Who is responsible for their implementation?

Responsibility

Low-impact forestry is a partnership between the landowner, the forester, and the logger. It starts with the landowner who has to know what LIF is and has to make the decision to do it. For LIF to happen, however, the landowners (if they do not do the work themselves) must be able to contact qualified foresters and loggers. They have to agree to work within LIF standards. Otherwise the cut may not turn out as the landowners wish.

Without the logger, LIF could not happen, despite the best long-term plans. The logger must understand the techniques and have the appropriate equipment to perform LIF. Before cutting a stick of wood, the logger must know the best markets to ensure that the wood is cut to the optimal lengths considering diameter and grade.

For low-impact forestry to work, therefore, the landowners, foresters, and loggers involved must all understand the goals and principles of LIF. And they must all agree to abide by those goals and principles. And the foresters and loggers must follow basic guidelines and standards.

Forester Guidelines

Stand Assessment. Before coming up with a management plan, the forester must assess and map the stand taking into consideration such factors as stand types, species, volume, quality, watersheds, and wildlife habitat.

Landscape planning. Watersheds, ecosystems, wildlife ranges, and disturbance patterns do not normally coincide with property boundaries. For landowners who own thousands of acres, landscape planning starts to become possible.

With smaller ownerships, the foresters and landowners should try to cooperate on a community basis to ensure that wildlife needs (such as effective corridors for migration and dispersal) are met.

Allowable cut. A number of methods can be used to calculate allowable cut. In doing these calculations, the forester must account for areas where there will be no cutting or less cutting because: 1.) the site has such low productivity that sustainable management is not economically viable, 2.) the site is environmentally sensitive (riparian zones, deer yards, slopes, species of special concern), or 3.) the site is in a baseline reserve.

Because the degree of tree crown closure (and thus residual stocking) is so important for both productivity and wildlife, one favored method is to classify stands as 'operable' when they have more than a minimum above a recommended stocking level to allow a commercial cut. The quantity above the minimum stocking is the allowable cut.

Another method is to ensure that cut is less than growth. Over a rolling ten year period (for larger management units), cut should average less than 70% of growth, allowing some growth to be reinvested into the ecosystem. This calculation is normally not done at a stand or woodlot level. The area is too small and the harvest too infrequent to use 10 years as the base. Often harvest occurs at 20 or more year intervals, so a longer time frame can be used.

Cut can, of course, exceed growth for species that are over-represented (such as balsam fir or red maple) and less desired for long-term stability.

Because the majority of land should eventually be classified as sawtimber (to ensure that relatively closed-canopy mature and late-successional stands are the landscape context, not just a small content) even-aged management (where a cut is made that reduces the stand to seedlings and saplings, leading to a single age class) should only be done if uneven-aged management will not work for the stand.

Priority for even-aged management should first go to irregular shelterwood (where some of the overstory is retained), and only go to regular shelterwood where regeneration is well-established before cutting the overstory.

Cutting cycle. More frequent, light cutting (every 5 years, for example) creates the potential for increased residual damage. Less-frequent (every 20 or 25 years), heavier cuts create potential for more drastic stand changes. The forester must reach a compromise between these two possibilities.

Residual stocking. The forester will consult silvicultural guides appropriate to the stand type. To ensure relatively-closed canopy areas in large blocks (for adequate interior species habitat), minimum stocking should be at least 65% of

crown closure, increasing to 75% of full crown closure for riparian areas. Near riparian areas, to prevent changes to water quality and flow, cuts should not exceed 25% of standing volume.

Crop trees. The forester will identify crop trees and potential crop trees—trees that have good form and quality. These are the trees to leave after harvest and should be given special attention to avoid any injury that would diminish value. The normal target is around 50-75 per acre. Common terminology calls trees acceptable growing stock (AGS) and unacceptable growing stock (UGS). Using this approach of AGS and UGS a harvest can be designed to improve stands and focus on the future crop trees.

Pecking order. The forester should mark trees to be cut based on a 'pecking order' that would prevent highgrading and thus stand degeneration. First to be cut should be high risk (trees that would not survive to the next cut), low vigor, and poor quality trees (UGS). With a pecking order, the logger would be more likely to cut short-lived, poor quality medium-sized suppressed trees than long-lived, high quality, large-diameter dominant trees that are still growing well.

Mast trees. Mast trees are those that produce edible nuts, seeds, and fruits that are important for wildlife. If no high-quality (for lumber) trees are suitable for mast, some low-quality mast-producing trees (such as beech) should be retained.

Dead wood. The forester will consult recommendations from forest wildlife guides to determine a minimum of snags, dead trees, and dead-downed trees. Preference will be given for larger-diameter (over 18 inches) leave trees (trees left behind), and allowance will be made to develop recruitment trees (trees that will be allowed to eventually develop into large-dead trees), since current dead-standing trees eventually fall over. The additional factor of safety must be considered since dead snags and branches have a frightening record of injuring loggers.

Logger Guidelines

Felling and limbing. LIF loggers will use directional felling to avoid damaging residual trees. Limbs will be left in the woods to provide wildlife habitat and to rot and supply nutrients.

Getting trees to trails. LIF loggers will move single large stems or a few small stems (but not winch whole trees) to the trail. If winching, the logger will, if necessary, use snatch blocks to avoid damaging valuable crop trees. The logger will avoid digging up the soil during winching and use such items as grapples or cones when needed.

Wood trails. Wood trails will not exceed 10 feet wide (to give several feet clearance to machinery), allowing crown closure over the trails. Machinery wider than 7.5 ft. should be avoided, unless trees are very large and smaller equipment will not do the job.

LIF practitioners should strive to distribute trails more than 100 feet apart to minimize damage to soil and roots. Some low-impact practitioners with radio-controlled winches distribute trails 150 feet apart. With horses, trails can be up to 300 ft. apart.

Getting trees to yards. Loggers should run machinery on permanent trails, with little or no driving to the stump or creating single path trails The LIF preference is to carry, rather than drag bunches of logs. A forwarder is thus preferred over a skidder. Use of short logs, rather than tree-length logs, minimizes damage when going around curves.

The result, however, is more important than the method used. If a logger can use a small skidder and do minimal damage, then the skidder is acceptable. Whole-tree removal with a grapple skidder, especially of hardwoods, violates too many LIF principles and has the potential to cause too much residual damage to be acceptable.

Residual damage. For long-term forestry, it is essential not to damage the residual, or 'crop' trees. During cutting, winching, and transporting trees, every attempt will be made to avoid such damage. While damage to tops and branches is of concern, it is even more important to avoid damage to trunks and roots.

Some LIF practitioners in New England guarantee that they will damage less than 5% of crop trees. This figure is also a goal in Sweden, where any opening in the bark bigger than a matchbook is counted as 'damage.'

Yarding. LIF yarding areas can be kept to a minimum in size with minimum damage to soil if short logs are piled with a loader, rather than pushed with the dozer blade of a skidder. LIF practitioners need less than 1200 square feet for yards on average. Whole-tree yarding with grapple skidders and delimbing in the yard requires too much space, is too damaging to residuals and soil, and removes and damages too much organic matter to be suitable for LIF.

Truck Roads. Road width and densities should be minimized. Road rights-of-way should be kept between 15-30 feet with a maximum of 33 feet. Road density becomes an issue in bigger blocks of non-settled forest depending on heaviness of traffic and need for ditching.

Landscape conversion. Loggers and managers should strive to keep the percent of forest taken out for permanent trails, yards and roads to less than 15%.

Water quality. LIF loggers will follow state BMPs to prevent soil damage leading to siltation of waters. In addition, foresters will take into account soil type, watershed characteristics, and season of cut to further advise loggers as to when logging standards should be even stricter than BMPs. Preference for LIF practitioners is to log when the soil is frozen or dry.

Economic Considerations

LIF landowners have a broad definition of wealth that includes the value of the standing forest as well as the value of what is removed. Some of the values of a standing forest, such as wildlife habitat, water quality, and aesthetics, are not easily translated into dollars, but are important none-the-less. A key challenge is to make LIF economically viable to both landowners and loggers over the long term.

In the short-term, the logger is taking more time to remove less wood. This means more cost per unit of wood removed than with more conventional logging. For LIF to be viable for the logger, the landowner should pay based not just on what is removed, but also for the quality of what is left behind. If conventional loggers were assessed fines for the costs they create to the residual stand, highgrading would not be as attractive.

How to Pay

There are a number of ways to pay for

LIF. No matter which method is used, the logger needs to know his costs to ensure that he will be adequately compensated. The simplest method for most landowners is to accept lower stumpage rates.

Another simple method is to pay by the hour, thus assuring that the logger's time is adequately compensated, despite the difficulty of operations. Some landowners pay by the volume removed, regardless of the wood value, thus taking away the incentive for highgrading.

Another option is to have contractors give bids per acre with incentives for the quality of the work. The landowner can be assured that low-impact practices are used by writing it into the contract and having the forester supervise the operation.

Better Returns

Because of the increased short-term costs and smaller cuts, often of low-valued wood, it is essential that LIF practitioners find ways to get better returns. A number of ways this can be done include:

•Locate better paying markets. Aggressive attempts to find the highest-paying markets can make a very large difference on returns. Sometimes small, 'niche' markets are available for odd species, sizes, or shapes of logs.

•Bucking and sorting for best markets. The logger needs to know the markets before the wood is cut. Otherwise he might cut logs to the wrong length and have to ship to lower-paying markets. A knowledgeable bucker and sorter can make a big difference in returns.

•Bargaining for better prices. Sometimes the same mill buys wood at different prices from different sellers. Ability to bargain is increased with volume—so cooperating with other landowners can increase bargaining leverage. The season at which the wood is sold can also make a difference.

•Cut and leave. Some mills buy wood at a price that is lower than the cost of cutting and hauling it. LIF loggers should accurately know their costs of production to be able to make such a decision. In such a case, it makes sense for the logger to just cut the undesirable trees and leave them on the ground to rot. This will at least benefit the forest. If enough woodlot owners did this, maybe the mills would get the message to pay enough to make management worthwhile.

•Subsidies. The government offers a number of tax breaks and incentives for thinning, stand improvement, and wildlife habitat improvement. LIF foresters should be well aware of such programs. In New Brunswick, some woodlot cooperatives have worked out incentives for thinnings that are partly funded by landowners, contractors and mills. These incentives are justified on the grounds that such cutting has long-term benefits to the whole community.

•Premiums. There are a number of certification programs operating in Maine now that can give landowners the potential to sell their wood at a premium. Anyone following the LIF guidelines should be able to qualify for certification.

Continuity

One way to ensure continuity of management is to offer the logger a long-term contract with incentives for stand improvement. The logger would have a chance at the next cut, but that right could be transferable.

Landowners could explore ways to ensure that the LIF program continues after they are gone. Management restrictions can be put into the deed. The land could be put into a trust with LIF guidelines specified as a requirement.

The ultimate way to ensure continuity of management is to pass on the LIF ethic as part of the culture. We need to act now as if we intend to have future generations, not as though this is the last. Forests, which by their nature require a long-term perspective, are a good place to put this ethic into action.

Excerpted from a working draft of Low Impact Forestry Standards & Guidelines available in full from Ron Poitras, Hancock County Planning Commission, RR 4, Cox 22, Ellsworth, ME 04605.

A Legacy For Low Impact Forestry in Maine

Family, friends and colleagues of Janet Engle Cormier, who passed away last June, have generously offered financial support for Low-Impact Forestry work in Maine. Her life and work as a soils scientist and someone who could easily bridge her practice in the field with researchers, policy-makers, and young people, has inspired in us a small hope that her work may continue. Those of us who came into her circle of life hope that others who knew her, and perhaps a few who did not, might consider supporting Low Impact Forestry in Maine. Funds raised will be used to build bridges across disciplines and to educate ourselves and the next generation of land stewards about responsible forest management and the soils upon which it depends. Contributions may be sent to NARP: ME Low Impact Forestry, POB 52, Groveton, NH 03582.

Vermont Loggers' Guild Mission and Principles

Ecologically advanced standards will guide landowners & loggers to a more joyous & fruitful union

Mission Statement:

The mission of the Vermont Loggers' Guild is to encourage the restoration and preservation of natural forest ecosystems and to promote the economic well-being of responsible landowners and loggers through:

a) the sharing of knowledge
b) the support of low-impact forestry practices and
c) consideration for the long-term health of our forests.

Guiding Principles

The following principles are intended to assist the Vermont Loggers' Guild in carrying out its mission.

The Vermont Loggers' Guild recognizes...

- The importance of all ecological processes in the forest ecosystem and the interrelationships among all species in the forest;
- The critical role of forests with respect to hydrology and water quality;
- The critical role of soils in the structure and functioning of healthy forest ecosystems;

The Guild advocates . . .

- The importance of forested riparian zones for preventing erosion, providing travel corridors and sustaining aquatic systems;
- Uneven-age residual stands comprised of representative age classes to minimize impact of cutting on natural processes;
- Minimum of 100 year management plans for forest ownerships;
- Snags and coarse woody debris as key habitat components;
- A minimum of five percent (5%) of contiguous acreage within a land ownership remain unimpacted to allow biological maturity, i.e., "old growth;"
- Minimizing of road building and forest fragmentation at all times;
- Protection of fragile areas and rare or endangered species and communities;
- Native tree plantings over exotic species and the re-vegetation of landing areas with native plants
- That the use of chemicals, e.g., herbicides, has no place in forest ecosystem management.

And the Guild acknowledges . . .

- That the maximum biodiversity within any climatic region is found within biologically mature forests;
- That natural disturbances such as small scale insect infestations, blowdowns, and fire are part of a natural forest ecosystem;
- That the full life-cycle of a tree is on the order of 500 or more years, from seed stage to complete decomposition and re-mineralization stages;

And also acknowledges the economic and social benefits of:

- Localizing value-added wood products industries;
- Long term rotations over short term cutting cycles.

NH Evaluates Sustainable Forestry Initiative, but Liquidation Continues

by Jamie Sayen

FOREST policy making is serious ecological work. For it to be valid, it must address issues of ecological limits, it must be developed through an open public process, and it must be accountable to revision in an open public process when it is not achieving necessary ecological goals. Furthermore, large landowners must not be allowed to subvert it.

By this measure, the American Forest & Paper Association's "Sustainable Forestry Initiative" is a fraud. It was hatched in secrecy by paper industry officials, imposed on loggers and others without consultation, and the public is frozen out of the process of developing and revising its standards. Paper companies continue to subvert honest forest policy making that addresses unsustainable logging and herbicide spraying. Most importantly, the SFI principles do next to nothing to protect ecosystem integrity. There's no science in the SFI.

SFI member companies pledge they will not conduct clearcuts that average more than 120 acres. Of course, there's a lot of leeway here. One 1,800 clearcut, associated with 15 five-acre clearcuts would meet this definition of sustainability. I'm sure creative SFIers can come up with other variations on this theme. The point is: an "average" of 120 acres does not mean a ceiling of 120 acres. And, who certified that 120 acre clearcuts are ecologically sustainable? The SFI fails to provide scientific substantiation on this point.

The SFI also pledges to "Continue the prudent use of chemicals [herbicides, pesticides, sludge, and petrochemical fertilizers] to improve forest health..."

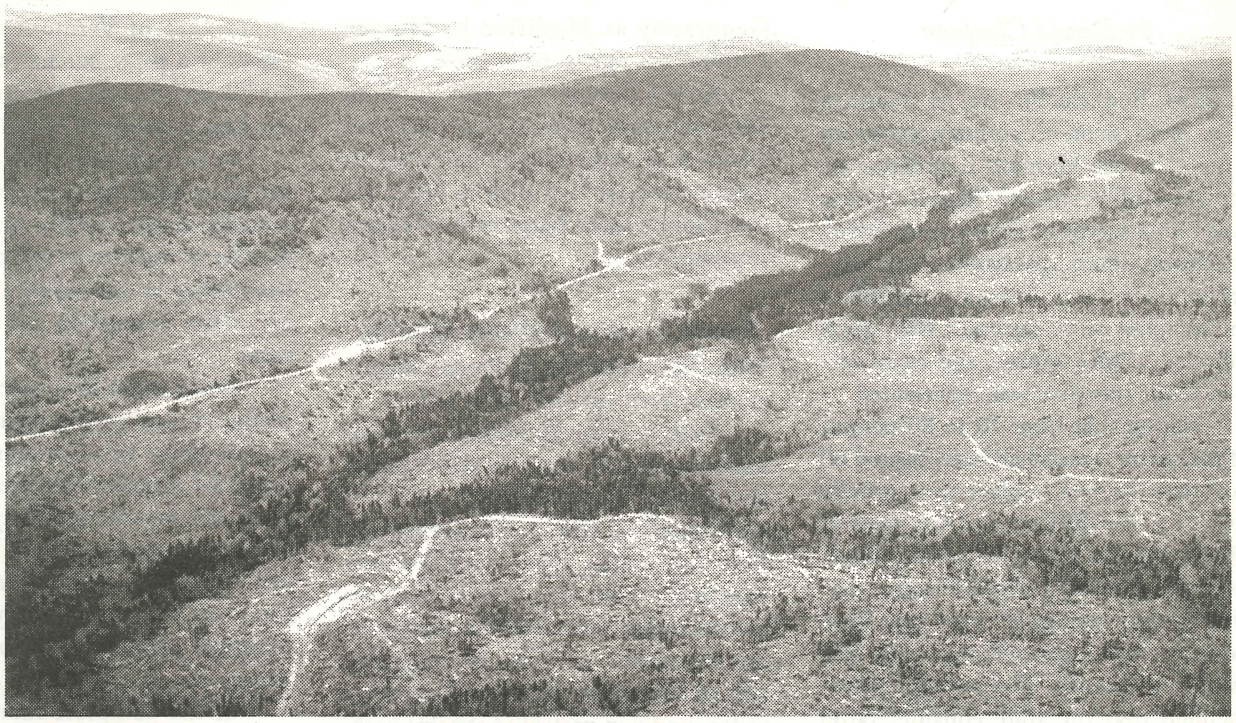
The great unasked question remains: "Do SFI principles protect the ecological integrity of managed forests?" It matters not whether someone is in compliance with standards that are irrelevant to the task at hand. What matters is that the standards are ecologically meaningful.

Again, the scientific documentation from SFI to this "principle" is a trifle scanty. Perhaps I should be reassured by the SFI pledge not to violate pesticide laws; unfortunately, my reading of this new pledge is that in the past industry has enjoyed the "right" to violate such laws. Otherwise, why the promise now?

NH Reviews SFI

Now comes the "1997 Annual Progress Report" of the New Hampshire SFI, the nation's first state review of the SFI, released early in 1998. The report was written by Phil Bryce, NH State Forester, formerly forester with James River/Crown Vantage; Richard Ober, Society for the Protection of NH Forests; Will Staats, wildlife biologist for NH Department of Fish & Game; and Don Quigley, professor at the Thompson School of Forestry at the University of New Hampshire. To my surprise, the report offered some mild criticisms of SFI and its implementation in NH thus far. Its recommendations, if followed, could, possibly, open up public scrutiny of industrial forestry a little bit in NH.

The review committee was asked to assess compliance with SFI principles by member companies. The committee asked itself the following questions: "Are the principles and objectives of SFI being translated to meaningful change on the ground?" "Is the [NH State Implementation Committee] accomplishing the tasks it has set out for itself?", and "Are those the right tasks to ensure that SFI principles are being carried out on-the-ground?"



An Example of Sustainable Forestry? *The ongoing liquidation by Mead Corp. of the headwaters of Roaring Brook in Dixville, NH began several years ago, and has continued even after its high profile promotion of the paper industry's "Sustainable Forestry Initiative". A significant portion of the clearcut area in this photo is scheduled to be sprayed with herbicides this summer. Photo © Alex S. MacLean—Landslides*

The great unasked question of SFI remains: "Do SFI principles protect the ecological integrity of managed forests?" It matters not whether someone is in compliance with standards that are irrelevant to the task at hand. What matters is that the standards are ecologically meaningful.

The review committee found that the SFI members had done a very good job of distributing SFI promotional material, generating favorable newspaper articles, and, in general, meeting SFI's real purpose of improving the industry's public relations. The review committee found that SFI is not doing as well in dealing with critics, including environmentalists.

To the question of whether the NH SFI initiative was "pursuing the right tasks to ensure that SFI principles are being carried out on-the-ground", the review committee noted "there needs to be a more effective and ongoing mechanism of review and feedback to member companies." It also recommended that there should be "broader representation from environmentalists, scientists, non-industrial landowners, logging contractors, mill owners, local officials, and others [who] could bring new perspectives and ideas to the program." I'm afraid this would also subvert the purpose of SFI which is to retain control over forest policy by the paper industry and large landowners.

The review committee gave a "qualified" approval to the question of whether or not SFI is leading to meaningful change on the ground. No documentation has been provided to enable the interested and informed public to judge what this positive change is.

SFI Exempted from Public Right to Know Laws

Ironically, although the SFI loudly pledges to be open, to involve the public, and to be accountable, the information most needed by the public to evaluate SFI progress has been withheld from the public. In fact, before launching this review, the NH SFI program sought and received a special dispensation from the NH Attorney General's office exempting SFI from the Public Right to Know Laws. This was necessary because three of the four members of the review committee were public employees. Whenever public employees are engaged in public activity, the public has a right to know what is going on. However, in deference to SFI, the AG suspended that "right". Thus, what we have is the spectacle of well-intentioned public officials being used by private corporations who are engaged in a cynical public relations stunt designed to undermine public welfare. Not a pretty sight.

But then, the forests of New Hampshire, managed by such SFI promoters as Champion, Mead, and Hancock (which clearcuts, but does not yet spray), are not a pretty sight either. A recent flight over paper company lands in northern NH revealed that pre-SFI practices of large clearcuts followed by herbicide spray (often near water bodies; always on forest lands pockmarked with wetlands, vernal pools, and streams and brooks) continue unabated. If there has been meaningful change on the ground, it has been confined to show plots where gullible reporters and NH Legislators are

SFI Scapegoats Non-Industrial Liquidators

The NH SFI has succeeded in getting most mills in NH to refuse to purchase wood cut by Le Cheval Logging operated by Ted Ingerson out of Whitefield, NH because of his non-compliance with SFI principles. (The Wausau mill in Groveton is the one major NH exception.) True, Ingerson has perpetrated some of the worst examples of liquidation logging in northern NH over the past several years. He conducted the 1,800 acre job in Whitefield/Twin Mountain in 1993, and he has numerous other mega-cuts to his dis-credit.

However, there's more than a touch of hypocrisy here, because his "judges" from SFI are the likes of Champion which plans to spray a 214-acre clearcut of its own this year, and Mead, notorious for its liquidation and spray activities in NH and Maine. Anyone in doubt about Mead's work ought to fly over the Roaring Brook headwaters in Dixville to see one large clearcut after another. *(See photo above.)* Mead plans to spray eight of them this summer with herbicides.

Its proponents cited SFI as one excuse to derail more meaningful recommendations from the NH Timber Liquidation Committee this winter, and they somehow think they can fool the public by expelling the least sophisticated (in terms of PR) liquidator, while continuing to shield Champion, Mead and Hancock from meaningful regulations.

Loth as I am to defend Ted Ingerson, I have to say that he has often conducted his forest liquidation in compliance with NH laws (which isn't hard to do since NH has no meaningful laws regarding clearcutting, highgrading, and the like). This is the real scandal: the SFI champions have successfully subverted every effort to reign in the worst abuses in forestry. Now, they are trying to scapegoat their own creation.

Ingerson is destroying NH forests for greed, but, he freely acknowledges this. In this respect, he's less of a hypocrite than his SFI persecutors.

—JS

The Vermont Forest of 1884

by David Clarkson

In 1884, Redfield Proctor, as chairman of a Commission on Forestry, presented a report to the Vermont Legislature on the state of Vermont's forests. It was based on a survey of the representatives, selectmen, listers, postmasters and others in every town. Several hundred of the circulars were returned with quite full and detailed replies, and every section of the state was well represented.

Noting that from 70 to 80 percent of the native forests had been cleared off and that the new replacement growth was "of a very different and less valuable character than the original forest growth," Proctor's Commission concluded that serious damage had been done to Vermont's waters, soils, and even her climate. The report recommended that the state consider fairer ways to tax forest land and to promote value-added wood industry.

Does any of this sound familiar? What have we learned in the intervening years?

Civil War Officer

Redfield Proctor was no lightweight. As colonel of the 15th Vermont Volunteers he commanded his troops on Cemetery Ridge in the second day of the Battle of Gettysburg. After the war he created the Vermont Marble Company. He represented Rutland in the House and as president pro tem in the Senate, served as Governor from 1878 to 1880, was Benjamin Harrison's secretary of war, and served as U.S. senator from 1891 to his death in 1908.

His work on the Forestry Commission is not mentioned in his official biographies, but as head of the Vermont Marble Company he probably had a hand in managing forest lands. He was but 30 years junior to George Perkins Marsh, whose classic book, "Man and Nature or, Physical Geography as Modified by Human Action," was published in 1864.

As a fellow lawyer and Vermont elder statesman, Marsh could well have served as something of a role model for Proctor, and, in fact, died in 1882, the year Proctor took charge of the Forestry Commission.

Forest Loss and Water Quality

What then did Redfield Proctor discover about Vermont's forests in 1882?

First, he notes the critical contributions that forests made to water supply and quality here. He found that "the water supply is year by year failing, and that the smaller springs and streams that had never until recently been known to fail often become totally dry in a dry season . . . There are many specific statements of the diminution of the water supply in particular streams within a certain number of years; of mills without power; of good brook trouts 50 years ago now nearly dry in summer ..."

Proctor saw the damage done by depletion of the forests to water supply and quality as long lasting.

"It must not be expected that restocking lands to wood . . . and its growth for many years will restore our springs to their former volume. The new growth will not furnish for generations or even centuries the deep bed of leaf mold which was the great factor in the retention and gradual distribution of the rain fall . . ."

The Commission noted that "the diminution of the forest works another injury to our best river valleys. The deposit from the overflow of streams has changed in character, is more sandy, showing that it is the wash, not from the rich mold of the forest , but from the bare hillsides, scarred by ravines cut deeper by every freshet for want of the protecting forest."

Exports and Value-Added Industry

Proctor, if anyone, knew the economic importance of Vermont's forests. In 1884, "if a party purchases a few hundred acres of timber land, or only buys standing timber by the cord or thousand . . . we exempt him from taxation for five years while he is cutting off all the available timber within his reach, and then he is ready to move to some other tract where he can repeat the operation and claim exemption for another five years.

Would it not be an anomaly in legislation to exempt this man for destroying the forest and also exempt his successor for restoring the same? Which is the public benefactor? They cut off the timber and soon leave the locality with less value for taxation than when they found it. It is a poor way to protect forests to protect those who are destroying them . . .

"If the complete manufacture of wooden-wares was generally carried on in this state [rather than exported] and our timber consumed in that way, it would add greatly to the prosperity of the state, and, we think, would increase rather than diminish the timber supply, as it would demonstrate its value and encourage its cultivation."

Different Century, Same Problems

About the only essential difference I see between Proctor in 1884 and Vermont's Forest Resource Advisory Council, which disbanded last year, is that airplanes for aerially spraying herbicides hadn't been invented in 1884.

Can we learn from the past? You bet. Do we have time to learn? Maybe, maybe not.

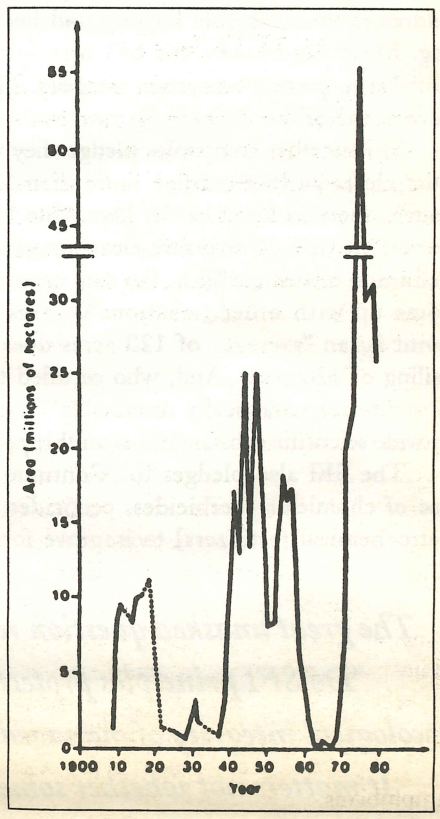
David Clarkson of Newfane, VT represented his district in the Vermont House for three terms and served on the Forest Resource Advisory Council 1995-1996. An interview with him appears in NFF vol. 5 #2 (Winter Solstice 1996).

Early Adirondack winter logging operation. Courtesy of the Adirondack Museum.

Get Ready for the Budworm?

by Mitch Lansky

Is the spruce budworm coming back to the Northern Forest? The answer is yes. The budworm has been part of the Maine forest ecosystem for centuries, so it will eventually come back—the question is when? It may be soon. To those of us who witnessed the budworm's last outbreak, this is a serious matter.



Area of forest moderately or severely infested with spruce budworms in the twentieth century. From J. R. Blais, "Trends in the Frequency, Extent, and Severity of Spruce Budworm Outbreaks in Eastern Canada," Canadian Journal of Forest Resources, Vol. 13 (1983), p. 539.

Outbreaks Come and Go

What is a spruce budworm? The budworm is the bug in the industrial forest program. This caterpiller of a bland-looking moth, has a voracious appetite for the needles of fir and spruce—species that are also highly desired for paper making. Budworm populations tend to explode into infestations that last 5-11 years, and then they disappear for decades.

During intense outbreaks, the most vulnerable species, fir, can be subject to widespread mortality, leading to big drops in inventory.

There is no definitive explanation as to why populations come and go, but outbreaks do seem to coincide with favorable weather (warm springs) and food supply. Huge populations seem to build up in the Ontario/Quebec region, leading to massive moth flights. Whether this is the source for infestations to the east or whether these moth flights only add to endemic populations is still not clear.

The Real Millenium Bug?

While the budworm has been

Budworm

around for thousands of years, in the 20th Century, budworm outbreaks have increased in size, intensity, and frequency. In part, this has resulted from heavy cutting of spruce stands, favoring the more aggressive and vulnerable balsam fir. Eastern Canada and the Northern Forest have had major outbreaks starting in 1910, 1940, and 1970.

If this thirty-year cycle persists, we could be getting another outbreak by the turn of the century— a couple of years away. Canadian researchers have already reported fluctuation populations in "budworm factory" regions of Ontario and Quebec. David Struble, entomologist for the Maine Forest Service, however, has seen no evidence of population buildups in Maine—yet.

DDT Defense

During the 1911-1919 outbreak, foresters had no defense against budworm mortality. It is estimated that in Maine, the budworm killed 27.5 million cords of fir and spruce. In the 1950s, New Brunswick and Maine started spraying chemical insecticides from planes. The chemical war on budworms had begun. Sprayers even used converted WWII war planes.

The first line of defense was DDT, which was not only effective against the budworm, it also started "controlling" salmon and eagles. Residues of DDT still persist in the environment. Managers eventually switched to organophosphates (such as fenitrothion), and carbamates (such carbaryl). These less-persistent, broad-spectrum chemicals caused mortality in spiders, wasps, aquatic invertebrates, pollinators, and in some cases, birds, fish, and amphibians.

Insecticide Impacts

Maine had spray programs 22 times from 1954 to 1985. New Brunswick's spray program lasted into the 1990s. Some researchers credit spraying for making infestations last longer or for causing intervals between outbrakes to be shorter. The spraying temporarily knocks down budworm populations, but the budworm's food supply is still there. If conditions are still favorable for population increase (and because some budworm predators are impacted by spraying, the conditions may be even more favorable) the budworm bounces back.

In 1976, Maine sprayed chemical insecticides over 3.5 million acres—an area as large as Connecticut and Rhode Island combined. That year New Brunswick sprayed 10 million acres. Doctors in New Brunswick started noticing an increase in a fatal disease in children, Reyes Syndrome, in areas that had been sprayed. Research indicated that the emulsifier used in fenitrothion could have potentiated a virus to cause more severe symptoms—such as encephalitis.

Management Options

Maine's last year of spraying, 1985, was almost all Bt—a bacterium fatal to caterpillers. Carbamate insecticides in the quantities needed were unavailable that summer due to the explosion of Union Carbide's chemical manufacturing plant in Bhopal, India—the largest industrial accident in history. The

Blackburnian warbler searching for spruce budworm larvae in fir foliage. From Daniel T. Jennings and Hewlette S. Crawford, Jr., Predators of the Spruce Budworm, Spruce Budworms Handbook, Agriculture Handbook No. 644 (Washington, D.C. USDA Forest Service Cooperative State Research Service, 1985), p. 54. Reprinted from Beyond the Beauty Strip: Saving What's Left of our Forests, by Mitch Lansky, Tilbury House Publishers, Gardiner, Maine, 1992, p.212.

explosion killed thousands of people within a few weeks, caused tens of thousands of miscarriages within a few months, and blinded, neurologically damaged, or otherwise impaired tens of thousands more people.

While New Brunswick officals have already held a conference in anticipation of another outbreak that may threaten the provincial tree (balsam fir), Maine officials have take a "wait-and-see" position. David Struble, for example, thinks that even if the budworm does come, it cannot do the damage that it did during the 1970s. Fir volumes are still way down due, in part, to the last outbreak. The outbreak in the 1940s in Maine (which was still recovering from the 1911-1919 outbreak) was not severe.

There is, however, a lot of young fir coming up. Most of the seedling/sapling acreage of spruce-fir is fir-dominated. Thirty-four percent of all trees 1-3 inches in diameter are balsam fir. During the 1970s, Newfoundland had a serious budworm outbreak that was sustained by young fir.

The time to manage for budworm is not during outbreaks, but between them. Managers still have a chance to thin to favor red spruce and other less-vulnerable species, and to encourage stand structures that support higher populations of budworm predators. During the last outbreak managers panicked, threw their management plans out and "salvaged." Once they got the momentum, they "salvaged" stands that were not even threatened by the budworm. Indeed, this mode of management persisted for years even after the budworm was gone.

Conference Needed

Maine ought to convene a conference to discuss strategies for dealing with the budworm soon. A new generation of foresters and environmentalists needs to get aquainted with the dimensions of the issue, share strategies, and discuss what we have learned from our last experience. With warmer springs and loads of young fir, there are plenty of potential problems ahead. Now is the time to discuss options to deal with them.

Spring Bear Foods

by Will Staats

Spring marks a critical period in the black bear's year. Emerging from their dens, bears find natural foods scarce. Berries, nuts and other foods which are so abundant later in the summer are absent.

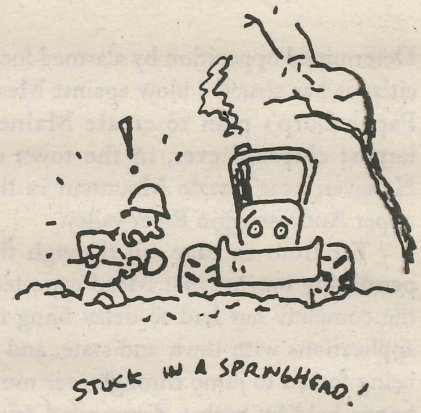
To survive, bears may subsist on the winter-killed deer they find exposed by melting snow. More importantly, is the emerging green vegetation growing at the wet "springheads", seeps, and forested wetlands found throughout the spring woods. These wetlands are the first places to "green up" and bears seek out the young, succulent grasses and forbs perking up from the saturated soil.

Looking closely around these areas the observant forester may notice the grasses or sedges cropped by the teeth of foraging bears; the ends appearing more ragged than the neat clipping "job" done by the chisel teeth of hares. Perhaps flattened spots throughout the vegetation will be found, indicating where the flat-footed bears have stepped. The large, black droppings of

the bear nearby are a final confirmation that the wetland is being utilized as a feeding area.

It is crucial that these areas be managed if bears are to survive in the Northeast. Additionally, forested wetlands serve as important aquifers, the birthplace of most brooks and rivers found throughout the region. A painted buffer zone which allows for heavy crown closure adjacent to the wetland (more than 70%) can provide the needed protection. Width of the buffer zone needs to be determined on a case by case basis and will depend on the type of harvest nearby. The wetland should be contiguous with remaining heavy forest cover utilized by bears or incorporated into a wildlife travel corridor system. The forester should alert his contractor of the location and nature of the paint.

Operationally, a skidder is far more productive staying clear of these places lest valuable production time be wasted churning and twisting to extract itself from a muddy trap. Water quality problems downstream and deep unsightly ruts can be avoided if skidders are directed around these wetlands.

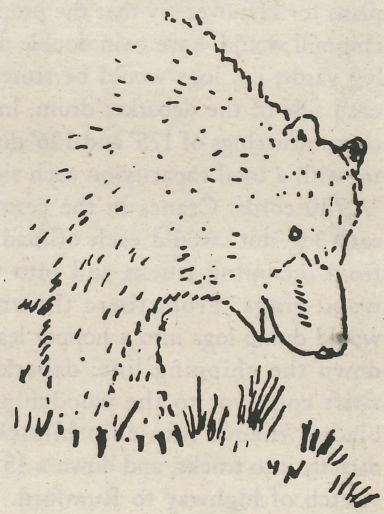


Learning to Live with Spring Bears

It is important to keep in mind that bears emerging from the den find themselves having a difficult time securing much needed sustenance. Natural foods are in short supply and if bears can't find available wetland plants or other food sources, the pangs of hunger may drive them to more desperate measures. This is the time of the year that people living in bear country wake up to find their bird feeders ravaged or garbage strewn across the lawn. For the bears these backyard treats can be irresistible. The solution is simple: remove the attractant!

Once the snow is gone, birds can survive without the feeders, so bring them in and rake up any remaining seed at the site. Keep garbage in a secure location and don't put it out until the garbage service is due to come. Bears are intelligent, quick learners, and once they develop a taste for these foods they can be difficult to discourage. The important thing is to avoid these problems from happening at all. Bears that are habituated to human food can become a persistent problem and can teach these bad habits to their offspring. These bears may cause enough problems that they have to be moved or destroyed. We need only to take a few extra precautions in order that we may continue to have the pleasure to coexist with these fascinating animals.

Reprinted from "Northeast Stewardship News" April 15, 1998. Will Staats is a wildlife biologist who works for the NH Fish & Game Department. He is also president of the Northeast Stewardship Project.



HANOVER BEANS WOODCHIP WANNABES

by Ron Huber

Determined opposition by alarmed local citizens has struck a blow against Mead Paper Corp's plan to create Maine's largest chipmill ever, in the town of Hanover, near Puzzle Mountain in the upper Androscoggin River valley.

Far from an easy sail through the permitting process that Mead expected, the company has had to delay filing its applications with town and state, and is being forced to jump through ever more hoops held by both a disgruntled town government and a surprisingly activist Maine Department of Environmental Protection, which has tapped Mead to be the unwilling guinea pig in the state's first ever use of Maine's 'Wood Supply' law.

Meanwhile, momentum gathers for a statewide review of the impacts of industrial forestry on the Maine Woods, to include both state and federal agencies and concerned citizens and organizations.

Lost in Chip-Space

Mead is reportedly chafing at the size limitations of their existing papermill, located on an Androscoggin River island in downtown Rumford, and has decided to move the log debarking and woodchipping production lines from Rumford to a remote, though not-too-distant location, to open up space on the island for expansion of other processes at the plant.

Mead looked at the surrounding region and settled on Hanover, located fifteen miles west of Rumford near the junction of Routes 2, Rte 5 and Route 232, an easy straight shot by truck from chipper to paper mill, with Mexico, Maine a distant runner-up. The rural location, Mead apparently believed, would be suitable for a 24 hour per day, 7 day a week chipmill, initially capable of producing 750,000 tons of woodchips per year, but expandable to one million tons or more per year.

Double Dipping Double Donuts

Confident that permits would flow forth from a town and state joyous over the expansion, Mead HAS contracted with Fulghum Fibres Inc, a Georgia-based chipmill builder/oper-ator, to build and operate the Hanover chipper.

Sources familiar with Fulghum's plans for Hanover say that the proposed chipmill would have twin double donut log yards, i.e. logs would be stored on each side of the debarker drum, in two concentric rings of 175' and 126' diameter with a total capacity on each side of 14,730 cords. Cranes in the center of each log-nut would each offload logs from incoming trucks and into their wood-rings. From there the cranes would dump logs into a hopper leading down the chipping line: debarker, a swift conveyor to the woodchipping blades, thence into chip hillocks or directly into trucks, and down a 15 mile stretch of highway to Rumford. This operation would run 24 hours per day, either six or seven days a week.

BUILD A WHAT?!

Hanover residents, many of whom either work at Mead in Rumford, or are retirees from the same, were startled to learn that Mead had chosen their town to be the site to for the company's new and expanded chipmill. The image of the sound and fury of a woodchip processor in operation: the rumble and groan of 900 trucks per day traveling through Hanover village entering and leaving the site, the continuous thunder rumble from the debarker; the chipper howling like a lowflying propeller air plane on foggy or ice-crystal nights, the spotlights atop the cranes lighting up the whole town with a bright pink and yellow glow. . . .it was as if Mead were pursuing them even in their quiet and peaceful retirement haven.

A small group of discontented Hanoverians found each other, as easily occurs in small town Maine, and began making their concerns known to their town selectmen and planning board, and to Maine Department of Environmental Protection permit reviewer David Silver. Rebuffed at first, or at best given a disinterested reception, the ad hoc group, which includes lifetime residents, summer people, and others who have moved there to enjoy the peace and beauty of the area, has smartened up, obtained legal assistance, and has so well learned to interact with the federal, state and municipal processes, that Mead's titanic chipmill plan has struck a veritable iceberg. Whether it will be able to pump out enough money and propaganda to rescue itself remains to be seen.

About Those Offsite Impacts. . .

A few years ago, Maine amended its primary development law, the Site Location of Development Law (Site Law) to require that new or expanding wood processors that exceeded a certain consumption level prepare an analysis of the impact of the increased deforestation on regional wood supplies for all wood users.

Under the law [38 MRSA 45-A.1-A "Wood Supply"] "a new or expanded development requiring an annual supply of wood or wood-derived materials in excess of 150,000 tons green weight. . ." must carry out a wood supply study that determines:

"A.) The expected operational life of the development;

B.) The projected annual wood consumption of wood mill residue, wood fiber and recycled materials from forest products during the entire operational life of the development;

C.) The expected market area for wood supply necessary to supply the development; and

D.) Other relevant wood supply information."

The law provides guidance to the Maine Forest Service at state economists on the cumulative impact of the operation on Maine's overall wood resources. The Maine DEP would base their determination of whether to permit the new chipmill on the MFS review.

NOTE: This is the law that the Huber Resources Corp avoided through legal loopholes while applying for permits last year to create their (alas) now operating chipmill in Millinocket, Maine. [See NFF v.6, #2, Winter Solstice 1997]

Site Law Review

Mead's proposed chipper complex being well over the size threshold, Maine DEP-er David Silver informed Mead in early May that they would have to do the Wood Supply study for the Hanover chipmill. Silver supplied Mead with MDEP's guidance papers on study preparation, and in a terse e-mail to the writer, wrote:

Dear Mr. Huber: Thank you for your recent email regarding this project. The applicant has received the statutory provisions for Site Law review and is undertaking that wood supply study now.

Both this writer's "recent email" which laid out some of the forestry impacts that might flow out of the chipmill's construction and operation, and Silver's response, were cc-ed to MDEP Commissioner Ned Sullivan and a number of Maine Forest Service and other relevant state employees, as well as to Stephen Silva, head of the US Environmental Protection Agency's Maine Projects Office.

Perhaps feeling a bit over his head, Mr. Silver has indicated he would prefer to have the Maine Board of Environmental Protection assume jurisdiction over the application (whenever Mead finally submits it). Should this take place, the interested public will be able to make sure that both the wood supply study and the examination of the likely impacts to the peace and quiet-loving residents of Hanover, both human and wild, will be thoroughly and fairly carried out.

Photo © Gustav W. Verderber

Crying Uncle

Last September, more than two dozen groups and individuals opposed to expanded woodchip forestry in Maine sent a joint letter urging Uncle Sam, in his incarnation as US EPA Region 1 Administrator John Devillars, to take a hard look at the past and present environmental impacts of industrial forestry on Maine's forest ecosystems and consider a moratorium on further federal permitting in Maine of woodchip mills, pending such a review.

Devillars wrote back in November, saying that a moratorium was beyond his powers, but that EPA was interested in participating in a joint study with state agencies and representatives of stakeholder groups. Significantly, he wrote:

"As we did in the Sears Island case, EPA will advocate to the Corps or any agency, full consideration of secondary and offsite impacts in any NEPA review of projects involving woodchip operations."

Devillars tapped his head of Maine Projects, Stephen Silva, to coordinate with the concerned groups. In a subsequent March 24th meeting at Maine Audubon Society's office, Silva met with representatives of NARP, Maine Audubon, Maine Greens, and three Hanover residents. Excerpts were read from the joint letter, as well as from EPA -1 administrator Devillars' response. Vicky Fimiani, one of the organizers of the Hanover opposition to the Mead plan, and two other Hanover residents, described the proposed chipmill in their community and the likely impacts to their towns residents and wildlife.

At first noncommittal, Silva's interest grew as the situation and possible routes for EPA involvement were discussed.

It was pointed out that the White Mountain National Forest is within the likely sourcing area for the proposed mill; Silva said that if that were shown to be so, it might provide EPA an avenue to put their hand in. Re the statewide study, however, he cautioned that no commitment would be forthcoming, unless sufficient interest was shown by Maine's broader conservation and environmental communities. Should that coalescence take place, Silva said, EPA would be, in his words, "prepared to go ahead" with participating.

He said EPA's interest in forestry is particularly on its relation to non point pollution (erosion/siltation) and wildlife habitat, and that EPA-1 recently hired a forestry specialist, Steve Winnet, who could work with the groups on both the Hanover chipmill proposal and the greater statewide impact study.

The Present Situation

"Hard pounding this, Gentlemen... who can pound the longest?"

—Duke of Wellington at Waterloo

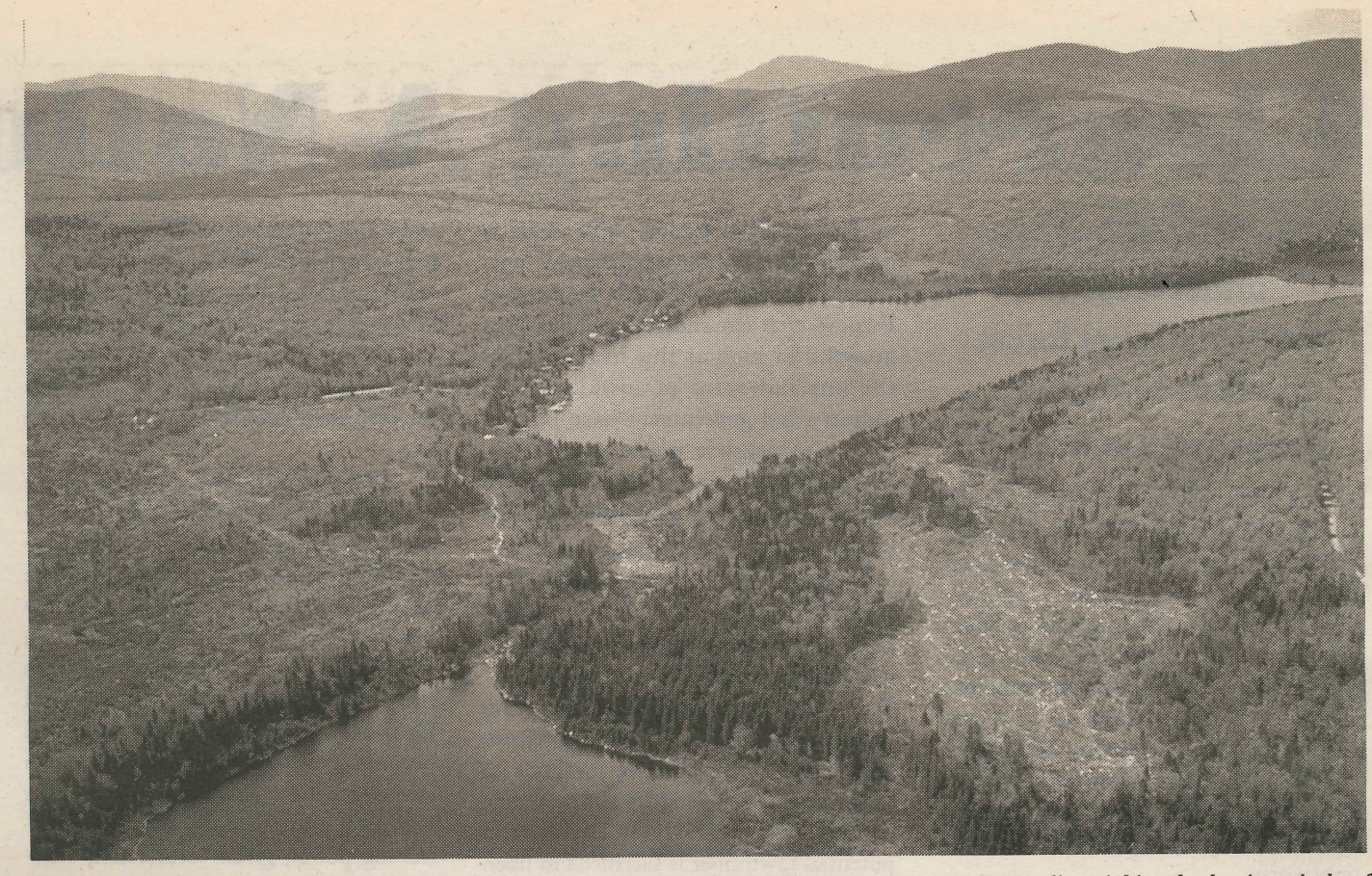
Mead is said to be severely bummed by the fact that the town of Hanover's

planning board is making noises about holding a town meeting to vote on putting a 180 day moratorium on accepting the chipmill application, as local opponents of the mill have been calling for some time. The town government now realizes that Mead has left a lot of information out about the impacts of the mill. As a result, much of their earlier gung-ho chipmill boosterism has tapered off.

At a May 20 public meeting in Hanover to discuss Mead's proposal, more than 40 of the 50 Hanover residents who attended opposed construction of the plant, despite claims of the Fulghum Fibres top brass who had flown in for the meeting, that there would be little or no impacts on the community. It was noted that Fulghum Fibres, the Georgia-based company that would build and operate the mill for Mead, is being sued in Machias, Maine, by a contractor who said the company has failed to honor its contract to pay for the work carried out at a chipmill construction site in Baileyville.

Maine DEP is accepting letters on the question of the Maine Board of Environmental Protection assuming jurisdiction over the Mead proposal. The Maine Forest Service is contemplating what should be considered in the "wood supply study."

According to one mainstream group that was queried by the writer, the list of measurable sustainable forestry benchmarks in 7 areas that the Maine Council on Sustainable Forestry would make a good start for the statewide study, including water quality (EPA's strongest card), as well as soil productivity, and overall biological diversity.



Clearcuts conducted by Mead at Millsfield Pond and scheduled for herbicide spraying in 1998 lie within the buying circle of Mead's Rumford mill. Photo © Alex S. MacLean—Landslides.

Key Questions

Concerning Mead's up and coming state mandated wood supply study, the group offered the following observation and questions :

"Sustainable wood supply should address both quantity and quality, and long-term sustainability of the forest, not just short-term (i.e., life of the facility) fiber supply.

1.) What is the present consumption of the Rumford mill in total cords and species group mix?
2.) Does the proposed facility only replace the wood yard at the mill or will it expand chip production capacity? If so, by how much?
3.) Are the chips only destined for the Rumford mill or will they be sent to other markets not serviced by the wood yard at the mill?
4.) Is there a sustainable supply of low grade trees (those not capable of producing sawlog quality wood now or in the future as they grow) to service the chip mill? The applicant should demonstrate that the wood supply is being used to improve average quality by utilizing only low-grade trees.
5.) Can the supply of wood be generated principally by thinning of low-grade trees that leaves well-stocked stands that meet acceptable silvicultural standards, or are the economics such that clearcutting and heavy partial harvests will prevail? The applicant should provide an analysis of projected quality levels and residual stocking of post-harvest stands.
6.) What steps will be taken to insure that forestry Best Management Practices (water quality, soil productivity, silviculture, biodiversity) are being implemented by all those who supply wood to the mill?"

Another expert told the writer that the Study should take note of the state of the wood supply in likely mill sourcing areas in Oxford and Franklin counties, noting that Franklin County has been hammered mercilessly; with both its hardwoods and softwoods badly overcut. Oxford County on the other hand, has a small surplus; though basically what's taken place there is that a low volume has gotten a little bigger.

Avenues for Public Participation

Members of the Dogwood Alliance, a coalition of citizen groups opposed to the expansion of chip mills in the southeastern US, have been sending helpful suggestions to the Hanover citizens, based on similar chipmill struggles in North Carolina and Pennsylvania. See an article from Pennsylvania Dogwood member Bill Belistskus in the latest issue of "River Valley Voice of Reason" a scrappy and informative newsletter put out by the grassroots anti chipmill group in Hanover (details below).

Contact the Dogwood Alliance: POB 1598, Brevard, NC 28712 ; telephone(704) 883-5889; email the Dogs at <lorax@citcom.net>

Public participation, after all, is the basis of functional democracy. Virtually everyone mentioned above would be delighted to hear from interested readers of this article. Should you desire to be involved, you can:

1. Write to the agencies, state and federal, (addresses below) and let them know that:
   A) Mead needs to prepare a genuine, comprehensive Wood Supply Study, and that the parameters of the study must be open to public comment;
   B) The issues are far reaching and of significant public interest; therefore the Maine Board of Environmental Protection should assume jurisdiction over the Mead application.
   C) USEPA should participate in the Mead application review process, due to the mill's planned consumption of federal timber from the White Mountain National Forest, and the likely impact to protected resources in Hanover, including wetlands and wildlife, from construction of the mill.
   D) USEPA should work with Maine environmental and conservation groups, and relevant state agencies, in the preparation of the statewide analysis of the ecological and environmental impacts of increased high capacity chipmill-directed forestry in Maine.
2. Write to the ad hoc citizens' group in Hanover, "River Valley Voice of Reason" (RVVR) POB 171, Hanover, ME 04237 with your ideas and words of support. Just knowing that people care can make a enormous difference to a local grassroots group waging a struggle with a multinational. RVVR also publishes a lively and informative newsletter, available by request.

ADDRESSES

Stephen Silva
Maine Projects Office
United States Environmental Protection Agency
Region 1
John F. Kennedy Federal Center
Boston Massachusetts 02203-0001
email <silva.stephen@epamail.epa.gov>

David Silver
Bureau of Land and Water Quality
Maine Department of Environmental Protection
17 State House Station
Augusta ME 04333-0017
email <Dave.Silver@state.me.us>

FOR MORE INFORMATION CONTACT

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Coastal Waters Project
60-A Grace Street
Rockland ME 04841
(207)594-5717
email <coastwatch@acadia.net>

(NOTE: CWP is a member of the Dogwood Alliance, in addition to being a project of the Northern Appalachian Restoration Project.)

The Twelfth Annual

National Forest Reform Rally

"Forging A New Vision For America's Forests"

Lake Ossipee Conference Center
Freedom, NH

September 11-13, 1998

Here is your opportunity to join grassroots forest activists from across the nation to share information to develop new strategies to restore and protect America's forests. Come learn about critical forest issues from nationally known and locally celebrated speakers, skills and issues workshops, local field trips, and strategy sessions. Renew your spirit in the beauty of New Hampshire's White Mountain National Forest and have fun while discovering how to become active in forest issues affecting your region and other parts of the country.

This year's Rally is sponsored by the Forest Reform Network and co-hosted by RESTORE: The North Woods, Sierra Club, and Green Mountain Forest Watch. For more information, or if you are interested in becoming a co-sponsor please contact Rachel Gooen or Melissa Belanger at RESTORE: The North Woods, P. O. Box 1099, Concord, MA 01742, (978) 287-0320, or restore@restore.org.

Book Review

Clearcutting A Nation

Canadian forests are under lease to multi-national forest product companies

Review by Andrew Whittaker

A new book by Elizabeth May, **At the Cutting Edge: The Crisis in Canada's Forests**, may hopefully contribute to an historical shift in Canadian consciousness of its forests. May, executive director of the Sierra Club of Canada and a past adviser to the federal environment ministry, charts a pattern of over-cutting, excessive mill capacity and industry dominance from Newfoundland to British Columbia. In fact, the Canada she describes sounds a lot like Maine—only worse.

No Wilderness, No ESA

To an even greater degree than citizens of the United States, Canadians have surrendered their public (Crown) forest lands to industry. Pulp, paper and lumber giants have historically controlled millions of hectares of forest through a variety of leases and agreements with provincial governments. May estimates that a mere 4% of Canada's forests are protected wilderness while clearcutting, the predominant weapon of choice, ravages habitat everywhere else.

Complicating this scenario is the weakness of federal government—there is, for instance, no endangered species act in Canada—and the outright cooperation of provincial governments with an industry which, on the whole, favors strong arm tactics and job blackmail in the face of reform efforts.

Clearcuts and Exports

Canada's history reveals a predilection to wholesale resource extraction. 19th century logging, for instance, paralleled that of the United States: a progressive march through commercially valuable species as white pine in Ontario and other eastern provinces, now ending in the old growth Douglas fir of British Columbia.

A manufacturing emphasis on pulp and the export of newsprint to the U.S. has hobbled a conservation ethic and kept a region like the Maritimes wedded to fiber extraction at the expense of sawtimber, wilderness and a whole-forest ethic.

Vast technologic change in wood harvesting and manufacture in this century have driven simultaneous loss of jobs and forests. For May, this central fact cannot be over-emphasized. It reflects the perversity of modern economics, which under-values human labor, energy and ecosystems alike. It also explains the intransigence of government and industry in reforming a system that IS enormously successful in generating profits.

Annual Allowable Cut

Nominally in charge of establishing annual allowable cuts (AAC), provinces have participated in a numbers game that allows on-going forest liquidation in the interest of feeding mills. AAC is predicated on the "sustained yield" philosophy, brought to Canada by Bernard Fernow, that cut should remain within growth. So long as this has remained the one indicator of sustainability, industry and government have been at liberty to degrade whole ecosystems, over-cut locally and pursue new wood supply in ever-more marginal areas like the boreal forest of northern Canada.

AAC is based on a forest inventory that May finds lacking in statistical rigor and objectivity, even beyond the inherent difficulty of "counting trees." Furthermore, so long as clearcutting predominates over more labor-intensive and ecologically-sensitive methods of logging, rotation lengths shorten, tree diameters progressively shrink and potential sawtimber is sacrificed to fiber. Meanwhile, it is true, less is cut than is grown . . .

Two further ways that the allowable cut gets fudged: lumping all forest land together in one statistical pool and assuming greater productivity in the future through "intensive management." Thus local shortages and future shortfall are obscured.

Newfoundland, for instance, predicates allowable cut on the island by adding in as-yet-unexploited Labrador woodland; the island cut is thereby intensified on the last remaining scraps of decently-stocked forest.

New Brunswick, according to May, has predicated 35% of its annual allowable cut on anticipated future higher yields—and thus allows a cut that may be 35% too high, should plantation forestry fail to hit anticipated targets. Meanwhile, industrial forestry creeps northward into forested areas unsuitable for logging, vulnerable to climatic stress and human disturbance.

Shifting Shortages through Trade

For those accustomed to complaints about Canadian subsidy of its forest products industry, May contributes the other side of the story. Yes, she tells her Canadian readers, stumpage that companies pay on Crown timber IS low, even non-existent if all the energy perks, tax breaks and management subsidies are factored in. But this is all part and parcel of a mentality of cheap exports and forgone value-added opportunity by which Canada and its forests are subject to market domination by the U.S.

More significant, for forests on both sides of the border, is the abdication of national interest in forest conservation through the empowerment of the World Trade Organization. The WTO oversees the General Agreement on Tariffs and Trade, otherwise known as the Bill of Rights for Transnational Corporations. The WTO may well become a bludgeon that knocks down environmental legislation and consumer boycotts, and controls, through sanctioning power, green certification standards such as those now being developed by Canada's International Standards Organization.

Exports of raw logs and fiber between the United States and Canada may to the free trader suggest a robust free market dynamic but overall, one draws from May's description of wood supply shifting, a serio-comic game of musical chairs. Quebec, with an overcapacity of sawmills preys on sawlogs throughout the Northeast United States; Maine mills draw on the beleaguered Maritimes for softwood, which themselves lean into each other for fiber while at the same time beginning to export "under-utilized" hardwood to Asia and Europe.

At some point in the next twenty years, the music stops. Who, in this beggar-thy-neighbor scenario will have a chair?

Provincial Paper Colonies

May provides a province by province detailing of over-cutting, clearcutting and subservience by government to industry demands. The story of New Brunswick and Nova Scotia will no doubt be familiar to residents of northern and eastern Maine. Along with Newfoundland, these Maritime provinces have gone the furthest in subjecting their forests to industry violence. Here is the story of one company:

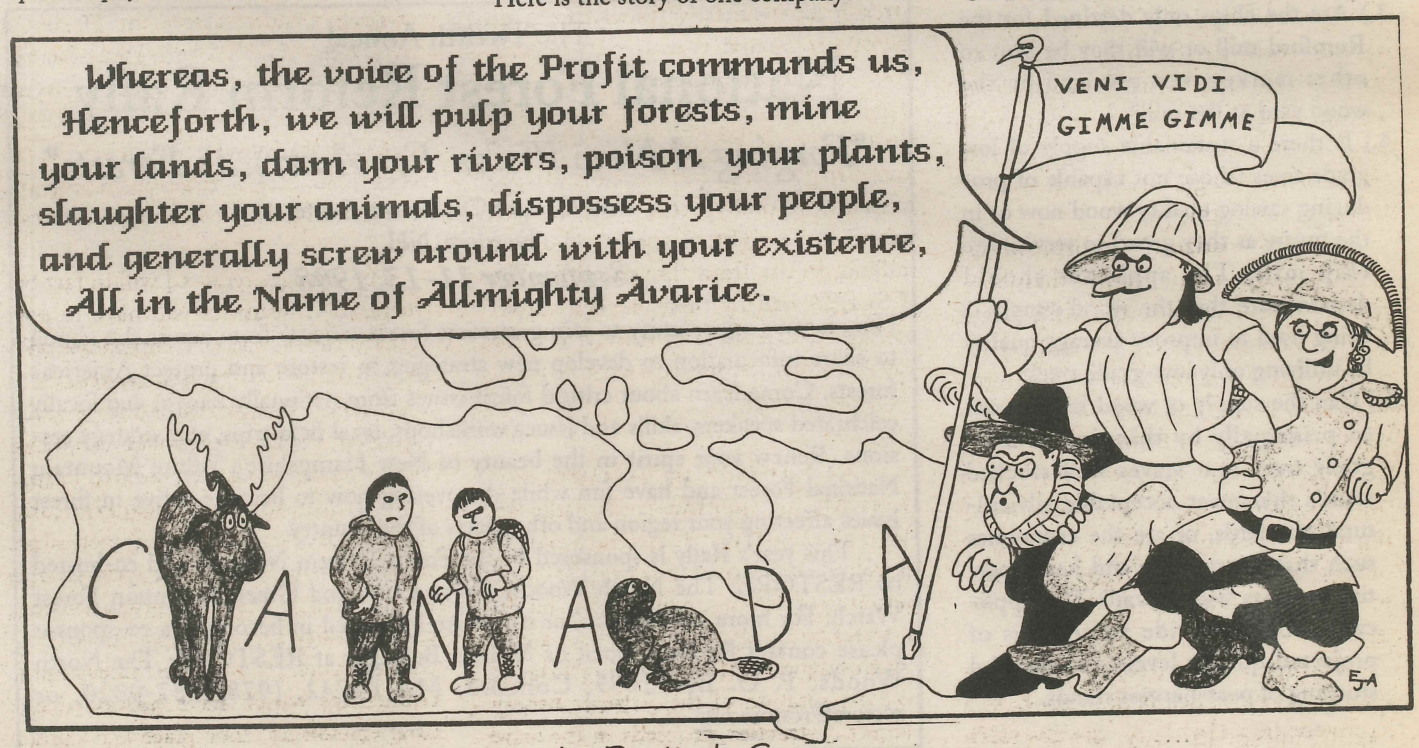
"The shift to pulp [away from sawtimber] was brought about by more than market pressure. It was legislated. In 1965, some of the best forests of mainland Nova Scotia were turned over to Scott Paper, based in Philadelphia, through the Scott Maritime Pulp Agreement Act. Under this legislation, Scott was given a lease for 100,000 hectares of the best forest and standing timber in the province. To sweeten the pot, Scott was given a five-year income-tax holiday and a twenty-year tax break on all land owned or leased by the company as well as on its new mill site in Pictou County. The government also kicked in a five-million-dollar donation to Scott's new operation. Scott opened a bleached-kraft pulp-and-paper mill at Abercrombie Point, midway along the mainland's north shore, dumping toxic waste into a Mi'kmaq reserve. As a further concession, Scott's waste-treatment facility was owned and run by the provincial Department of the Environment, all the while dumping twenty-five million U.S. gallons of effluent every day into Boat Harbour."

Collective bargaining by small woodlot owners has also been crushed in both provinces, as also happened in Maine. Low stumpage paid by pulp producers sitting atop Crown leases further undercuts prices paid for pulp. Opportunities for a sawtimber economy have been squandered, and sometime within the next twenty to thirty years, according to May, wood will be in acute short supply.

Spray Us, Please

While Quebec has a forest policy at least nominally committed to the elimination of insecticides and herbicides (and reduction of clearcutting), other provinces are not so lucky. Most appallingly, while Nova Scotians resisted the bullying tactics of Stora and its campaign to spray the budworm in the 1970s, New Brunswick's government went beyond acquiescence.

Beginning in the 1950s, the province paid for spraying of DDT, phosphamidon and fenitrothion. It has also steam-rollered citizen opposition. New Brunswick discounted the deaths



Le Droit de Seigneur

Forum in Maine Focuses on Energy Self-Determination

Reported by Pamela Prodan

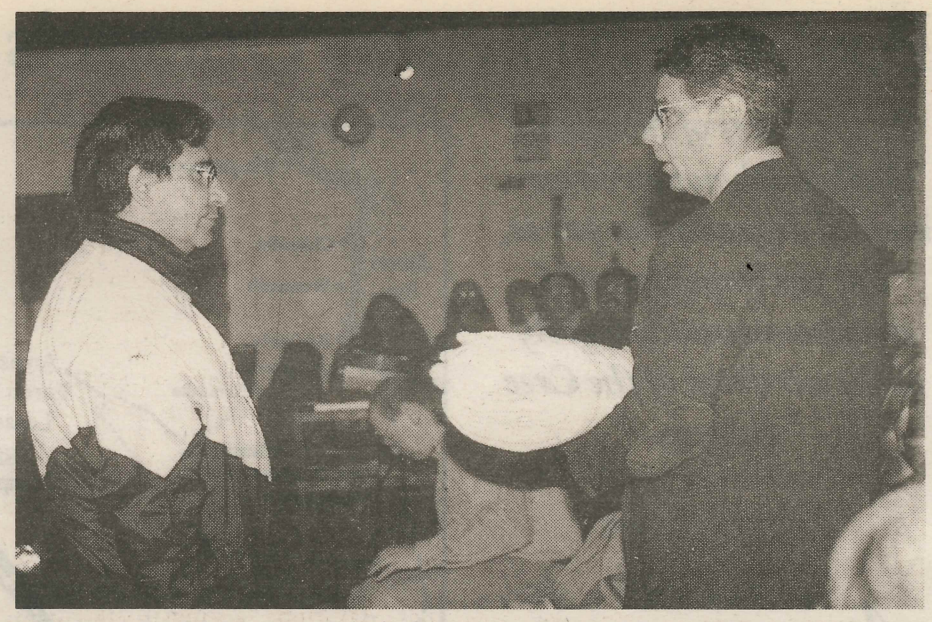
Marking the beginning of a new era and the struggle to move away from unbridled energy consumption, a one day forum in April brought energy activists to Lewiston, Maine from around the region. Activists traveled from as far away as Vermont, Massachusetts and Quebec to meet each other and try to articulate a vision for a sustainable energy future. Clean air advocates traded ideas with indigenous people and architectural designers met co–op organizers.

Helping activists prepare to cross the threshold from the consumer age to an era of energy self–determination, the forum and related events gained local and statewide media attention as well.

In the morning, panelists answered a series of questions intended to raise awareness of energy–related issues in the Northern Forest region. Although not every area of energy policy was well–represented (there was little discussion about transportation, oil and natural gas), the forum was a positive step in bringing together people who are working at a grassroots level in separate and distinct areas of energy policy.

Oujé–Bougoumou Provides Inspiration

A keynote speech, by Chief Abel Bosum, focused on community energy development in the model sustainable village of the Oujé–Bougoumou Cree Nation, James Bay Territory of Northern Quebec. The village has won national and international recognition for its culturally–based architecture, its locally developed andself–sufficient housing program and a village–wide biomass district heating system. The village has been selected as an official project of the World's Fair, Expo2000, to be held in Hannover, Germany. This spring, Chief Bosum received Canada's prestigious National Aboriginal Achievement Award in the category of Community Development.



To express solidarity with the Cree people in their struggles, Professor John Joseph (right), former Director of the Maine State Energy Office, presented Chief Abel Bosum with a blanket made in Maine from flax fiber grown in Maine.

Gathering Leads to Stimulating Discussion

In the afternoon, activists regrouped to brainstorm leverage points to bring about change and carry out energy initiatives. Discussion revolved around getting a grip on our role as consumers and how our decisions impact the environment. As one panelist had noted in the morning, it does no good to build a house that is twice as efficient as normal if it is twice as large because it has to hold people's "stuff." Some of the other ideas:

- The Legislature gave the Maine Public Utilities Commission $1.6 million to educate consumers; education is not marketing.
- Energy cooperatives could get education money to focus on energy efficiency.
- Also use education money to build/remodel and showcase a house with high energy standards.
- Use education money to educate appraisers, mortgage officers and real estate agents and to train electricians and plumbers, instead of consumers.
- Say "no Hydro–Quebec" loudly and proclaim that it's a back door way to destroying a way of life.
- Acknowledge environmental racism and talk about the double standard of energy impacts on whites and indigenous people.
- If we cast our circle widely, we will make decisions that are good for the community.
- Instead of labeling things "green," make companies label the non–natural, non–renewable, non–sustainable things.
- Make labels disclose the "environmental footprint" of the product/service.
- Decide whether success will be defined by building green–energy companies, or by changing existing ones.
- Recognize that energy is a service, not a product.
- Subscribe to services that meet certain values, like sharing, instead of profits.

Clearcutting a Nation

of children from Reye's syndrome attributed to spraying. When faced with a successful lawsuit over drift, the government changed the law to allow drift by eminent domain. By the time it curtailed annual budworm spraying in 1994, New Brunswick had sprayed the equivalent of its entire forest nearly seven times over.

(New Brunswick-based Irving—or is it Irving-based New Brunswick?—whose green certification plans were profiled in the Mud Season 1998 Forum, continued to spray fenitrothion after the province ceased using it—even while the federal government mandated its phase-out by this year.)

May summarizes New Brunswick's insecticide program: "Rather than collapsing from natural causes within four to five years, as would normally have occurred, the outbreak lasted for more than forty years. The insecticide had the unintended effect of knocking out the budworm's natural predators, birds and other parasitic insects, while maintaining the food supply [balsam fir made over-abundant by clearcutting], thus preventing conditions for natural collapse."

Opposition to Stora's budworm spraying in Nova Scotia does not have a happy ending. Initially, the Swedish bully exerted enormous pressure, threatening to close its mill if not allowed to bomb the budworm. All political parties held to a no-spray platform, or so it seemed.

When a Conservative government came to power in the early '80s, however, they granted permits to Stora, Scott and Bowater to spray herbicides, including Agent Orange. Citizens succeeded in gaining a court injunction after governmental waffling. Stora and Scott proceeded to, as May puts it, "vacuum" up opponents lives, raising legal obstacles and driving plaintiffs to bankruptcy (May's own family lost 80 acres in paying court-ordered legal costs). Eventually Stora won its case, winning the right to spray and also a million dollars from the plaintiffs. The U.S. EPA had by then blocked export of Agent Orange and Stora itself had sold its own supply to—who else?—New Brunswick.

Alternative to Collapse

Like Maine, like the South, like 3rd World countries, Canada needs to develop alternatives to domination by resource extracting industry that has no interest but profit. May draws an analogy throughout **At the Cutting Edge** to the exploitation of the Atlantic fishery. Forest destruction proceeds in the same context: burgeoning world population, over-mechanization and a blithe ignoring of biological realities. Collapse was inevitable, but the lessons remain unlearned.

As in the Northern Forest, the prescription for change in Canadian forests amounts to inspiring local economy and awakening understanding of forest ecology. Rural resource economies are not prospering in any sustainable sense with wholesale resource extraction. Declining employment and forest degradation can be reversed through investment in appropriate technology. More value can be added locally while reducing overall cut and eliminating harvesting altogether on a much larger percentage of forest land.

The changes required will in fact be structural. Consumers will have to pay more for forest products; companies will have to adapt different management approaches. Perhaps this is the greatest rub of all the natural resource conflicts. While power to initiate positive change rests within economic organizations, corporations across North America are instead opting to propagandize and avoid change. Such companies bear responsibility for poisoning the well of civic discourse: they create the economic conditions which have hollowed out rural economies, they place the burden of regulation on a reluctant government, and encourage the reaction of rural property rightists to limit the action of environmentalists.

The corporate power that May describes is probably incapable of reform. The sad truth is probably that industrialism will have to run its course in Canada before new attitudes can take hold.

Quebec a Prime Shareholder in Forest Industry

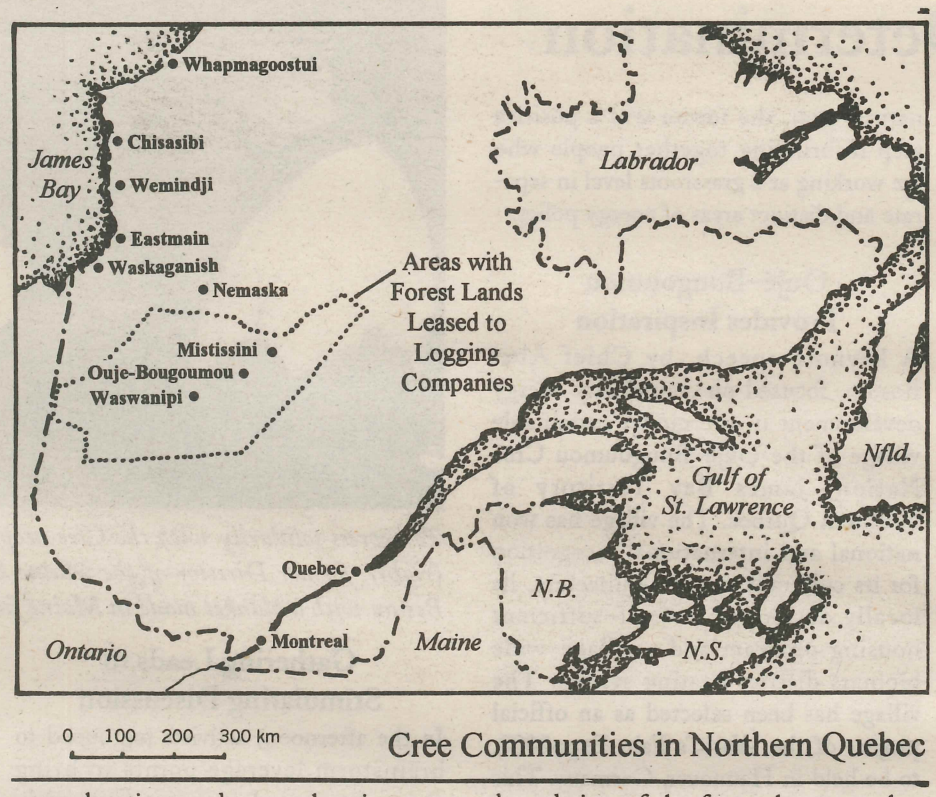
The government of Quebec has set itself up in the dual role of protector of the forest and corporate shareholder. The province owns 45% of Domtar, Inc.'s shares. With over 10,000 square kilometers of forest leases, Domtar is one of the most active companies in Eeyou Astchee. In the first two quarters of the 1995 fiscal year Domtar sales reached $717 million and earned a record profit of $166 million. These six month profits surpassed the previous annual record of $161 million in 1987.

— *PP*

Forum Interview: Québec's Crees & Trees Under Siege

To the Crees of Northern Québec, it's not environmental degradation per se, but the importance of environmental integrity to the survival of the Cree culture.

by Pamela Prodan



Cree Communities in Northern Quebec

About one third of Crees live primarily from what the environment provides, yet Hydro-Québec has eliminated rivers and vast tracts of productive forest land from the Cree's land base—Eeyou Astchee—by the creation of mercury-polluted reservoirs for hydroelectric power generation.

In addition, more than 5000 square kilometers of forest have been clearcut since 1975—an area equivalent to the state of Delaware. Although much attention worldwide has been focused on the plight of forests in British Columbia, awareness of the damage being inflicted on the boreal forest in Northern Québec, and its cultural consequences, is minimal.

So if you cut the forest down, and you say well, it will regrow itself in about thirty years, you sever the teaching process for over a generation. The young generation won't have a place to learn.

Bill Namagoose has been the Executive Director of the Grand Council of the Crees since 1988 and played a critical role in the Cree campaign in the U.S. against the mega-hydroelectric projects proposed by Hydro-Québec for Northern Québec rivers.

Abel Bosum is the Chief of the Oujé-Bougoumou Cree Nation; he has led his community since 1984, from an era of forced relocations, marginalization and extreme poverty to the present, overseeing the creation of a permanent village based on sustainable principles.

Paul Wertman has been the principal advisor to the Oujé-Bougoumou Crees for over 15 years. A second interview with Bill Namagoose, focusing primarily on energy, will appear in a future issue of the Forum.

Pamela Prodan (PP): One reason I wanted to bring you to Maine to talk about Oujé-Bougamou is the fact that the community has a biomass pant. I know it's a heating plant, not electric. Maine has a lot of biomass plants, but they're used to generate electricity and not heat. Why did Oujé-Bougamou choose a heating plant?

Bill Namagoose (BN): Ninety percent of your energy needs in the house is for space heating and water heating, so with this concept of burning biomass you are heating with fire. You've solved ninety percent of the problem and the other ten percent is lighting and appliances. So you've solved a major energy problem with that system. In the case of Oujé-Bougamou, the economies of scale are against them, because they are only seven hundred people, so to build a cogen station or power generating station for electricity was not economical.

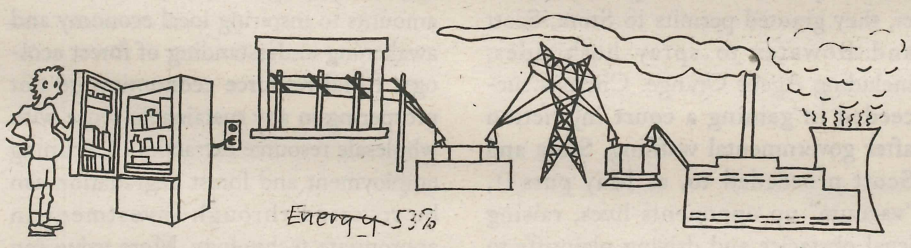
PP: There is more talk about using cogeneration for smaller applications, so the technology is advancing and for new applications it might make sense to cogenerate. But these stand-alone electric biomass plants that put the heat into the environment, either into an aquifer or into the air, seem really wasteful because so much of the energy in a biomass plant is in the form of heat.

That's one reason why biomass plants have a bad reputation, but also because wood chips are often burned in Maine, not just sawmill waste. Some people draw a connection directly between the biomass plant and the degradation of the forest, because a lot of times, whole trees are chipped and sent to the biomass plants.

It raises the question how a balance can be achieved between using wood for combustion and continuing to have a forest. How do you limit it so that the forest is not destroyed by how it's being used?

Paul Wertman (PW): There is a lot of biomass that could be harvested as a consequence of forestry operations, regardless of the scale you're talking about, in pre-commercial thinning work. And there's a lot of debris left on the forest floor after cutting takes place. So that's an awful lot that is currently wasted that could be utilized for biomass.

One of the things that Oujé-Bougoumou is looking at right now is developing a small plantation just for growing trees that would be eventually harvested for chipping for the plant. That way, by setting aside an area, and just growing in that area, you can leave the rest of the forest unaffected by your biomass plant.



ENERGY QUIZ NO. 3

Question 1: How many kilowatt hours does the average refrigerator use per year?

Question 2: How much money could U.S. Consumers save if 100 million existing refrigerators were replaced by refrigerators that are 10 percent more efficient?

Question 3: How much CO2 emissions would that prevent?

Answers:

1. *550 kilowatt hours per year.*
2. *$700 million.*
3. *8 million tons.*

PP: There's also a growing school of thought that questions whether what we think of as waste in the forestry operation is really waste, and whether in fact the forest needs a lot of that dead woody debris to regenerate itself. In your northern latitudes there is a lot of organic matter in the soils because it doesn't decompose very quickly, but that's one of the concerns in our region, that using all of the waste products is not such a good idea necessarily.

PW: It depends on how comprehensively you're looking at the nature of the resource and how it's harvested. If there's clearcutting, it doesn't much matter what's left or picked up, it's going to take an awfully long time for that forest to regenerate anyway.

PP: Do you find that in the Cree territory there is a lot of clearcutting?

BN: Oh yes, most of the operations are clearcuts in our sovereign territory. It's devastating environmentally, but especially culturally. We need the forest in order for Cree culture to be passed down, for traditions to be passed down. We need some kind of classroom and the forest is the classroom. That's where the children learn from their parents all the techniques for surviving in the bush,

At one point we thought they were not going to get into those areas where the moose habitats are, but now, with the equipment they have, they can go after any tree and destroy every habitat.

which is part of Cree culture.

So if you cut the forest down, and you say well, it will regrow itself in about thirty years, you sever the teaching process for over a generation. The young generation won't have a place to learn. They will only hear about it in the communities. There will be no place to practice it and that is why it is really important to keep the forests intact.

PP: Is that happening in Oujé-Bougoumou too?

Abel Bosum: The forestry is done at such a large scale. And with big, big equipment that pays no respect to what they damage. Besides just the cutting of the forest, you have heavy machinery that's rolling around and squashing habitat, small animals, large animals, blocking caves and dens for foxes and other kinds of animals.

So when these machines carry out their operations, they're not just taking the resources, they're destroying everything that's beneath it. This is done in both seasons, summer and winter. You can imagine that kind of destruction and you can imagine what a trapper feels when he looks out at the land and realizes there's probably not another living soul on that land.

The forestry operations, besides cutting inland, they come so close to the

ORIMULSION – Is the New Utility Fuel Coming to Maine?

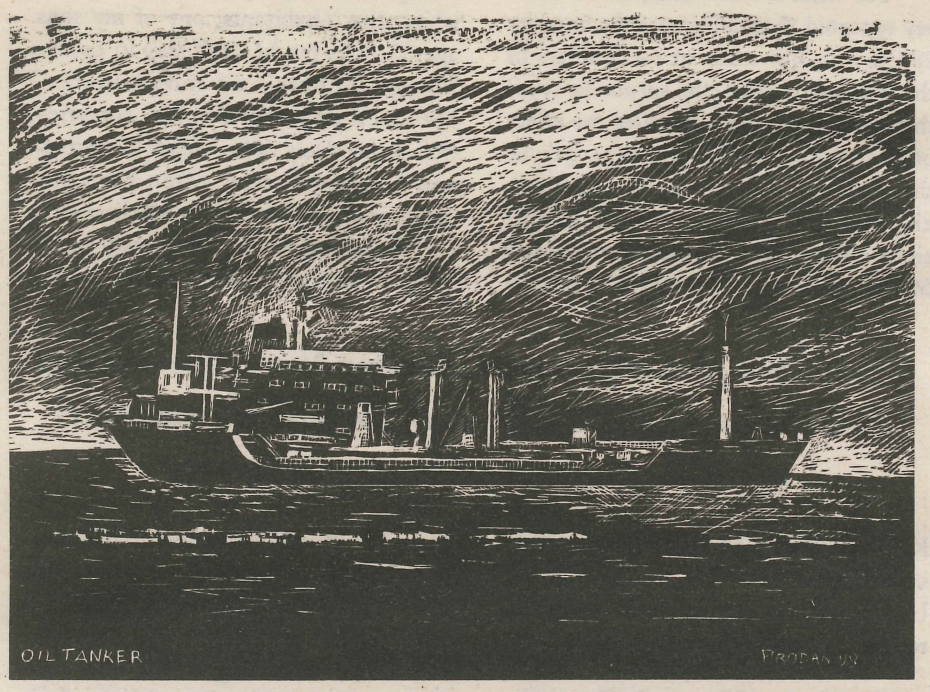
by Hans Nicolaisen

Florida Power and Light, which has negotiated the purchase of Central Maine Power's generation assets, including the oil-fired stations in Yarmouth and Wiscasset, is currently in the advanced planning stages of converting two 800 MW oil-fired units in Florida to orimulsion. Because orimulsion is a lower cost fuel than oil, FP&L would take these units from "seasonal intermediate" status to base load.

Orimulsion is produced from naturally occurring bitumen, likened to a "liquid" bituminous coal, that must be emulsified with water to be handled, transported, and used. Vast reserves of bitumen are found in the Orinoco Belt region of Venezuela where it is extracted, processed, and distributed by Bitumenes Orinoco SA, a subsidiary of Petroleos de Venezuela, the national oil company. Petroleos de Venezuela (PDVSA) is the world's fifth largest producer of crude oil and the fourth largest refiner.

Proven Bitumen Reserves Immense

In the Orinoco Belt in eastern Venezuela there are approximately 1.2 trillion barrels of proven bitumen reserves. With present technology, the economically recoverable reserves are estimated at 267 billion barrels, roughly equivalent to the crude oil reserves of Saudi Arabia. Other major reserves of bitumen are in Canada (Alberta), and Russia. The bitumen reserves on Venezuela's Orinoco Belt are said to be the largest in the world.



A spill of orimulsion would be potentially worse than an oil spill because orimulsion, unlike oil, does not float on the surface, but sinks and dissolves in the water making it almost impossible to clean up.

Toxic Slurry

Orimulsion is a mixture of 70% bitumen and 30% water. To suspend the bitumen in water, a surfactant is added, making up about 0.22 percent of the mixture. The current emulsifier, nonylphenol ethoxylate, mimics estrogen – a "gender bender" that can cause sexual dysfunction and deformities in marine life. Fourteen European countries have concluded that it is so toxic to aquatic life that they've agreed to ban its use by 2000.

A spill of orimulsion would be potentially worse than an oil spill because orimulsion, unlike oil, does not float on the surface, but sinks and dissolves in the water making it almost impossible to clean up. It could then be taken up by marine plants and animals and build up in the food chain, posing a risk to wildlife and human health. Environmentalists are also concerned about the risks to health from the release of toxic dust when orimulsion is burned in power stations.

"World's Dirtiest Fuel"

Orimulsion has been labeled the world's dirtiest fuel. Like much residual oil, it contains high levels of sulfur (up to 2.7%), as well as significant amounts of heavy metals. Vanadium content is around 310 ppm, and nickel about 80 ppm. Although the sulfur content is similar to residual oil, S02 emissions can be 50% higher when corrected for heat input. Ash content is generally around 0.25% - small compared to coal but appreciably higher than oil. Meeting emission requirements involves significant expense in electrostatic precipitators (ESP's) and scrubbers.

Studies of Florida Power and Light's conversion have found some aspects of Orimulsion combustion that make emissions control more difficult than with other fuels. These include fouling of the upstream heat transfer areas, fly ash problems in the ESP's, and greater amounts of SO3 in the flue gas which may lead to injecting ammonia upstream of the ESP's. While emission standards for SOx and NOx may be met, overall carbon emissions will increase dramatically as a result of these units being taken from "seasonal intermediate" units to base load. This will result in a nearly threefold increase in their on-line time and a corresponding increase in carbon emissions.

Florida's Power Plant Siting Board will make the final decision whether or not to approve FP&L's plan on June 24, 1998.

Hans Nicolaisen lives in Waldoboro, Maine.

Crees Under Seige

river banks. Even with the corridors that have been established, 200 feet corridors, they're tempted to take the big trees. That's where you find the big logs, right near the lakes and rivers. The fines they get for violating these corridors is really nothing. They pay five hundred dollars and they're glad to go clearcut the whole lake side or river bank just to have more volume.

Even what they leave, those who may comply, their clearcutting is so wide, after the trampling over the earth, they've certainly affected the roots of the forest vegetation, so that when the west winds start to come, in a couple of years down the road, everything has been destroyed – that originally destroyed by the forestry company and then nature takes over. At one point we thought they were not going to get into those areas where the moose habitats are, but now, with the equipment they have, they can go after any tree and destroy every habitat.

PP: It sounds very familiar, like an image of Northern Maine. I'm wondering if there's a connection between the mining and forestry industries and the electric power industry?

BN: There is a connection between forestry and hydro in Québec. In the south of our territory, the government has allowed clearcutting permits where-

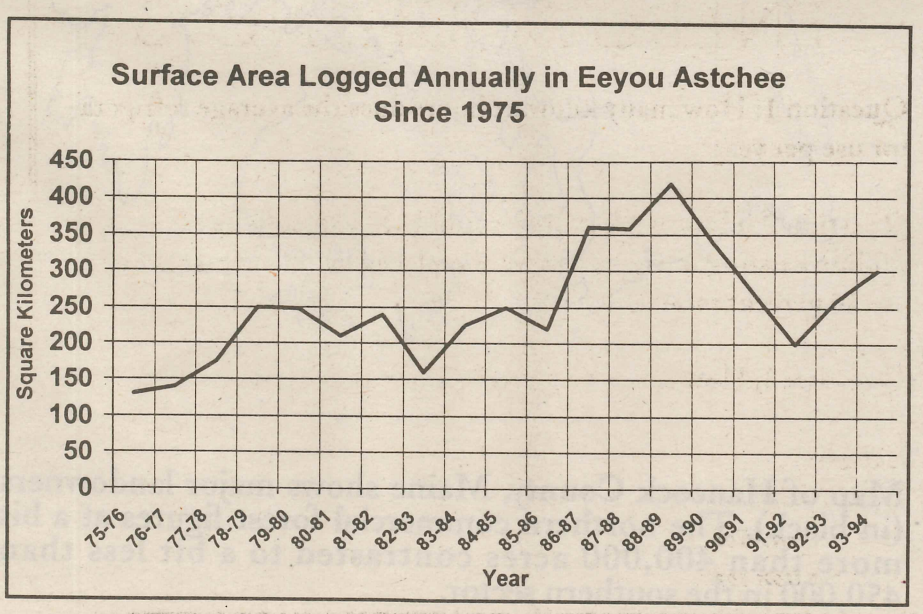
They don't want these images of trees or forests sticking out of their reservoirs anymore. Forestry companies cut down the forests in order to clean up the area.

by they could cut right to the river's and lake's edge in the future hydro reservoirs that they would build.

Before a hydro project is announced or assessed, the Québec government has given permission to clearcut the future reservoirs. The method of cutting does not have to comply with any forestry standards. That's the connection. They don't want these images of trees or forests sticking out of their reservoirs anymore. Forestry companies cut down the forests in order to clean up the area. That's what they call it, "clean up" so there will be no trees in the area. That's the connection.

Now we are trying to focus on forestry, because it's an issue that was neglected for some time. The forestry fight will be different because Great Whale is an isolated area. There was no access. The New York and Vermont electricity export contracts also gave us big and visible targets that could be canceled.

But the forestry issue will be different. The territory is already occupied. It's already being cut. We are going to be taking some court challenges, arguing the Cree's rights. We will argue that under the James Bay Northern Québec Agreement we have the right to pursue the traditional economy and to pursue the new economy. These are rights that are granted in the James Bay Agreement. We have the right to pursue our traditional economy, but how can we practice that right when the forests are being cut and the land is being flooded? So we have a legal argument.



PP: Do you think they are moving ahead with more mining in anticipation that some day the land will be flooded?

BN: There is a lot of mining in the south of our territory. Even up on the shores of the LG2 reservoir, they are starting to drill because they've found some gold deposits. And they're also drilling on some islands in the reservoir. Well, they're not islands, they used to be hills. They're looking for gold. They also renamed some of those islands and gave them French names in celebration of their French language law, Bill 101. They took one hundred and one islands and named them after French writers and their works. The Québec government also provides specific subsidies to the exploration companies to operate in Cree territory.

Pamela Prodan is Director of the Northern Appalachian Restoration Project's Renewable Energy Assistance Project

THE MAINE FOREST INVENTORY, 1995, or, Cooking the Books 102

Industry and government look to the US Forest Service's Decennial Survey for forest inventory information—but should the public have much confidence in the numbers?

by William Butler

Having been told by the USFS that the growth data in one popular version of the 1995 Forest Inventory and Analysis were "fudged," I am by nature skeptical of whatever else it says. When one has the unedited quantities measured by the field crews some understanding can be had, limited by the design of the successive studies of 1959, 1982, and 1995.

Changes in these designs effectively (and admittedly) blocked all comparisons, hiding the extent of cutting, mortality, and accretion of living trees. And we were thus kept ignorant of the total war on the Maine temperate rain forest, as Steven Manley called it. That war is now finished; our paper mills are raiding Canada and New England while they wind down.

Disappearing Spruce

In particular, red spruce was the Northern Forest's characteristic tree and the principal component of what was the major forest type, and, coincidentally, afforded the best fiber for paper and lumber. The industrial promise that "intensive management" will restore the spruce forest type is negated by the destruction of the spruce ecosystem, and its ability to perpetuate itself.

Clearcuts and plantation forestry are not for red spruce, as Manley and Robert Seymour, professor of silviculture at Orono have written. As the science magazine **Nature** put it in a headline, the complexity of the system is a wood-wide web. The article reports that tagged carbon fed to a birch in sunlight soon appeared in a Douglas fir nearby, but in shade. Don't look for it in a plantation.

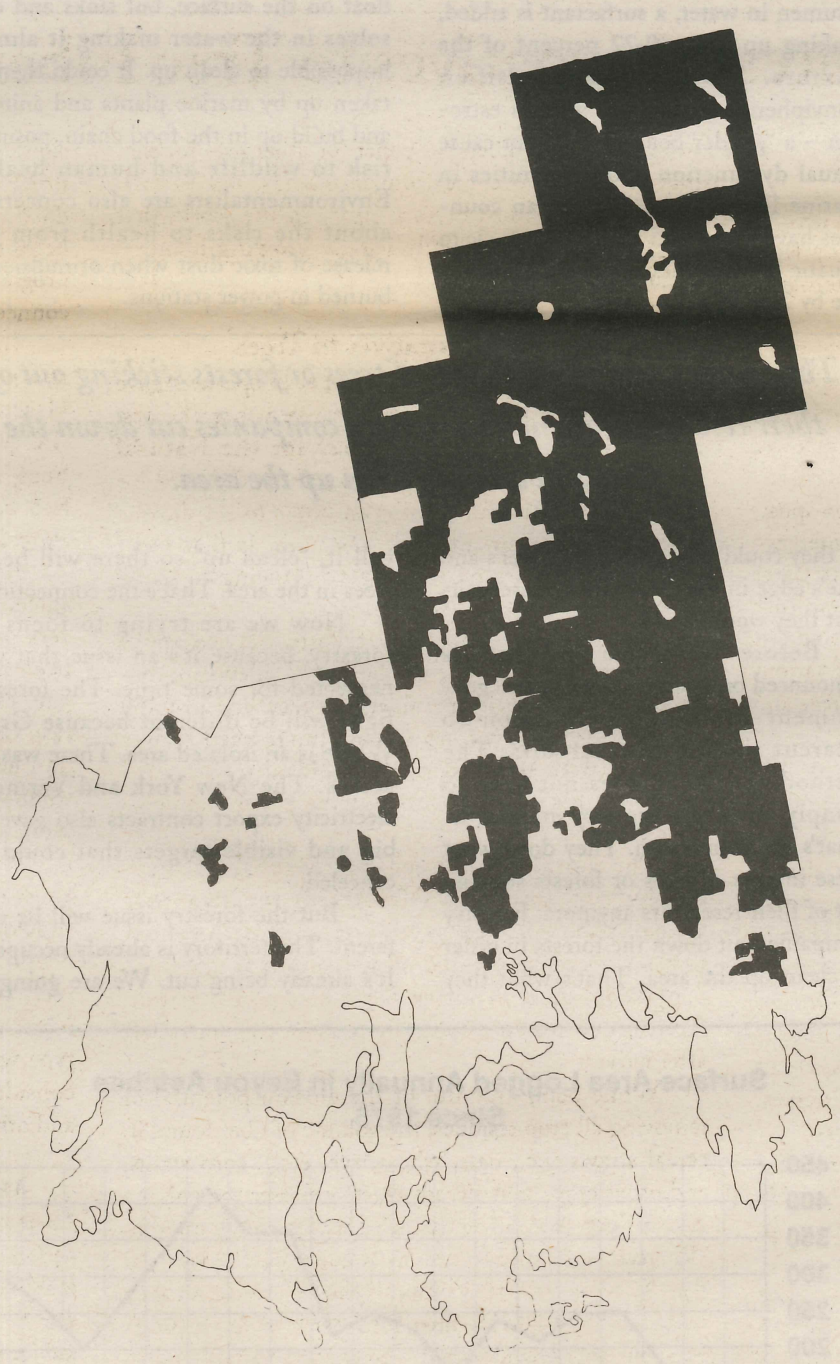
For what it was worth, the '95 survey reported that red spruce declined by 28 percent. For some of us familiars of the industrial forest (the spruce-fir type) this number likely understates the effect of clearcutting whole townships. Maybe the glass isn't 28% empty, but 72% full, eh? Hard to challenge their conclusions—they have the numbers. (They had the same sort of numbers in 1982—Ken Stratton, then Maine forest commissioner, and I told Joe Barnard of USFS that the spruce wasn't there; Joe replied, "Our numbers say it is.")

Why is Champion at Bucksport sweeping New Brunswick and Nova Scotia for spruce pulpwood? The answer is that once again, the federal numbers are unbelievable.

Plundering Hancock County

Hancock County (see map) is economically divided exactly as is the state—wealth at the end not in the paper plantation (Bar Harbor), separated from small towns in the depressed forest economy by the poverty line. (I've lived and worked here for fifty years and am ashamed how we have let seven companies plunder the forest while impoverishing the inhabitants; one of my sons. age 33, tells me he can't stay in eastern Maine, "There's no money here.") Hancock and Washington counties, fiefs respectively of St. Regis-Champion and Georgia-Pacific, often have per-capita incomes lower than Mississippi's.

According to the '95 report, spruce in this county increased in 1982-1995 from 297 million cubic feet to 375 million. In both inventories, red spruce was 87% of spruce volume, the remainder in white spruce or black. Were this true, the industrial-strength landowners in the county could take pride in their management—they cut intensively, yet apparently increased the growing-stock by almost a million cords. So, where's the crisis? Why is Champion at Bucksport sweeping New Brunswick and Nova Scotia for spruce pulpwood? The answer is that once again, the federal numbers are unbelievable.



Map of Hancock County, Maine shows major landowners (in black). The northern commercial forest figures at a bit more than 400,000 acres contrasted to a bit less than 450,000 in the southern sector.

Under Sampling

But, this time they are challengeable. Thanks to the USFS field data, we know, to a mile the latitude, and precisely as to longitude the locations of the plots where all the other measured quantities are gathered. The USFS states that the forest area in Hancock county is 855,000 acres. The county is about 65 miles North-to-South by 40 along the coast. This was sampled by 157 plots, shown in Fig.1 (on page 27). Superposing the commercial forest ownerships on the county outline shows how many of the 157 plots are found in each portion. The commercial forest figures at a bit more than 400,000 acres contrasted to a bit less than 450,000 in the southern sector.

Here's the rub: the number of plots assigned to the southern end is 115; plots in the northern, commercial, section number 42. The result of this disproportion is that we learn more about the non-commercial holdings than the commercial. Or worse.

Inconsistent Measurements

Thirty-six of the currently measured plots were newly installed for the 1995 survey; trees on these have no history, so they yield no information on cut, growth, or deaths. An additional 61 plots were created for the 1982 inventory, and remeasured in 1995.

Any history derived from these is sketchy because the plots were partitioned, with differing measuring protocols in each partition. The 1/6-acre plot originally was subdivided into 1/12-acre compartments in which tree classes measured in the inner ring were not measured in the outer. Additionally, the 1982 plot area of 1/6 Acre was expanded to 1/5 Acre with no tree history at all. Last we have 60 plots carried from 1959 through 1982 and 1995. Even these treated trees on the inner half of the 1/5 Acre plot differently than those on the outer half in the earlier inventories, leaving a mixed bag of data.

I studied this problem with the FIA (Forest Inventory and Analysis) in the 1997 Autumn Equinox Forum. At a Maine legislative session in April, 1998 Will McWilliams of the FIA unit first told me they wouldn't dignify the Forum piece with a response, but, immediately, continued that, in southeastern US where he had done other inventories, all the plots are remeasured. Q.E.D.

Cooking the Books

Mentioned in my first piece was another factor which might bias the study—the process of stratification, by which a human observer decides which and how many plots go where. That aerial photos are used does not make it less subjective. Even the decision to drop an older plot carries the same hazard. The probability of the plot distribution found in Hancock county is low, when it is considered as a result of a random, or chance, procedure. Because it is the result of human manipulation, of course, it is not random. Again, it is the result of human choice.

Some of the stratification was done by University faculty at Orono when the paper industry funded much of the forestry school. This is a strong argument for either 1) keeping industry-sponsored people out of the process, or, 2), having a school of forestry which does not accept financial aid and direction from the landowners.

Of itself, the discrepancy in plot assignments makes little difference in the inventory, if it is assumed that the forest composition is homogeneous, that is, about the same in two halves of the county. If you haven't been there lately, think of coastal Maine — spruce-covered headlands, summer homes of those wealthy enough to refuse to cut their trees, despite the importunities of both paper-company contractors and the Maine Forest Service; the usual. It's all going to die, anyhow, is applied, not that the mills really are desperate. (If there is a spruce beetle about, as Chuck Gadzik states, he ought to check if Champion Paper at Bucksport brought it in on their pulpwood barged from Nova Scotia.)

The volume per acre along the coast is wonderful, incomparable with the scant cover MFS finds acceptable on the other half of Hancock. Put over twice as many plots in this protected forest as on commercial land and you have skewed the result for the county.

SFI Implications

During the recent legislative forestry debate, a slow train to nowhere, the state forest service got an appropriation to fund a new forest inventory. Even industry admits that no one believes the USFS numbers, although this is no guarantee that they really want an accurate report. (The same reluctance appears in the evasions embodied in a "confidential audit, green certification" (bought), and a third rat-hole, self-proclaimed compliance with the paper industry's Sustainable Forestry Initiative, SFI. In Maine, J. M. Huber, with over 300,000 Acres is not in the SFI game. Nationally, Louisiana-Pacific is also a non-starter.

My opinion of SFI is that it starts a train that rolls on to incriminating mills for bad forestry on private lands from which they buy wood, for theft of wood, for underpayment of wages and taxes on what are euphemistically termed "subcontractors" employed by others in the supply chain. In short, this tends to force the mills to recognize those who cut the wood used in the mill as their employees.

In Maine, this would be a radical, nuclear change. But it is true that in the southeast US, a federal court ruled back in the '70s that those who cut pulpwood, on private holdings and who sold their product through the white broker system, were in fact, employees of Scott, IP, and the rest. This was the legal ground for the 1975 organization of the Maine Woodsmen's Association. That the MWA was side-tracked by the big unions is not news today; it is relevant that we told you in 1976 that Cut & Run was not only a film title, but a prediction of where the forest is today. (I have a copy.)

If there is some blessing in the worst of news, the Hancock county set-up can lead to industry embarrassment—not of foresters, who profess always to conform their mischief to the landowners goals. Contradicting Will McWilliams, Robert Seymour says we will do remeasured plots in the forthcoming inventory. With data from these 157 plots, we can calculate the temporal changes for 1) the county; 2) the Bar Harbor end; 3) the commercial forestry end. Look forward to hearing reasons we shouldn't do this.

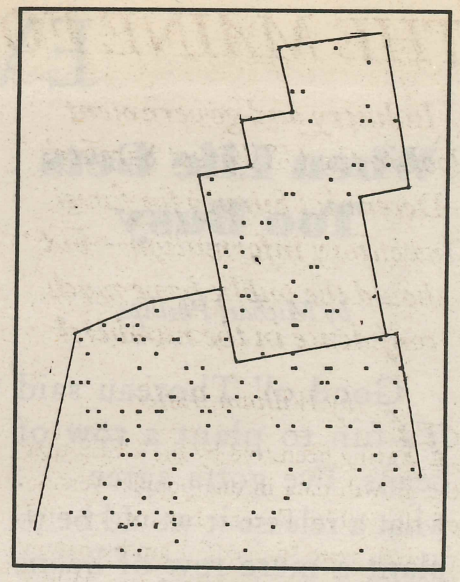


Figure 1. FIA plot distribution, Hancock County, Maine. Northern Section is dominated by large landowners. Southern section, with a preponderance of sampling plots, is mostly owned by non industrial interests.

Conference Explores Alternatives to Tree Fiber in Paper Making

by Eric Hartmann

"Anything made from wood ought to last at least as long as the tree it came from," suggested Andy Kerr, the keynote speaker for the First Annual Alternative Paper Conference.

With that thought in mind, the absurdity of using tree fiber for making paper becomes immediately apparent. Consider the useful life span of a hamburger wrapper at a fast food restaurant versus the life of a tree in even the most intensively harvested tree plantation.

This and many other paradigm-shifting propositions were abundant at this first-of-its-kind conference held in Lewiston, Maine on April 4, 1998 at Bates College. Attendees came from as far away as New York and comprised a mix of college students, interested citizens, and farmers, as well as representatives of various paper companies, Maine chambers of commerce, and the Penobscot Indian Nation.

Farming Fiber

After an opening welcome and introduction by Jim Carignan, Dean at Bates College, Andy Kerr shared many incisive thoughts gleaned from his long years working on the front lines of the ongoing timber wars in the Pacific Northwest. Mr. Kerr was Conservation Director and then Executive Director of the Oregon Natural Resources Council for over 20 years. He is currently on the board of the North American Industrial Hemp Council, a coalition of businesses, environmentalists, paper companies, and farmers.

Mr. Kerr highlighted the importance of trees for carbon sequestration, among other useful benefits. He explained that trees are best left alone so that they can absorb and retain excess carbon dioxide from the atmosphere. As he pointed out, the only things that cannot be made with a wood alternative are certain musical instruments.

One of the most promising alternatives is hemp, not to be confused with marijuana. (Similarly, most people can tell the difference between a Poodle and a Chihuahua.) Not only is hemp naturally pest resistant and easily grown in rotation with other crops, but it is an annual, which means that one can obtain more fiber, more often than from even the fastest growing trees. In essence, fibers for paper (or other uses for that matter) ought to come from farmlands, not forests. Significantly, almost every country in the world that can grow hemp is already legally growing hemp—including Canada.

More Alternatives to Trees

Following Mr. Kerr's address, a panel of speakers gave an overview of some other alternative paper choices. Anne Hagstrom, staff attorney for the Natural Resources Council of Maine, spoke about the need for chlorine-free paper processing in order to rid dioxins from our environment. One key point is that most alternative fibers require far less bleaching to make paper than does wood fiber.

Bob Kearney, United States Postal Service, spoke about paper recycling's contribution to alleviating our dependence on virgin tree fiber. For recycling to fulfill its promise, however, we as consumers need to buy products with recycled content—ideally post-consumer, the higher the percentage the better—to complete the loop.

The morning's last speaker, Meghan Clancy-Hepburn, Campaigns Director of the Resource Conservation Alliance, gave an electrifying presentation on the vast potential of agricultural residues for providing an alternative fiber source for paper. Agricultural residues typically include the stalks left after harvest.

While being mindful of the erosion potential of removing all crop residues, the volume of fiber found in cereal straws (i.e., oats, wheat, rye, etc.), corn stalks, and other crops that already exist surpasses the volume of tree fiber used currently for paper by a large margin! Whereas these residues are often burned off today (and thereby create air pollution problems)—tomorrow, they could not only provide fiber for paper and other products, but also provide additional income to farmers. In a very real sense, these residues represent untapped gold.

Future Prospects

After a delicious lunch specially cooked up by the Bates College dining staff, attendees and speakers broke off into two sets of three smaller panel discussions. Topics included the potential of alternative fibers in Maine, printing on alternative paper fibers, getting dioxin out of the paper making process, partnerships between the agricultural community and government, progressive paper buying policies for colleges, and the connection between alternative fibers and forest health.

In addition to the speakers mentioned above, the afternoon panels benefited from the expertise of John Harker (Maine Dept. of Agriculture), Greg Barber (PCW 100), Peter Hopkins (Crane Paper Co.), Will Sugg (Green Disk Paperless Environmental Journal and F.E.N.), and Kelly Sheehan (Campus Ecology Program, National Wildlife Federation).

By the end of the conference, most participants agreed that the future of alternative fibers for paper is very promising. When paper can be made from fibers from recycled paper, hemp, kenaf, bamboo, seaweed, jute, cotton, agricultural residues of flax, wheat, corn, rice, or byproducts from coffee, cigar, banana production just to name a few viable alternatives—our overwhelming use of paper made from trees seems all the more irrational.

A caveat to always bear in mind is that no one alternative fiber can replace tree fiber paper . . . nor should there be just one. Any intensive mono-culture is bound to precipitate unwanted tradeoffs and problems such as habitat loss, pesticide use, and depleted soils. Most importantly—reducing paper use of whatever type will always need to be an overriding goal if one considers clean air, clean water, and wildlife habitat and other features to be vital.

Many thanks to Heather Burt, Executive Director—Compassion Unlimited—Respecting Everyone, for successfully organizing this ground-breaking conference. (For more information on this conference, contact C.U.R.E. at P.O.B. 100, Edgecomb, ME 04556, (207)882-6848, or adburt@wiscasset.net.)

Patagonia of Freeport,ME deserves major credit for making this conference possible through a grant and their commitment to using alternative fibers.

Let's hope this is just the first of a series of conferences which will catalyze a transition from an unhealthy dependence on tree fiber paper to a sustainable reliance on tree-free paper.

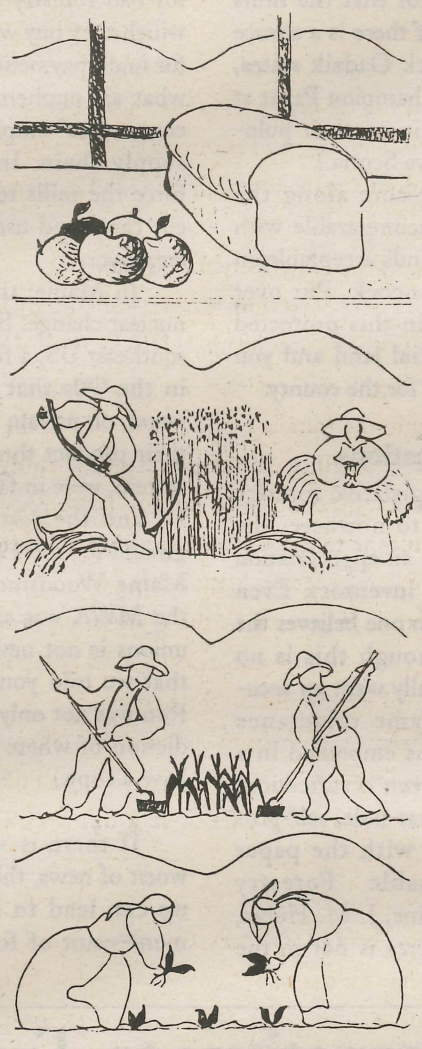
EVERY PERSON'S NEED

When Life Gets Too Busy

by Michael Phillips

Good ol' Thoreau said it's fun to plant a row of beans. I've gotta agree . . . what a release it would be to plant a mere row of beans this time of year. Leave the onions be. Who needs corn! Tomatoes only freeze come June's full moon. Why not let a few worms claim the apple crop? Henry David always preferred the wild sorts anyway.

Compulsive-obsessive gardeners don't plant on a simple scale. But then the goal of providing the majority of the food for your family's table doesn't take place on a humble garden plot. Planting time entails having twenty tasks to do at once and then some. You step to the left intending to cultivate the garlic but then remember the newly set lettuce transplants have yet to be watered in. Which takes you past the greenhouse where the squash seed screams "plant us, plant us." Across the brook the sheep graze freely, unhindered by outlying fences that would put an end to summertime jaunts down Lost Nation Road (thank god the black flies drive 'em back to the barn this time of year). The young orchard trees fall victim to the relentless chewing of borers in the trunk needing to be grubbed out one cursed bug at a time. There is too much to do even if we didn't sleep!



But whoa, Jack. Unending lists are a reality (of sorts) that by no means need to block out the greater reality of existence. And you don't need to be an unrelenting homesteader to be befuddled by the oft-too-many demands on your life. We each have our own gardens to plant—be it in the corporate world, juggling our children's schedules, tending our relationships with mates and friends, even "saving the earth." Certain seasons bring the complexity of our so-called simple lives to the fore. And then all hell breaks loose as regards the serenity of our souls.

Which is a good point to step back, take a few deep breaths, count your blessings and just be. Plop in the grass and look at the clouds passing overhead. Set your sights on one task at a time. Nothing is a more direct route to unhappiness than juggling more than can be humanly done, none of which gets done satisfactorily. Focus on doing a great job on that first task. "Be here now" is the sagest of advice.

Too often we forget where "here" is. We are on this beautiful creation known as earth, each with God-given talents and inner joy to share with each other. We are spiritual beings in awesome physical bodies in which we can directly experience the lessons life has to offer. We can watch a blossom unfurl and marvel at the miracle of a wee robin taking its maiden flight from the parental nest. We can gaze at the vastness of the universe at night, and then, turning over to sleep, gaze into the depths of our own hearts. We can love each other. We can cherish the earth. We can be happy.

"There is enough for every man's need, but not enough for every man's greed."
—Gandhi

All of this is a choice. Too often people take the perspective that life is dictated to them, that their circumstances allow no choice. Ultimately, there is little correlation between the circumstances of people's lives and how happy they are. Helen and Scott Nearing of "Living the Good Life" fame had a proportional approach to each of their days: four hours for the work of their homestead, four hours for sharing in community (including themselves!), four hours for solitude and creative expression. Such balance is integral to our spiritual well-being.

I'm out to the gardens now. First I'll work in the greenhouse and start the squash in peat pots. Act two is not yet planned, though I suspect daughter Gracie will guide me to some fun splashing in the pond where the ducks will have a hearty laugh at my human condition. Perhaps after lunch I'll plant those beans for Thoreau. What needs to be done will get done in its time. Simple living is first and foremost about being a joyful, loving human being.

Simple Living Quotes

☞ *"What a care, what an assiduity does this life require! A particular friend of mine who possesses a large farm and mows every year about 120 acres of meadow, and keeps 100 head of horned cattle, sheep and horses in proportion, came the other day to dine with me. 'How happily, how peaceably you live here,' he said. 'Your farm is not so large as mine and yet brings you all you want. You have time to rest and to think. For my part, I am weary. I must be in the fields with the hired men; nothing is done except I am there. I must not find fault with them or else they will quit me and give me a bad name. I am but the first slave on my farm.' Nor is his case uncommon; it is that of every person who tills the earth upon a large scale."*
Michel Guillaume Crevecoeur, **Letters from an American Farmer** 1782

☞ *"What is the good life if its chief element, and that which must always be its chief element, is odious? No, the only true economy is to arrange so that your daily labour shall be itself a joy."*
Edward Carpenter, **Non-Governmental Society** 1911

☞ *"If we had ample means and could choose any kind of life we wished, we would choose what we have chosen. And when I say we, I mean we. There are many differences between a man's viewpoint and a woman's, even though they may live side by side in the same house year in and year out. But there must be a profound unshaken unity underneath the difference if they are to make a success of such a life as we have lived, because the things that must be passed by are things that one or the other might consider indispensable. As for children, I cannot help think that they gain far more than they lose, in happiness and experience. By and large, it is the best life for children. And later, they must make their own choice."*
Gove Hambidge, **Enchanted Acre: Adventures in Backyard Farming** 1935

☞ *"When humanity gets tired enough of being hounded from pillar to post, when the powerful have sufficiently persecuted the weak and the envious weak have sufficiently obstructed the strong, perhaps our way of life will come to seem the true one, the good one; and people everywhere will awake in astonishment at having for so long neglected its simple wisdom."*
Louise Dickinson Rich, **My Neck of the Woods** 1950

The Land That Feeds Us

"The keystone of local economy is agriculture"

"Call for a New Food Movement"

Guest column on proposed federal organic standards

by Michael Colby

As an agency that has had nothing but disdain for organic agriculture, the motives behind the UDSA's new commitment to getting its fingers in the organic pie and ensuring that its standards are as low as possible are obvious: to pave the way for the pure commodification and centralization of organics.

If the question is whether or not H.J. Heinz. M&M-Mars, and Whole Foods should use toxic pesticides, the answer is obviously "no", they should not. And if we had a federal government and a democracy that truly reflected the will of the people, policies outlawing the use of those poisons would be in place.

But we must go deeper than that. In the pursuit of sane and sustainable food systems, we must take into account factors that go so far beyond the simple list of what chemicals a farmer can and cannot use in all 50 states. Rather, in addition to banning toxic pesticides, we must demand that our food supply does not become another weapon used for the benefit of the multinational corporations against the best interests of individuals, communities, the land, and the environment.

Issues of scale, economic concentration, transportation, resource conservation, animal welfare, farmer and farm-worker justice, and environmental stewardship, as well as a much needed emphasis on local production and consumption, must be the centerpieces of a real and politicized food movement.

Ineffectual Activism

Most of the action alerts sent out by activist groups centered around the USDA's potential inclusion of irradiation , sewage sludge, and genetic-engineering in the standards. But to get lost in the undertow of wrangling about irradiation, sludge, and genetic engineering is to fall for these red-herring issues meant to distract us from the realization that the entire concept of "national organic standards" is destructive. It puts us in the demeaning position of begging for insignificant changes to something we shouldn't be asking for in the first place.

It doesn't even help to contact the USDA and tell them to "get out" of organics; they don't understand that language. The USDA is a bureaucracy that maintains its existence through such programs. At a gathering of organic farmers in Vermont last February, USDA officials heard hundreds of comments demanding that the USDA "get out" of organics. One of the USDA's officials on hand, Grace Gershuny, the author of the first draft of the standards, arrogantly responded in a newspaper article that "there were practically no helpful comments on anything since most of the comments focused on 'we don't want it, get rid of it' and are not substantive about what should be."

Creating The New Movement

The USDA is here to stay with organics and it appears from our perspective that we're faced with two distinct possibilities: beg and whine for the standards to be a little bit better, or get on with the necessary work of building real food security.

The ultimate certifier for the manner in which food products are produced should not be a monolithic federal government, but rather a mutually trusting and celebrated relationship between the producer and the consumer, the community, or, at the very least, local or regional certifiers, with an understanding of localized social, ecological, and economic needs. In other words, what we should be striving for is assurance of familiarity.

No, these are not "simple" actions you can take. Producing your own food, getting "to know:" your farmer, visiting farmer's markets, being actively involved in meaningful co-ops, or being diligent in shunning a monopolized food supply is certainly not easy. But it's necessary if our goal is to not only fundamentally change a very destructive food system, but the underlying culture that makes it all possible.

From the Spring 98 edition of the
Food & Water Journal.
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The Two Year Old Ecologist

by Grace Elena Phillips

Daddy and Jamie wanted us to go for a walk in the woods, but Brookie and I knew. We were actually going to look for Hefalump's house.

You can think you know where you are in woods in which you've walked many times. Big boulders and huge pine trees don't move about like people do. But once you speak a name like Hefalump—and he realizes you've actually come looking for him—mischievous changes are going to take place. Daddy and Jamie talked about the way ahead being the way back to our farm, but Brookie and I knew. Hefalump had turned the mountain around backwards.

Which was okay. We found bear poop and could tell Mister Bruin had had 'dead animal applesauce' for lunch. We wound our wee way beneath blowdowns, while our dads struggled above. We scampered up great rocks and listened to the lichen eating. Brookie and I also settled many arguments between the big people over who would carry which stick. Finally we found our babbling brook and dealt with the important question: "If Brookie's name is Brook, and the water at our feet is a 'brook,' what's the point?"

Each new view brought more puzzlement to Daddy's face. He was mumbling about never having seen this alder swamp before and that we should have come to the pasture long already. Jamie suggested to Daddy that next time he might want to carry a leaking bag of flour with him into the woods. I didn't see the need as Hefalump prefers to eat things like cars, glass windows, and oil paint.

Then we came to the neighbor's logging road. Only Daddy said that for us to be here we would have had to have crossed the road before, which was impossible. See what I mean how Hefalump turns things around? Brookie and I knew which way to go. I told Daddy, "Today Hefalump lives on Main Street" and suddenly the spell was broken. There was the far edge of our sheep pasture. There was our house where our mamas had both snacks and warm laps in which to snuggle. Daddy and Jamie both relaxed. I whispered goodbye to Hefalump and thanked him for a nice walk in the woods.

LEFT BIOCENTRISM PRIMER

Left biocentrism is a left focus or theoretical tendency within the deep ecology movement, which is subversive of the existing industrial society. It accepts and promotes the eight-point Deep Ecology Platform drawn up by Arne Naess and George Sessions. Left biocentrism holds up as an ideal, identification, solidarity, and compassion with all life. 'Left' as used in left biocentrism, means anti- industrial and anti-capitalist, but not necessarily socialist. The expressions 'left biocentrism' or 'left ecocentrism' are used interchangeably.

Left biocentrism accepts the view that the Earth belongs to no one. While raising a number of criticisms, left biocentrism is meant to strengthen, not undermine, the deep ecology movement which identifies with all life.

Left biocentrism says that individuals must take responsibility for their actions and be socially accountable. Part of being individually responsible is to practice voluntary simplicity, so as to minimize one's own impact upon the Earth.

Left biocentrists are concerned with social justice and class issues, but within a context of ecology. To move to a deep ecology world, the human species must be mobilized, and a concern for social justice is a necessary part of this mobilization. Left biocentrism is for the redistribution of wealth, nationally and internationally.

Left biocentrism opposes economic growth and consumerism. Human societies must live within ecological limits so that all other species may continue to flourish. We believe that bioregionalism, not globalism, is necessary for sustainability. The perspective of the late German Green philosopher Rudolf Bahro is accepted that, for world-wide sustainability, industrialized countries need to reduce their impact upon the Earth to about one tenth of what it is at the present time. It is also incumbent upon non-industrialized nations to become sustainable and it is necessary for industrialized nations to help on this path.

Left biocentrism holds that individual and collective spiritual transformation is important to bring about major social change, and to break with industrial society. We need inward transformation, so that the interests of all species override the short-term self-interest of the individual, the family, the community, and the nation.

Left biocentrism believes that deep ecology must be applied to actual environmental issues and struggles, no matter how socially sensitive, e.g. population reduction, aboriginal issues, workers' struggles, etc.

Social ecology, eco-feminism and eco-marxism, while raising important questions, are all human-centered and consider human-to-human relations within society to be more important and, in the final analysis, determine society's relationship to the natural world. Left biocentrism believes that an egalitarian, non-sexist, non-discriminating society, a highly desirable goal, can still be exploitive towards the Earth.

Continued on page 31

Labrador Tea

Book Review

Extinct Songbirds of Maine by Stephen Petroff

Review by Elderberry Youngmann

What a marvelous antidote to the recent and vicious propaganda of the Fillmorists—of which we are all no doubt weary!

Mr. Petroff has here captured, in as much as the tragedy of extinction may be mitigated, the nuances, subtleties and yet also the enormity of our loss.

In these pages Mr. Petroff describes and celebrates the net-weaver, blue wavelet, hedge-monk, field-scold, perhaps most marvelously the blind strider; perhaps most poignantly the echoing-widow. (And not to diminish in anyway his achievement, how regrettable that Mr. Petroff neglected the flummery partridge and meadow dourbrush!)

This volume's phonetic rendering of forever departed birdsong is its greatest accomplishment. Lucky we are that Mr. Petroff set modesty aside to render, for instance, the song of the silver-beaked warbler:

A spider wrapped a star in a cloud
and laid it away, to eat.
There's no escaping a spider like that.

Mr. Petroff's small asides on the question, problem and situation of extinction itself are part and parcel of the overall poetic effect of his prose. Asides? Perhaps these observations are central: I cannot say. "I know how grotesque it would seem to suggest that their extinction was part of some larger, or supernatural, migration of spirits. But it does seem as if a choke-damp moved through us, in a certain period, and that some creatures came to their senses and fled."

Extinct Songbirds of Maine is available for $5.00 from Blackberry Books, Nobleboro, ME. 04555

The Deep Ecology Platform

1. The well-being and flourishing of human and nonhuman life on Earth have value in themselves (synonyms: inherent worth, intrinsic value, inherent value). These values are independent of the usefulness of the nonhuman world for human purposes.

2. Richness and diversity of lifeforms contribute to the realization of these values and are also values in themselves.

3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.

4. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.

5. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.

6. Policies must therefore be changed. The changes in policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.

7. The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent worth) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great.

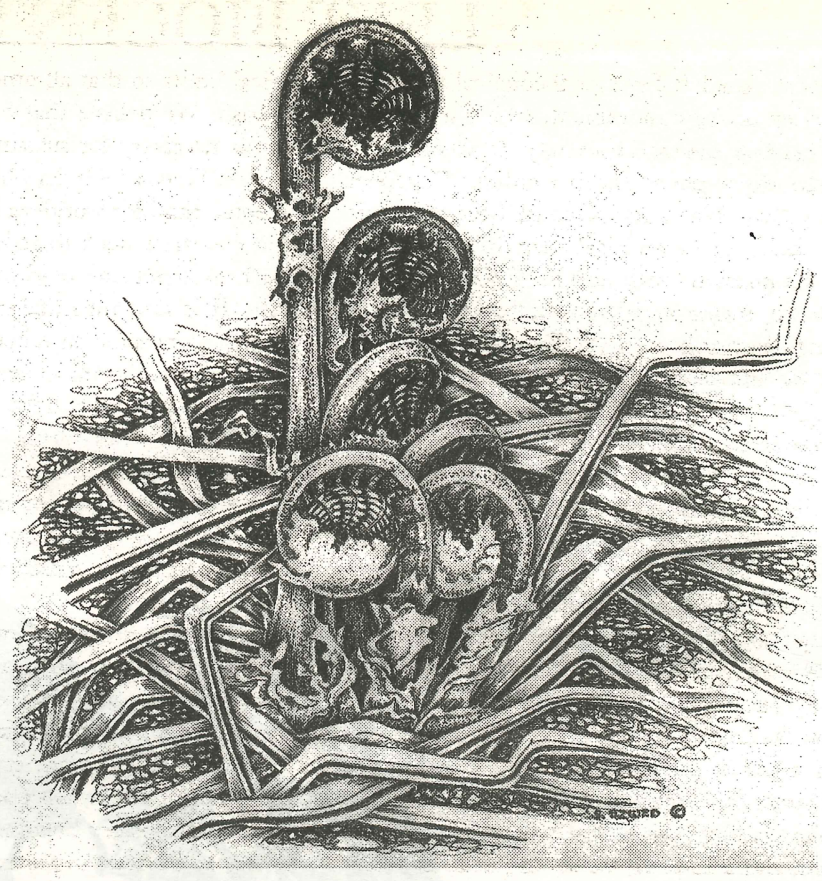
8. Those who subscribe to the foregoing points have an obligation directly or indirectly to participate in the attempt to implement the necessary changes.

-Arne Naess and George Sessions

Source: Clearcut: The Tragedy of Industrial Forestry, edited by Bill Devall (San Francisco: Sierra Club Books and Earth Island Press, 1993).

Acadia: The Soul of A National Park

Reflections on private property from a forthcoming book by Bar Harbor's Steve Perrin



Ostrich fern - L. *Pteretis pensylvanica*

From Hike 40—Sargent Mountain via Giant Slide Trail, April 23, 1997

From the former St. James Church on Route 198, the start of the Giant Slide Trail—one of Acadia's truly great hikes—is a little off-putting because of the battery of signs warning hikers not to stray off the trail onto private land. The Park Service has its sign, the owners of the former church theirs, and four other property owners theirs. In no uncertain terms the hiker is told:

PRIVATE DRIVE
PRIVATE PROPERTY
POSTED, PEDESTRIANS ONLY
KEEP OUT, NO TRESPASSING
DO NOT ENTER

Even the portable toilet by the former church had its sign:

POSTED
NO TRESPASSING
KEEP OUT

The message was clear, but I felt somehow unwelcome on a route that had served as a public way for over a hundred years. A more positive approach would be to make sure the trail was clearly marked so that hikers would not wander off out of uncertainty. How defensive we become when we own a piece of land. It brings out our fear of being intruded upon by strangers. Signs and fences go up as soon as we sign the deed. Think what Mount Desert Island would be without the park—a warren of barricaded acres defended with leers, signs, fences, and shotguns. Would the warbling vireo sing in such a place? Not without the owners permission. We want no such racket here. No untoward displays of cosmic joy and celebration. The so-called right-use movement has it wrong. Earth is not meant to be divvied up among the fearful and defensive. Private property rights are a dangerous fiction.

We cannot rightly control what we did not make and do not understand. Earth owns us, we are its creatures. It is as foolish to think we can own an acre of land as it would be to own our parents or the clouds that bring rain. I am thankful for state and national parks that remind us how beautiful our habitat is, and how lucky we are to share it for the brief span we are allowed. Earth welcomes our visit as long as we do not spoil the landscape or its inhabitants as we pass by. Who among us has ever posted a sign, WELCOME EARTHLINGS! I am glad the federal government had the wisdom to set Acadia aside for the benefit of spruce trees and warbling vireos, and for those who care about such things.

PUBLIC WAY, ENTER HERE!

After running the gauntlet of no trespassing signs, my route took me through mixed woods to the Aunt Betty Pond Carriage Road, then up the valley of Sargent Brook as far as the trail crossing by the Giant Slide, a huge slab of granite let slip from the Parkman side of the valley. From there I took the Sargent Mountain North Ridge Trail to the 1,373-foot summit, where I picked up the Grandgent Trail leading to the upper end of the Giant Slide Trail in the saddle between Parkman Mountain and Gilmore Peak, passing through what I call Chickadee Valley and over Gilmore Peak on the way. I followed the Giant Slide Trail from the saddle back to the former church on Route 198. Including the climbs to Sargent Mountain and Gilmore Peak, the route rises (and falls) a total of 1,424 feet in elevation in a distance of 5.6 miles, 2.4 miles to the summit of Sargent and 3.2 miles back.

I took a little less than five-and-a-half hours to make the loop, and could probably do it in about three hours if I didn t take pictures and make notes.

The hike was about being there. Being in the valleys of Sargent and Hadlock brooks, being on the summits of Sargent Mountain and Gilmore Peak. I went from ecodomain to ecodomain, rocky stream valley to subalpine summit, to rocky stream valley, to a lesser summit, to a saddle between summits, and back through a rocky stream valley. Each domain was unlike the others, a place unto itself. Each brought out a different side of my nature: my icy valley side; my exposed, subalpine side; my sheltered, saddle-between-peaks side. I tried to be where I was at all times. To be who I was in each place. Being there is an art. It takes close observation, empathy, and openness. It requires moving with the land. Moving with the water flowing in and over the land. Moving with the plants that rise from the land and the water running through it. Moving with the creatures that rise from the plants. Being there is a matter of entering into the dynamics of Earth and of the cosmos. We can do it because we are designed to do it. We are not meant to stand apart as rugged individuals always the same but to get with the program the universe is engaged in here and now. We are creatures of that program. It gives meaning to our lives. Born and bred of cosmic particles, we are here to do the work they lay out for us. If the warbling vireo is driven by whizzing electrons, so am I. As electrons go, so do we all. We go with the flow of the terrain and the waters, the flow of plants and animals, the flow of electrons and life. Being there means being alive where you are, fully alive, open to the forces around and within you, seeking resonance between the two. Finding that resonance, you have arrived. You are there. You are where you are. You are part of the scene. When the vireo sings, he sings of you and for you. When you sing, you sing of and for the vireo.

They don't own what they claim to own, and fear others will take it from them by resonating with the land before they do.

Private property loses its meaning when you are there. Keep-out signs are put up by people unsure of themselves because they are not where they think they are. They miss the resonance, so are afraid. They are intruders themselves, and know that they are. They don't own what they claim to own, and fear others will take it from them by resonating with the land before they do.

Being there is not a matter of putting up fences and signs. It is a matter of opening to the place where you are, of giving yourself to the Earth so that you belong there as much as earthworms and robins do. The word human means Earthling (one of the soil or of the Earth) but we act as if we were visiting from outer space, taking what we want now, then moving on—the consequences be damned. We think of ourselves as sojourners making a temporary stop between stages of our journey to heaven, not recognizing that this is heaven where we are. Being there means finding heaven here on Earth. Look no farther, heaven is where the warbling vireo sings. Being there means letting the place where we are nurture us with its own cosmic juice. Fulfillment, no respecter of fences and signs, is here for the taking.

The selection above is excerpted from Steve Perrin's new book, ACADIA: The Soul of a National Park, ISBN 0-9651058-4-9, $28.30 plus $1.70 Maine sales tax (where applicable) and $2.00 shipping per book. With 360 8«" x 11" pages, 268 black-and-white photographs, and 64 maps, the book describes 60 hikes made during the four seasons in every week of the year. For sales information contact Earthling Press, P.O. Box 585, Bar Harbor, Maine 04609-0585; earthling@acadia.net; voice 207/288-8240, fax 207/288-5820.

Left Biocentrism

Continued from page 30

Left biocentrists are "movement greens" in basic orientation. They are critical of existing Green political parties, which have come to an accommodation with industrial society and have no accountability to the deep ecology movement.

To be politically relevant, deep ecology needs to incorporate the perspective advanced by left biocentrism.

The above Primer is a result of a protracted collective discussion among a numer of those who support left biocentrism and deep ecology.

David Orton, Coordinator, Green Web, R.R. #3 Saltsprings, Nova Scotia, Canada B0K 1P0

Major Northern Forest Land Sales 1988-1998

Seller	Buyer	Acreage	Year
Diamond	Various	1,000,000	1988
Great Northern	Georgia Pacific	2.1 million	1989
Georgia-Pacific	Bowater	2.1 million	1991
Diamond/James River	Hancock	300,000	1993
Scott	Sappi	911,000	1994
Boise Cascade	Mead	667,000	1996
Champion	Still For Sale	325,000	1997
Sappi	Still For Sale	911,000	1998

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