Acid Rain '84

"Democracy in Action"

Kathleen Bond

It's democracy in action," I said Canadian Minister of the Environment Charles Caccia. He was referring to the "Acid Rain '84" conference held at the University of New Hampshire, the weekend of January 6-8, 1984. The conference brought together people from all parts of the U.S. and Canada to learn about causes and effects, control techniques, and strategies for reducing acidic deposition.

Friends of the Earth Foundation and the New Hampshire Citizens’ Task Force on Acid Rain organized the conference, which was cosponsored by 22 other organizations, including the Vermont Clean Air Coalition (of which VNRC is a member). The goals of the conference were to add impetus to the grassroots campaign against acid rain and to forcibly inject this critical environmental and economic problem into the politics of the presidential election, beginning with the New Hampshire primary. It succeeded in both cases.

"If the people lead, eventually the leaders will follow."

Over 600 people attended — twice as many as expected — and 150 reporters recorded the weekend activities on film and in print. Six Democratic presidential candidates delivered their positions on acid rain control. President Reagan, Vice-president Bush, and EPA Administrator William Ruckelshaus all declined to attend "Acid Rain '84." Reagan's position — or lack thereof — was an easy contrast for the Democratic presidential candidates who addressed the conference.

Former Vice-president Walter Mondale quipped, "President Reagan would rather be a polluter to lunch than take him to court." He calmly outlined his proposal for a national acid rain control fund, to reduce SO2 emissions by 50% (the minimum reduction called for by the scientific community). Polluting states would pay a higher share under his plan. Senator John Glenn of Ohio had the support of his coal mining constituency in mind when he introduced his own bill calling for the smallest emissions reductions of any of the candidates. He said his program has the best chance of winning Congressional approval because it would not cost a single job. It would reduce SO2 emissions with scrubbers and other pollution control technology rather than requiring that industries switch to low-sulfur coal. It would be financed by a fee imposed on the sale of electricity produced by fossil fuel-burning plants, and utility customers would bear the cost according to their electrical use. Polluting states would not necessarily pay a higher share.

Senator Ernest Hollings opposes consumer user fees covering all costs of emission reductions. He suggests private capital formation incentives (tax breaks for utilities which invest in pollution control devices). He supports a 50% SO2 emission reduction at no cost. He considers the "Acid Rain" an "innovative approach to reductions in S.1211," a bill requiring utility companies to mix natural gas with coal.

The self-proclaimed "common sense" platform of Senator Alan Cranston calls for reducing emissions by 50% by 1990 through more efficient use of electricity. He detailed three steps, any of which he says could achieve that objective:

- (1) reasonable national energy efficiency standards for major appliances.
- (2) capital incentives for industrial co-generation; and
- (3) national electrical motor and lighting efficiency standards.

Cranston claims his platform would save huge amounts of electricity at a comparatively low cost and would create enough new jobs to offset any lost in the coal industry.

Senator Gary Hart proposed tax credits, loan guarantees, and other subsidies for Midwestern utilities to clean up their emissions. He is the primary Democratic cosponsor (along by the Senate Agriculture Committee.

Senator Gerald Morse, Chairman of the Senate Agriculture Committee, opposed the measure and was able to hang onto the bill until the second half of the 1983-1984 Biennium. The committee finally turned it loose in February, but tacked on eight amendments, any of which would have done more damage to Act 250 than would have been gained by closing the 10-acre loophole. The amendments ran the gamut from reducing the five-mile radius to a two-mile radius to depriving adjoining property owners of their right to party status at Act 250 hearings.

The bill came out on the floor of the Vermont Senate on Wednesday, February 1. The Senate debated the Agriculture Committee amendments for more than three hours before striking each one in separate roll call votes. Debate resumed Thursday morning on the substance of the bill, concluding with a dramatic 19-10 vote.

A committee of conference is being set up to deal with the date the bill becomes effective and the other differences between the Senate and House versions. The House version says it becomes effective upon passage, whereas the Senate version would give developers a five-month period of grace.

VNRC operations director Donald Hopper is cheered by the victory, but doesn’t overestimate its consequences.

It was an affirmation by the Senate of Vermont’s basic commitment to environmental quality,” he said, “but it’s ironic that Act 250 is under such vitriol, and that there was so much discussion of weakening the Act at a time when so many of our constituents are expressing their concerns and fears that Act 250 may not be strong enough to cope with incremental and mega-scale developments such as the proposed golf-course development..."
Hikers Object to Trail Relocation Plan

A proposed relocation of a portion of the Appalachian Trail (AT) near the Killington Ski Area continues to elicit concern from conservationists and hikers. The Vermont Department of Natural Resources office around the state. The National Park Service wants to move a 1.4-mile section of the trail to the ridge line of Killington and Little Killington Peaks.

This section of the AT traverses land owned by the Sherburne Corporation, owner of the Killington Ski Area. The National Park Service has negotiated a relocation easement with the Sherburne Corporation, but the terms of the easement provide that the trail could be crossed by up to eight 60-foot-wide ski trails and one 200-foot-wide chairlift. It also allows for warming huts, picnic tables, and snow-making facilities within the trail corridor. Hikers contend that such actions would significantly decrease the quality of the hiking experience on this scenic segment of the Appalachian Trail.

Earlier this year, the National Park Service issued an Environmental Assessment on the relocation. The Vermont Group of the Sierra Club and other state and national environmental organizations have filed comments or requested the opportunity to speak to the Trail proponent’s hearing panel. They have asked NPS to comply fully with the requirements of the National Environmental Policy Act, to acquire additional protection for the AT by restricting ski area development, and to extend the comment period from February 3 to early March.

Copies of the Environmental Assessment may be obtained by writing:
Mr. David A. Richie
Appalachian Trail Project Office
National Park Service
Harpers Ferry, WV

Vermont Perspective
Local and Regional News

Mixed Fare at Breakfast

Margy Erdmann
The Tavern Motor Inn in Montpelier was the setting for the Second Annual Legislative Breakfast on January 15, sponsored by the Vermont Environmental Caucus. Attendance by legislators was greater than expected, with 69 people jamming the breakfast room. Conversation was jovial, and the food was most palatable, but the message from key legislative committee chairmen was more difficult to swallow.

Senate Energy and Natural Resources Committee chairman John Howland and House Natural Resources Committee chairwoman Mary Carse agreed that environmental issues will be assuming a "front seat" this session. Howland further dampened morale when he announced that he would not support H.82, the bill that would eliminate the so-called '10-acre loophole.'

Nevertheless, the breakfast served as a forum for communication between those on both sides of the State House walls, and legislators went away with a better sense of which bills would and would not see forward progress this session.

The Council is monitoring more than two dozen bills in the Vermont General Assembly including three important bills concerning Act 250. Highest on VNRC's list is maintaining and strengthening the use value assessment (current use) program. Two bills to weaken or eliminate the program will see considerable committee debate in the next few weeks. Watch VNRC's legislative Bulletins for updates.

Margy Erdmann is a legislative liaison for the Vermont Natural Resources Council.

Vermonters in Washington

10 Vermonters appeared before a subcommittee of the Senate Agriculture Committee in Washington to voice their opinions about the Vermont wilderness bill (H.R.4198), which cleared the House of Representatives just before Congress recessed last November. The bill would designate approximately 41,000 acres of the Green Mountain National Forest as wilderness and reserve another 22,000 in national recreation area classification which allows snowmobiling and limited timber harvesting for wildlife management purposes.

Assistant Secretary of Agriculture John Crowell showed up to register the Reagan Administration's opposition to the bill, but the only Vermonter to oppose the bill was John Mc- Claughry of Kirby, who complained that the federal government was unjustly taking away from Vermont its right to determine the management of a federal resource within its borders.

Loophole

(Continued from page 1)
expansions of the Snowbowl, Stowe Mountain Ski Area, and Stratton Mountain Ski Areas.

Hooper credits the victory to "a full team effort" involving a coalition of environmental organizations and their grassroots lobbyists who called, wrote letters and buttonholed their legislators on this subject for three consecutive legislative sessions.

Hooper also said that the debate in the Senate was "the most thoughtful, considered discussion of an issue" that he had seen.

Wilderness supporters hope that the bill will emerge from committee by early March. When it does, it is a good bet that Vermont will possess more than twice the amount of Congressionally-designated wilderness it now has.

Loophole

Thursday, February 16, 7:00 p.m.
Author and ethnographer Howard Norman delivers the first in a series of lectures sponsored by the Center for Northern Studies in Wobile. Norman has spent 10 years collecting and translating oral narratives of the Swampy Creek of northern Mani- tola. His lecture will draw on these narratives and on his personal experiences with the Cree. Call 888-4351 for reservations and directions.

Sunday-Friday, February 19-24
Sunday-Friday, Feb. 26-March 2
Five-day winter adventure/challenge course Info: Help.

Wilderness workshops sponsored by Sterling College.
Participants learn map and compass skills, fire and shelter building, snowshoeing and cross-country skiing and first-aid skills. Tuition: $250 ($100 for educators, teachers and counselors).

Wednesday, February 25
The second in a series of winter workshops sponsored by the Vermont Natural Organic Farmers Association will be held at St. Peter's Parish Hall in Vergennes. The conference, with a panel breakfast at 8:30 and includes workshops on growing grains in Vermont, greenhouse gardening, diversified farm income, creative farm management and improving soil fertility. For information and registration, call Barbara Lytton at 759-2555.

Thursday, March 1, 7:00 p.m.
Sanford Sagendorf, attorney for Alaska's Prudhoe Bay and North Slope will share his experiences in resolving conflicts between Native organizations, environmentalists, and the oil industry in the second in a series of lectures sponsored by the Center for Northern Studies in Wobile, 888-4351.

Thursday, March 8, 7:00 p.m.
Dr. Tom Svensson is a cultural anthropologist from Norway speaking on the history of the Sami (Lapps) of Sweden and Norway. He’ll discuss two major conflicts as to illustrate what happens when traditional cultures clash with the interests of modern societies in the third in a series of lectures on native resource conflicts sponsored by the Center for Northern Studies in Wobile.

Thursday, March 15
Maritime Stenbaker is the featured speaker in the fourth in a series of lectures sponsored by the Center for Northern Studies. Stenbaker, a Professor of English at McGill University, has worked closely with the Inuit Circumpolar Conference, an international organization with representatives from Greenland, Alaska and Canada. For reservations and directions, call 888-4351.

Saturday-Sunday, March 17-18
Sixth Annual New England Environmental Conference at Tufts University in Medford, Massachusetts, sponsored by the Lincoln Filene Center for Citizenships and Public Affairs. As usual, the list of scheduled speakers is a regular Who's Who in the Environmental Movement. The list includes virtually every significant environmental organization in New England. The conference includes two full days of workshops on more than 50 environmental organization and issues and strategies. The conference registration fee of $60 includes two buffet lunches and all workshops and materials. For information on registration and carpooling, call Kathy Bond at VNRC, 223-5238.
Jim Wilkinson is the champion and chief defender of current use, the program that allows Vermont farmland and forestland to be taxed on the basis of productive value rather than development value. He was instrumental in putting together the legislation that helped get the bill through both houses of the Vermont Legislature five years ago. Now he chairs the halls of the State House again as the chairman and legislative spokesman for the Vermont Current Use Tax Coalition, a new organization that’s trying to fend off a drive to eliminate current use or raid its budget.

Current use has been lauded as reasonable and very effective in protecting Vermont’s productive farmland and forestland. The same description might apply to Wilkinson himself.

“He’s probably contributed more to common-sense land management than just about anybody I know,” says VNRC operations director Don Hooper.

One reason legislators listen to Jim Wilkinson is that he’s a professional forester with more than 38 years of experience, including 33 years with the Vermont Department of Forests and Parks. Beginning as a district forester in charge of fire control for southern Vermont in 1946, Wilkinson worked his way up to county forester, district forester, and state forester, and retired as commissioner of Forests and Parks in 1979.

“As a forester, I recognize that taxes on the land in many cases are more than the value of the annual growth,” says Wilkinson. “So there’s really no incentive to hold on to the land and to manage it for timber-growing purposes.”

Forest products is one of Vermont’s major industries, yet every survey shows that Vermont’s forests are not nearly as productive as they could be. According to Jim Wilkinson, “One of the reasons for this is the low level of timber management in the past.”

The current use program gives farm and forest landowners a break on their taxes in exchange for an agreement to keep the land in production. Timberland owners must have approved forest management plans in order to remain eligible for value assessment.

Some legislators charge that current use is a windfall for land speculators and large corporations and that most of the benefits of the program go to people who don’t need the subsidy. Jim Wilkinson sees it differently:

“The wood-using industry is dependent on a productive land base to provide raw materials,” he says. “It’s important for the state’s economy and for the public benefit that they be assured some kind of basic resource. That’s the real reason and justification for a law such as this. It’s not to benefit you or me or anyone else; it’s in the public interest to have productive farmland and productive forestland, rather than to have it broken up and split up to the point where it becomes a commodity rather than an active producing resource.”

Of course, current use isn’t Jim Wilkinson’s only issue. He has provided invaluable assistance to VNRC as a sounding board and walking reference library on issues ranging from management of public lands to stream reclassification. He has testified on behalf of VNRC at countless public hearings and has been a faithful writer of articulate and persuasive letters to legislators, State officials, and the media.

In addition to serving as one of its principle volunteers, Wilkinson is a charter member of VNRC and has held the offices of director, treasurer and vice-chairman of the board of directors.

I asked Jim what kind of changes he’s seen in his 20-year association with the Council:

“The organization has changed, the leadership has changed, but its basic principles remain the same. VNRC is made up of other organizations and individuals with a broad range of interests. Because most of the time it’s been reasonable in the manner in which it has addressed issues, it’s been able to maintain that base and to be effective in supporting a particular point of view.”

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**Open Letter to the Secretary of the Vermont Agency of Transportation**

**Road Salt Blues**

Mr. Secretary, Mr. Secretary, May I have your attention?

I have a small problem I’d like to mention.

It’s about my car —

A ’71 Bugeye

Runs like a top

And works like a tug.

It came from Connecticut.

Just three years ago,

Where it knew not

Salt nor ice nor snow.

Now instead of a Connecticut

Creampuff I’ve got

Just another old Volks

With body rot.

First some hubcaps,

A fender, and then a door;

And twice last summer

I fell through the floor.

The brake cable snapped

In mid-January

Now I stick out my foot

And say a “Hall Mary.”

And just last week

Deepest despair —

I put the pedal to the metal

And the metal wasn’t there!

The heater boxes melted

Long ago and

Not from overheating

Don’t you know

That a Volkswagen has

A heart of gold

But without heater boxes

It’s g’ pound cold!

I’ve got fiberglass fenders,

A second-hand hood,

A new bumper made

Of nails and wood.

I’ve cornered the market

On furnace cement and tin

And I tell you, some days

I’m afraid to get in!

I have myself

A good mechanic.

He smiles and tells me

Not to panic.

Fred Kaiser’s work

Is the best I’ve seen

But on my house

He has a lien.

And some parts even

Fred can’t repair —

Especially when

The parts aren’t there.

So it’s off to Leo’s

In Morrisville.

If Fred can’t fix it,

Leo will.

Now at Leo’s Welding

They have a flair

For rebuilding cars

Out of thin air.

I have enough work

To keep his whole crew busy

But when I get the bill

Oh, it makes me dizzy!

No one no likes

To drive on snow. It’s

Dangerous and destructive —

That I know.

But salt is an expensive

Item, too, and

More dangerous than snow

I submit to you.

In this day of budget

Deficit woes,

Perhaps we ought to

Try a lower dose.

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**Vermont Will Be Smallest State By Year 2000**

According to the Census Bureau, Vermont will replace Alaska as the least populated state by the year 2000. The Bureau expects Vermont’s population to increase from 511,500 in 1980 to 675,600 in 1990 to 625,000 in 2000. The Northeast as a whole is projected to lose population. Growth in the New England states will not be enough to offset the losses in the Middle Atlantic states, particularly New York.

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**Vermont Environmental Report**

Editor

Marion MacDonald

Executive Director

Seward Weber

Chairman of the Board

Mollie Beattie

The Vermont Environmental Report is published six times a year by the Vermont Natural Resources Council. The opinions expressed by VERC contributors are not necessarily those of VNRC. Please address all correspondence regarding this publication to VERC Editor, VNRC, 7 Main Street, Montpelier, Vermont 05602, (802) 229-3354.
**Alternative Energies Have Been Oversold**

Norman F. Smith

Among the proponents of alternate, or "soft," energies are some people who have taken these energy sources seriously enough to put them to use. I live, for example, in a passive solar home, burn wood, drive an energy-efficient car, and use sail power on the lake. People who have actually lived with these soft energies tend to have a cautiously hopeful, yet realistic, view of their uses and problems.

But there are many who vigorously promote the idea that these sources are free and plentiful and can readily replace present sources such as fossil fuels and nuclear power. Some environmentalists have developed a serious attachment to alternate energies out of a feeling that they will reduce the adverse environmental effects that have come to be associated with conventional energy sources.

Producers of conventional energy, on the other hand, have been reluctant to commit large efforts to the development of these new sources. Although they have been sharply criticized for this stand, it is now becoming clear that they are right. They have known all along that the soft energies have been greatly oversold and will not fulfill the glowing promises of their advocates. By applying a little scientific literacy plus some simple arithmetic, we can readily see why this is true.

**Electricity From Solar Energy**

Take solar energy, for example, which is perhaps the most passionately promoted — and the biggest disappointment — of the soft energy sources. The radiant energy that comes from the sun is largely blocked by the earth's atmosphere. Only about 1000 watts of power reaches each square yard of the earth's surface. That's enough power to supply five 200-watt reading lamps. That sounds like a useful amount, if we could gather it all and convert it to electricity. But doing so turns out to be very difficult.

First of all, solar (photovoltaic) cells can, at present, convert into electrical energy only 10-12% of the light energy that strikes them. Secondly, the sun is strong enough for use only six to eight hours per day. And thirdly, if clouds cover the sun at least half the time, as they do in Vermont, we can count on only three hours of sunshine per 24-hour day, on the average. Putting all these numbers together, we find that to gather (and store for continuous use during dark periods) 1000 watts of electricity we would need about 80 square yards of solar cells. About 3600 square feet of cells (the roof area of a large house) would be needed to supply an average home with some 5000 watts of power.

Using these numbers and some more simple arithmetic, we can calculate that the output of Vermont Yankee — a modest-sized plant of 540 megawatts capacity — would require some 13 square miles of solar cells! Even more land area would be needed for the machinery required to mount the solar arrays and to keep them pointed toward the sun.

There are huge obstacles in the way of creating solar arrays whose size is measured in square miles. There is at present no industry capable of manufacturing solar cells in such quantities. Also, high-purity silicon — currently the best material for solar cells, is one of the most energy-intensive materials in use today.

Other methods of producing electricity from solar energy — such as the "solar power" system that employs mirrors to focus a large area of sunlight on a steam boiler mounted on a tower, have similar problems of size, land use, efficiency and cost.

Making electricity out of solar energy will never be easy, cheap, or environmentally benign. In fact, it may never be economical to make electricity from solar energy on a large scale. Breaking solar cell plants down into many residence units — even single residence units — is often mentioned. This approach will not reduce the area of cells needed, but will bring on the nightmare of maintaining hundreds or thousands of scattered individual units.

**Electricity From Wind Energy**

Wind, like the sun, is variable and intermittent. It would take more than 600 large, complex and expensive wind turbines (capable of generating 1000 horsepower each) operating full time to equal one Vermont Yankee. If the wind blows at a usable speed only, say, 20 percent of the time, we would have to install five times that many, or about 3000 turbines! These wind turbines would need to be located in hilly places — preferably mountain tops — to capture the most wind possible. This would require access roads to each site for construction and maintenance, and power lines to carry the power to market. The environmental consequences for Vermont's beautiful, mountainous landscape would be disastrous. The-and mountain landscapes suggest that wind turbines in large numbers are unlikely to be found acceptable.

**Ocean Thermal Energy**

Ocean thermal energy (OTEC) is perhaps the most dramatic failure. The energy contained in the temperature difference between surface and deep layers of ocean water is several times more diffuse and difficult to gather. A detailed design study by the Lockheed Corporation for the United States Department of Energy envisioned a floating power station weighing 300,000 tons (almost five times the weight of the largest superliner ever built). The station would need a pipe 125 feet in diameter to bring cold water from 200 feet below. The availability of sea water needed by the station's heat exchangers would be equal to one fourth the average flow of the Mississippi River at New Orleans. 100,000 horsepower would be required to pump this water, for a net electrical output of only 160 megawatts. More than four such stations would be required to equal the output of

Vermont Yankee! OTEC seems unlikely to provide us with any significant amount of energy.

**The Immutable Laws Of Thermodynamics**

The laws of thermodynamics in charge of energy conversions say that energy becomes less and less useful as it runs downhill, becomes more diffuse, or is represented by lower and lower temperatures. Equations based on these laws tell us that a steam plant can convert high-temperature heat (from the concentrated energy of fuel) into electricity with a thermoelectrical efficiency of about 50%, while an OTEC plant can convert energy into electricity with an ideal efficiency of only about 7%. Actual efficiencies of operating power plants are no more than half these values — 40% and 3%, respectively. Because the efficiency of an OTEC plant is a dozen times less than that of a plant using concentrated energy, the OTEC plant must process a dozen times more raw energy to generate the same amount of electricity. Such a plant must be something like a dozen times larger, and certainly more costly to build, maintain and operate. Research may produce some modest technical improvements in the collection/conversion process, but the limits imposed by these low efficiencies. But the size, complexity and cost of plants which produce electricity from solar, wind or ocean thermal energies will remain mind-boggling. The environmental effects of building and operating such plants will be far more significant than was originally imagined.

Other renewable sources such as tidal power and biomass energy remain limited in quantity and questionable in environmental effects. Hydropower is still one of the most desirable sources of electricity, but it is unfortunately limited by the number of available sites and by the amount of environmental impacts that we may be willing to tolerate.

**A Re-Examination Of Concentrated Energies**

How does this bleak information on the future of "alternative" energy affect our search for future energy sources? All
Steps to a Recycling Society

Recycling has been an environmental goal for a decade, but only about one quarter of the world's paper, aluminum and steel is recovered for reuse, according to a recent study by Worldwatch Institute: "Materials Recycling: The Virtue of Necessity" (Worldwatch Paper No. 56) concludes that while voluntary recycling efforts have brought some success, countries that have increased materials recycling have been motivated primarily by short supply of raw materials, high energy and capital costs for processing materials, and high environmental costs in materials production and disposal.

Worldwatch lists three "Steps to a Recycling Society" that could double or triple materials recovery:

1. Consumers must be required to pay the full costs of the materials they use. The world's forests are being cut faster then they are being replenished which makes wood cheaper now at the expense of future generations. The U.S. Forest Service, which owns half the softwood timber in the United States, should consider reducing sales of trees for harvesting as long as waste paper is under-utilized. Also, a special effort should be made to reduce energy subsidies. When the present by industries for energy is distorted by subsidies, industries are less motivated to recycle.

2. We must create world markets for scrap market, aluminum, iron and steentronics. Wealthy countries restrain the export of scrap iron and steel and should inhibit the use of imported scrap in developing industries.

3. Greater collection of waste will reduce environmental subsidies, promote international trade, and widen the impact of higher energy prices. Container deposit legislation can dramatically increase the return of beverage containers. Incentives, information, or the threat of fines and non-collection of garbage can induce greater collection of recyclable materials.

FEDERAL LANDS EYED FOR NUCLEAR WASTE DISPOSAL

The U.S. Department of Energy is scheduled to select two sites for high-level nuclear waste disposal by March, 1980. Specialreporters have reported that public opposition will force DOE to build the facilities on federally-owned lands.

"Most people simply don't want a repository in their backyard," said Thomas Cotten, a senior policy analyst with the U.S. Office of Technology Assessment in a article in the Christian Science Monitor. "The only place it sells easily is on government property.

Cartoon by Greg Watson
Book Review

The Country Journal Woodlot Primer
The Right Way to Manage Your Woodland

Richard M. Brett
(Country Journal, 1983, $9.95)

Richard M. Brett's Country Journal Woodlot Primer is billed as a handbook on small woodlot management. It does, in fact, contain a wealth of information on soil selection, tree planting, thinning and harvesting, and road and trail construction and maintenance. What I will remember about this book, however, is Brett's clear articulation of his personal land use ethic, and I'm sure this is what the author intended.

Dick Brett is one of the four founding fathers of Vermont environmentalism. He presided over the birth of the Vermont Natural Resources Council and served as one of its first chairmen. A former book publisher and business manager of the New York Public Library, Brett turned to forestry at 50 years of age and graduated from the Yale School of Conservation and Forestry in 1965.

The Country Journal Woodlot Primer is an extension of Brett's work in both environmental education and forestry. It is a treatise on environmental ethics that almost incidentally concerns the care and feeding of small woodlots. Through a discussion of the principles of "right forest management," Brett drives home several cardinal tenets of modern environmentalism, namely, that everything is connected to everything else and that a woodlot (like any other natural system) is a complex whole that must be treated with intelligence, care and respect.

"In my work in forestry over thirty years, and in writing this book," says Brett, "I have been guided by the principle that a woodlot needs much more than a site on which to grow trees that will be cut as soon as possible for maximum use." The most important thing that woodlots do, according to Brett, is not to provide lumber nor fuel nor "even -- to grow the trees that make the pulp that makes the paper that makes this book." Rather, a woodlot's most important function is to "provide pure water, and provide it in benign amounts." The author's elegant description of the role of forest soils in purifying water and controlling flooding could only have been written by a man who has spent much of his life in the woods and who identifies completely with the trees he tends.

And speaking of forest soils, Brett contends that a woodlot's second most important product (after clean water) is soil. "From the soil's point of view, a forest exists to supply such things as trees, and undergrowth to be turned into soil," he says. About two tons of bark, twigs, branches and trees fall on every acre of fully stocked forest every year. This material is ate to by rots, moulds, insects, rodents and "billions of microbes," which turn it into soil.

The Country Journal Woodlot Primer is not a guide to the scientific management of large commercial forests. It is geared to the owner of a small woodlot (10-200 acres) who is interested in the management for wildlife habitat, recreation and simple beauty in addition to improved yield of forest products.

It is not surprising, then, that Brett's first chapter contains a firm denunciation of even-age monoculture. "Biologic diversity equals biologic strength," says Brett. "Where there is not diversity -- the spruce-fir area of Maine, for example, -- or where man has created a monoculture, there is a tasty banquet for enemies of the trees in monoculture." Another of Brett's fundamental principles is that "there are no weed trees." Poplar can be sold for pulp or made into kindling and matches; hop hornbeam used to be called "leverwood" and is virtually impossible to break; wild apple trees provide food for deer and grouse. For the author, the challenge of making every product of the woodlot "find its use" is one of the joys of small woodlot management.

Brett has no love for chip harvesters, clearcutting, even-age management or pesticides. "In the woodlot, the watchword is "easy does it," he says. Brett cautions his readers to put small, use simple tools, and work slowly and carefully. He suggests that they take time out now and then to rest, reflect and "watch the geese flying south."

The meat of the book consists of two chapters entitled "Learning About a Woodlot," and "From Seeding to Harvest," in which Brett walks the reader through the process of managing marking and culling an existing woodlot and planting, pruning, thinning and harvesting new growth. Sandwiched between these chapters is a section on tool selection and use which is full of homegrown, field-tested advice and helpful illustrations. Brett practices the same economy and simplicity in print that he promotes in the woods. His writing is spare, personable, and very, very lively. There's a nice balance of the technical and the philosophical, with a dash of pure whimsy. Here's the author on modest antitode to our common -- and uncomnon -- methods of getting wood out of the woods:

"My first venture in this field involved a metal, rubber-tired wheelbarrow. I pushed it into the base of a large white pine tree into appropriate lengths for the stove, and trundled the load to the house. That was a hard way to keep warm, but it is possible, or it was in 1943. About the same time I used another method that involved slave labor, not my own. We had two attractive daughters. Young men flocked. In those far-off days, young men had to be polite to older men with talented daughters, so I invited them to handle short log lengths to the house where I would cut them into stovewood. Ropes and peavies were the only available tools. I sighed that sort of exploitation is no longer possible, and in any case not every woodlot owner is blessed with beautiful offspring."

Brett devotes his final chapter to managing woodlots for "uneconomic" activities such as wildlife habitat, recreation and aesthetic values. Many readers may wonder why a book on small woodlot management contains detailed directions for building wing dams and hiking shelters. But it's all part of Brett's conviction that a woodlot furnishes far more than "babe-cuddle." "The beginnings of wisdom are often small, and one of them can be the small and simple treatment of small woodlots," he says. "I can envision a mild, modest, intelligent and wasteful if woodlot owners take up the idea that each of them will spend some time improving his own corner. I find it heartening that, in doing so, we can no longer, in small numbered..."

Dick Brett has gone a long way toward "improving his own corner," with this thoughtful book on small woodlot management. MM

From the Front Office

A proposal for a VNRC-sponsored "Women's Association" requires further study. That was the consensus at a recent meeting of the Council's board of directors.

Last fall, the board accepted a recommendation from a property task force that it seriously consider organizing one or more management and marketing cooperatives in conjunction with the Windham County Woodland Owners' Association. The impetus for this decision came from a report prepared by Sarah Thorne, a former member working in the Resource Policy Center at Dartmouth's Thayer School of Engineering.

Thorne wrote her master's thesis on "The Feasibility of Forest Landowners' Associations in Vermont," based on a detailed survey of forest landowners in Windham County. She concluded the "operating a forest landowners' association for education, management and marketing is feasible in Windham County, and probably in other regions of Vermont as well," and that such an association had great potential for "improving the economies of scale in management, augmenting landowners' knowledge and providing a sense of community."

Under-management of the state's many small woodlots and timber tracts is one of Vermont's most serious environmental problems, and the board members convinced that forest cooperatives may be part of the solution. It is tempting to jump headlong into this project, but common sense suggests that VNRC should first make a calm and thorough assessment of the financial and political problems that may be encountered.

The board of directors has therefore stipulated that before deciding to pursue this effort, we should make a full-fledged feasibility study. We are told that such a study will cost between $10,000 and $15,000, and will require three months of full-time work for a consulting forester.

Anyone interested in this project should contact me. We'll need help rounding up the money, as well as the advice and support of Council members who are interested in improving the productivity of Vermont's forest lands. This is sure to be an exciting project that will benefit both the state's economy and the long-term health of its forest resource. I'll look forward to hearing from you.

Seward Weber
Executive Director

Photo by Clare Brett Smith © 1983 Richard M. Brett

Seward Weber
Executive Director
Notes from the Winter Board Meeting

VNRC, past and present, was the theme of the winter board meeting in Woodstock on January 26, 1984. The agenda included reports from the executive director, adoption of the 1984 budget, committee assignments (see listing at right) and presentations by special guests Richard Saudak, Vermont Public Service Department Commissioner, and Richard M. Brett, conservationist and charter member of VNRC.

VNRC executive director Seward Weber noted in his report that VNRC was one of the first in the state to talk about the state of the winter climate for the environmental movement including VNRC has not been favorable in recent years, there are opportunities to improve effectiveness through the establishment of an internship program that would involve graduate students from area universities and professional schools. The Council has used interns over the years, but this program would formalize and expand intern involvement in Council activities under the supervision of an internship coordinator and the operations director.

Weber also made a plea for strengthening the development committee and setting higher goals for it. He said that the two ingredients for a successful organization are program effectiveness and financial stability.

Chairman of the internships Donald Hooper discussed prospect for several key environmental bills. He also raised questions about the fate of the current use program and a bill to close the 10-acre exemption in Act 256. The Vermont wilderness bill was the subject of a hearing in the U.S. Senate on Wednesday, February 1. Seward Weber testified on behalf of the Council in support of the bill.

Board member William Upettegrove, an active member of the Vermont Wilderness Association, commended the Council for the work it has done in the last year or so to promote the Vermont wilderness bill. He said that every time he heard of a meeting or decision being made, he thought about the cause of wilderness or brought up the opposing factions together, it was clear that VNRC had played a major role.

The board approved the 1984 revenue and spending plan recommended by the executive committee. The plan calls for a barebones budget of $187,000 and contains no provisions for staff salary increases or capital expenditures. These might be possible later in the year if (and when) revenues exceed present expectations.

The board was treated to a delightful commentary by Richard M. Brett, a charter member of the Council and one of its first presidents. Brett spoke of the role of the wilderness in our national life to which society must adjust if it is to survive.

Richard Saudak, Commissioner of the Public Service Department, also spoke to the board. He referred to the new term called the "big picture" of electrical energy in Vermont's future. He said that despite considerable progress in energy conservation, electrical use continues to increase at a rate between 2% and 4% per year. He spoke of his impending shutdown of Vermont Yankee, which was forced to do so after the savings from a 12-year plan of replacement. Saudak said that shutdown is a factor in the state's urgent efforts to negotiate a new intertie to Hydro Quebec at the Vermont-Canada border.

New Members

For information please welcome the following new members, who joined us in November and December: 1938: Mary Lavigne, Jonathan Besse, Stephen Pratt; Kay Berg; Robert and Martha Franklin; Mr. and Mrs. Slade Hall; Elizabeth Edwards; Mrs. John J. Lindsay; John and Jules Kessel; Mr. and Mrs. Ian Kessel; Rebecca Skillin; William Moore; Barbara Derrick; The Chorey; Frederick Lapham, Joan Armbrust; Stephen and Ellen Barker, John Dalder; Minor Center Library; Carol Green; Lucia Milburn and William Glassowe; Vergennes Union High School; Marion Driscoll; A. Wallace Bryce; Norm and Ann Bittermann; Charles and Carolyn Hogen; David Carpenter; Mike and Sarah Jane Higgin; Robert Herbert; William Hunt; Robert Hirsch, Katheryn; Maura Maling; Mr. and Mrs. Michael Maddock; Corrine Mann, Paul and Linda Mann; Mr. and Mrs. Leon Eldred; Pauline Dickenson; Gateway Motors, Inc.; Mary C. Hent; Virginia Strickland; Mr. and Mrs. Frederick West; Mr. and Mrs. Robert Fradenburg; Robert G. Gregor; A. Russell Allen; Robert R. Gribben; Mr. and Mrs. John H. Kruze; Mary W. DePriest; David and Frances Thomas; Kathleen Pomplun; Arthur and Janet Heuberger; David Jones; Scott Almend; Judi Lopuch; Robert Fulk; Allan Dier; Eric and Liz Mussayed; Susan Boedeker; Wilfard Bith; Mr. and Mrs. Hugh Borington; Mr. and Mrs. John Nuber; Renald Francis; Mr. Ray Vawoet; Kenneth General Homes; John E. Backley; James Barton; Mr. and Mrs. Richard Shelby; Samuel White; Wesley Gilmore; Freeman French George and Ronnie Blacq; Dori John; and Jason Bierlein; Paul R. Lindman; Colman Asinof; Gerald Francis; Mr. and Mrs. Wendell Warren; Vermont Business Equipment; James Ellis; Brian Evans; H. Chandler Parker; Virginia Stambaugh; David Abit; John McFarren; Woodstock Historical Society; Mr. and Mrs. Joel Chickering; Chris Beckwood; Helen Woole; Philip Fann; Laura Wood; A.W. Mowen; Mary Loan; Mr. George Seywer, Heather Skilling, W.B. Bermsong, Charles Dereny; Allen Dier; Rev. Mary Clapp; Emily Joseph; Mr. and Mrs. Arnold Sharp, J.R.; Mrs. Edmund A. Brown; Susan Fleisher; George W. Smith; Mr. John W. Wells; Terry T. Grinnell; David Hayford; Margaret Arnold; Karl Morn; Mr. and Mrs. James Owen; Henry Bourne and Anne and Parker; Mr. and Mrs. Lindsay Chinted; Lloyd and Mrs. Theo Dollars Brown; Joseph Johnson; Eleanor Cadbury; Dr. Charles L. Bragster; C. Wendell Carbo; Jerry Beacham Ins Agency; Merrill Clark; Mr. and Mrs. Robert Marple; Karl and Nicole Putzer; Tepler Family; Sue Sherwood; Barton Piqu; David William; Cushing Poo; Jay Joseph; Rev. and Mrs. Murdock Hale; Steven Robert Lovelace; Mr. and Mrs. Nelson Manning; Rodent and Ingra Skilling; Margarette Inspery; Andrew Backerowicz.

Dear VNRC,

Add this name to your list of new members!

Address

I enclose $____ for the following type of membership: ( ) Individual - $15.00 ( ) Family - $20.00 ( ) Student - $5.00 ( ) Fixed or Limited Income - $6.00 ( ) Business - $25.00, $50.00 or $100.00 ( ) Sustaining - $50.00 ( ) Supporting - $100.00

VNRC is selling a serviceable dictating system consisting of three desk dictator-transcribers and two portable dictators. Made in Germany by Dejur-Grundig, these Stenaraute use magnetic tape rather than microcassettes. Sale price: $100.00. Call Cherrie Langer at 223-2258 if you would like a demonstration.

FOR SALE

1984 VNRC COMMITTEE LIST

Standing Committees

Executive
Mollie Beattie, Chair Sarahelle Hitchner, Vice-chair Ken Geyer, Treasurer Richard Mixer Carl Reidel Seward Weber, Secretary Gail Osherenko Planning
Peter Davenport David Hiltz Richard E. Mixer William Uptegrove Charlotte Housenill Bill Schmidt Information & Education Chair David Hartnett Karen Meyer, Chair Karl Nelson Norma Skjold Nominating
A. John Holden, Jr. Carl Reidel, Chair Karen Meyer Finance
Richard Mixner, Chair Development Subcommittee Ted Cronin Sarahelle Hitchner, Chair Paul Osherenko Hugo Meyer Donald Peddie Patsy Higgins Jared Wood Accounting Subcommittee
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Chester Eaton Francis Whitcomb Dean Barrington Austin Cleaver Donald Hooper, Acting chair Mark Schroeder Land Use Jean A. Anden Larry Forcier William Hendrix Steve Putz David Jillson, chair Stephen Libby Jonathan Doup Meredith Wright Katherine Powers Chuck Ross
Democracy

(continued from page 1)

with Vermont's Republican Senator of the Stafford-Hart bill, which is the strongest bill introduced in the Senate. Reverend Jesse Jackson would impose a kilowatt-hour tax on all electrical generation, and a significant portion of the resulting superfund would be used to encourage conservation and development of safe and renewable energy sources. Major programs would be launched to rebuild and insulate homes, install solar heating devices, and, in general, reduce energy use and create jobs.

Rhetoric aside, these Democratic presidential candidates by their very presence acknowledged that the conference represented what Friends of the Earth President Rafe Pomerance called, "not just a citizen breeze, but a gale force citizen pressure."

Conference participants learned how to translate popular sentiment into political pressure in workshops on the environment, health, economics, international relations, technology, jobs, cost allocation, and legislation—all conducted by experts in those fields. Skill sessions on organizing and coalition-building, citizen education campaigns, fundraising, lobbying, gathering and using information and conducting statewide initiatives also focused on grassroots organizing and political pressure.

Regional caucuses gathered together New Englanders, people from the mid-Atlantic states, southerners, Midwesterners, westerners and Canadians. Each regional caucus had drafts of national and international citizens' platforms on acid rain to amend and reword until consensus was reached. A caucus committee then compiled all drafts and the final wording was ratified by all caucuses. The resulting documents—a "National Citizens' Platform on Acid Rain" and a "U.S.-Canada Citizens' Agreement"—are on their way to President Reagan and members of Congress.

New Englanders will also be rounding up support for a new acid rain bill, H.R. 4404, that was introduced in the House of Representatives in November. Dubbed the "New England" bill, it gathered immediate cosponsorship by all New England Representatives except Olympia Snow of Maine. It mandates the 12-million ton sulfur dioxide reduction that New England environmentalists have been calling for and is designed to be broken down into amendments to the Waxman bill, now the favorite of the House proposals. It authorizes a 1.5 mil per kilowatt-hour surcharge on all electricity bills to create a trust fund to pay for sulfur dioxide emission reductions.

In phase I, the fund would pay 90% of the costs of installing scrubbers in the 60 top polluting plants in the country. This approach would achieve significant reductions in a short period of time while avoiding sudden and massive unemployment in the high-sulfur coal mining states.

In phase II, a superfund would provide grants to states to help pay their clean-up costs. Each region of the country would contribute to the fund in proportion to its contribution to total emissions. New England contributes 6% of the total and would pay roughly 6% of the cost. Vermont, with its very low emissions, would pay almost nothing. Vermonters should write and thank Representative Jeffords for supporting this bill.

And speaking of letter writing, Priscilla Chapman, executive director of the New England Sierra Club, says our real job in New England is appealing to the rest of the country. She calls on us to write personal letters to at least five friends or relatives in states outside New England. Acid rain damage is occurring in many major sulfur-dioxide-emitting states, such as Pennsylvania, Michigan, Wisconsin and West Virginia. Yet many people still think of it as New England's problem.

Regional concerns do play a part in the kinds of citizen efforts that are mounted in different parts of the country, and they influence which legislation is supported. But solving the acid rain crisis requires a united national and even international effort. Adele Hurley of the Canadian Coalition on Acid Rain is encouraged by the fact that the issue has created a transboundary constituency. She remarked, "A tremendous network of citizen activists in the U.S. and Canada and Europe has evolved and these individuals are ahead of their governments in terms of the immediacy with which they want their governments to act."

Rafe Pomerance echoed Ms. Hurley. "If the people lead, eventually the leaders will follow," he challenged. He maintained that if the strong general public opposition indicated by most polls can be translated into political action, the war on acid rain can be won. "We're in the political process to stay, because that's how policy is made in a democratic government."

The New Hampshire Acid Rain Conference was more than a gathering of the troops for a pep talk before the next skirmish. It was a timely signal to the present administration and the future administration that the protection of clean air, healthy forests, fishable streams, and productive cropland translates into votes at the polls. Priscilla Chapman summed it up in the recent issue of New England Environmental News: "For the sake of our lakes and streams, our aquatic life, our forests, our buildings, drinking water, and our health, we don't have a choice—we have to win this one.

Kathleen Bond is Communications Coordinator for the Vermont Natural Resources Council and was a VNC delegate to the Acid Rain '84 conference.

PACs Pull the Strings

For a whole new perspective on Congress' recent track record on environmental protection, take a look at "Clean Air—Acid Rain: PAC Money in Congress," a January, 1984, report by Common Cause. The report defines political action committee (PACs) as "committees formed by corporations, trade associations, unions, and other organizations to make contributions to federal candidates." Common Cause says the number of PACs has increased from 600 in 1974 to over 3400 in 1984, and the amount contributed by PACs to federal candidates has risen from $12.5 million in 1974 to an estimated $100 million.

The two key committees with primary jurisdiction over the Clean Air Act in Congress are the Senate Environment and Public Works Committee and the House Energy and Commerce Committee. Over the past six years, members now serving on the Senate Environmental and Public Works Committee have received a total of $4,378,121 from PACs, or 39% of which came from environmental PACs. Contributions to current committee members from PACs of the seven key industries affected by the Clean Air Act totaled $1,551,216.

During the last election, members who now serve on the House Energy and Commerce Committee received a total of $4,736,215 from PACs, or 37% of which came from seven key industries affected by the Clean Air Act, and $1,576,215 from environmental PACs.

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Address correction requested;

January/February 1984