

PULPWOOD FORESTRY IN NOVA SCOTIA

(Presentation by the Socialist Environmental Protection and Occupational Health Group [SEPOHG] to a Public Hearing held by the Royal Commission on Forestry, Halifax, April 19, 1983.)

We see that the forests of Nova Scotia, in general, are destined to become pulpwood producing forests...

John S. Donaldson, 1961, then General Plant Manager,
Halifax Power and Pulp Co. Ltd., Sheet Harbour, N.S.

Introductory Remarks

My name is David Orton, and I am making this presentation to the Public Hearing on behalf of the Socialist Environmental Protection and Occupational Health Group. We are a small Nova Scotia-based group of socialists interested in environmental and occupational health issues. Our group has done research and organizational work around the environmental issues of acid rain, toxic chemicals, forestry and wildlife management, pesticides, uranium exploration and mining, and nuclear war. SEPOHG is interested in a socialist ecology¹ which combines an appreciation and commitment to nature with a concern with environmental issues as class issues, i.e. as linked to the ownership and control of the productive wealth of capitalist society. SEPOHG rejects any notion of man's supposed domination over nature and stresses the interconnectedness and complexity of the ecosphere. We believe the developing ecological crisis must be addressed by the Left. Otherwise the achievement of socialism, the real emancipation of women and men, will remain an unfulfilled dream. Unlike Ecology Action Centre, SEPOHG neither solicits nor accepts funds from corporations or the federal or provincial governments.

Our point of view, in appearing before this Royal Commission, is that forestry policy in Nova Scotia, as elsewhere in Canada, will be decided by organized political power, and not by the rationality of various arguments which make themselves heard.

Pulpwood Forestry: The Dominant Orientation in Nova Scotia

Basically the forest management policy of the government of Nova Scotia has been directed towards providing cheap feed stock to the pulp and paper industry in this province. While it is reported that the first pulpwood was cut in the province in 1875,² before 1961 pulpwood only made up some 30% of the annual harvest cut from Nova Scotia's woods. Today, about 80 percent of the total harvest is in pulpwood. Since 1951 there has been a decrease of the order of 60% in sawlog harvest and a corresponding increase of 500 percent in pulpwood harvesting.³

With increases in pulp and paper plant capacity underway, corresponding increases of pulpwood harvesting are planned.

The sawmill industry is in direct competition with the pulp and paper companies for raw material and forest land. Sawlog quality logs end up going to pulp in considerable numbers, as a number of studies have shown.⁴ Many sawmills have problems obtaining a supply of sawlogs. Independent mills collectively only have about 5 percent control of forest land in Nova Scotia.⁵ Within the sawmill sector, there is a growing concentration. In 1980, 8% of the mills were producing 60% of the lumber.⁶ The Wood Product manufacturers Association of Nova Scotia says that the lumber firms in Nova Scotia have become dependent for sawlogs on the pulp and paper companies. That lumbermen must cut such logs directly on pulp and paper company land or purchase logs from the companies.⁷ Barrett Lumber Company, in appearing before this Commission, stated that the pulp and paper companies are expanding their sawmills, which is affecting detrimentally the existing log supply.⁸

The provincial government is in the pulpwood marketing business because of its control of crown lands on which pulpwood is produced for the industry. The pulp and paper industry, because of the long term crown leases that are held – particularly by Nova Scotia Forest Industries (N.S.F.I.) – are under no pressure to accept wood from private woodlot owners. Crown stumpage prices, which are very low, e.g. one dollar per cord in practice for N.S.F.I., serve to depress the real value of pulpwood from private woodlot owners.

Private woodlot owners who want to sell pulp to the pulp and paper companies took part in a long struggle to establish their association – the Nova Scotia Woodlot Owners’ and Operators’ Association – and to obtain and put into effect bargaining rights. Since 1972, when the Pulpwood Marketing Act⁹ was established – the Association was certified under the Act as the sole bargaining agent in 1974 – setting up the N.S. Pulpwood Marketing Board, Nova Scotia Forest Industries bitterly contested through the courts the administration of the Act by the Board. The kind of opposition to the woodlot owners parallels that of the Michelin Tire Company in preventing a union being formed at their plants in the province. (Another example of the hostility of the pulp and paper companies against organized workers is the current dispute between Scott Paper and Local 440 of the Canadian Paperworkers Union.) Private pulpwood producers sell about 40% of the pulpwood used by the pulp and paper companies. In March 1983, the secretary treasurer of the Wood Products Manufacturers’ Association said that the selling of pulpwood was a monopoly held by the pulp and paper companies. He also pointed out that pulp sells \$10 higher in Sackville, N.B. compared to Amherst, N.S.¹⁰

Under the Nova Scotia Pulp Ltd. Agreement Act (1958)¹¹ with Amendments, N.S.F.I., the Swedish-owned largest pulp and paper mill in the province, has a not less than 50-year crown lease agreement for up to 1,700,000 acres. The Bowaters Mersey Agreement Act (1962)¹² leases the British-owned Bowater 286,484 acres of crown land, with no definite term to the lease. (This agreement was never executed.) While the Scott Maritimes Pulp Limited Agreement Act (1965)¹³ leases the American-owned Scott approximately 230,000 acres of crown land to this company with a 50-year lease, which can be extended for another 40 years. All three Acts contain a clause which says that by “mutual agreement” between the province and the various

companies, the size of the crown leases can be enlarged. In all three Acts the roads built by the companies on their leased crown land are considered private and charges can be levied for their use. None of the Acts stipulate any considerations for wildlife management on the crown lands under company lease. (The Masonite hardboard plant by Order-in-Council, dated December 14, 1976, has the right to harvest annually 25,000 cords of wood from crown land. The wood obtained is 85% hardwood and 15% softwood.¹⁴) Part of the price of acquiring industry at any cost in Nova Scotia has been the give-away of the forest by the provincial government. The attitude of provincial governments towards foreign investment in Nova Scotia is perhaps captured in the remark attributed to John Buchanan: “A foreign investment application has never been turned down in Nova Scotia.”¹⁵

As the forest has been exploited, so has its quality overall declined. The following quotation illustrates this:

Evidence indicates that the quality of the forest in Nova Scotia, which occupies 84% of the Province’s land area, had deteriorated substantially during 350 years of harvesting. Both hardwood and softwood trees have decreased in height and girth since the 19th century. Species composition has been changed as lumber was “highgraded” from the forests and as more valuable species for fibre were removed by the pulp and paper industry. The proportions of sugar maple, yellow birch and white ash in the forest decreased even during such a short period as 1958-1971. White pine as the major species was replaced by red spruce and this species by balsam fir. Barrens created by fire and other causes have increased the amount of unproductive land by over 200,000 hectares in southern Nova Scotia in the last few decades.¹⁶

Pulpwood forestry can only accelerate the deterioration of the forests of Nova Scotia.

The Ecological Perspective and Nova Scotia Forestry

1. The ecological perspective rejects man’s supposed domination over nature. This domination is referred to as the homocentric or anthropocentric viewpoint which sees the environment primarily in relationship to how it “benefits” human beings. An example of this viewpoint is to be found in the Position Statement of the Canadian Agricultural Chemicals Association:

Human “progress”, as we define it, is basically the achievements of mankind in adjusting his environment to his needs rather than the other way around.¹⁷

The anthropocentric viewpoint is the basis of all environmental management perspectives where the goal is the exploitation of nature in the most efficient and rational manner possible. Such viewpoint is fully compatible with the different but existing forms of political economy, e.g. in the United States of America and the Soviet Union. An example of anthropocentrism is to be found in The Trees Around Us, a publication of the N.S. Department of Lands and Forests. This manual defines the various forest types in the province solely in terms of softwoods which are premiated by corporate forestry, e.g. “Mixedwood – Stands containing 26 to 75 per cent softwood trees”; and “Hardwood – Stands containing 25 per cent or less softwood trees.”¹⁸ A

more ecological definition would value hardwoods in their own right and also point out that the hardwood component of a forest increases with greater site fertility.

The attitude of the Department of Lands and Forests towards deciduous trees is also shown by the fact that the Provincial Forest Nursery at Lawrencetown, as of March 1983, did not have hardwoods for sale, whereas there were 9 species of softwood listed in the catalogue for spring delivery.

In contrast to anthropocentrism is the ecological perspective, where it is seen as necessary that people be managed so as to live within the constraints of the ecological system of which they are a part. Our existence has to be ecologically as well as socially sustainable. The forest then is a living ecosystem of which we are a part and is not to be seen mainly as a source of low cost wood fibre for the pulp and paper industry.

2. Rachel Carson, in her book Silent Spring, pointed out: “In nature nothing exists alone.” What is being stressed is the interconnectedness of living organisms (people included) with each other, and their physical environment. An ecosystem is seen as “complex” in the sense that there are many different plant and animal species filling every ecological niche. Hence no species within the system is capable of unlimited expansion. With this complexity comes ecological stability.

Industrial forestry, directed basically at pulp production which aims, by use of chemical poisons, to eliminate specific insects or eliminate “competing” hardwood species, is seen as an anthropocentric attempt to diminish the historically evolved complexity of the forest ecosystem in the direction of biological instability. It is a move from the heterogeneous forest to the homogeneous forest and hence is to be opposed.

The use of chemicals by industrial forestry, whether they are insecticides or herbicides, also has interconnecting results. A paper by Murray Prest, “Heritage Lost”¹⁹, points out that chemical “protection” in Nova Scotia will also come to mean protection against animals and people. As Prest sees it, the interlocking process is, clearcutting – herbicide use fire to control grass – pesticide use – government financial bondage because of the costs involved – new restrictive legislation to keep people out of the forests.²⁰ Prest gives the example in his paper of one unnamed country where a forest was behind locked gates with a 10-foot high wire mesh fence enclosing it. All people not authorized to enter were excluded and all animals living within the fencing had been destroyed.²¹

Nearer at home, the Department of Lands and Forests is moving to “control” the animal population in the chemical forest of the future. A Forest Research Note, “Rabbit Browsing of Conifer Seedlings”²² points out that “browsing animals”, e.g. snowshoe hares and rabbits, are affecting the “growth and survival of planted seedlings”. The Research Note is the write-up of an experiment in the fall of 1981 in the Cox Brook area of Pictou County, where rodent repellants – Skoot, A.A. Protect, Thiram (Arasam) – were sprayed on red pine seedlings. This treatment, according to the argument advanced in the document, is designed to deal with “peripheral areas” adjacent to plantations which are not susceptible to mechanical and chemical techniques of

control. Rabbits were apparently venturing out some 15 to 25 meters from cover to browse the nursery grown seedlings. A “Caution” in the Research Note informs us that “the uses discussed here” have not necessarily been registered. The effects on various predators of the rabbits, i.e. human and non-human, were not taken into consideration. This example shows that chemical “protection” against wildlife, in the interests of industrial forestry, is underway in Nova Scotia.

Clearcutting is the principal cutting method followed by industrial forestry. It is a method which lacks any sense of the complexity or interrelatedness of the forest. This method is pursued because most money is made this way and other considerations are basically irrelevant for the pulp and paper companies and those who follow the same road. One among the many ecologically disastrous consequences that follow from clearcutting is to increase the prime habitat of the spruce budworm, i.e. the balsam fir. This situation is not unique to Nova Scotia:

The clearcutting of the last 50 years has made balsam, which grows faster in open spaces than spruce or pine, the new dominant species. This species change is primarily responsible for the huge epidemics of spruce budworm killing Quebec’s forests.²³

Clearcutting also tends to result in even-aged stands, predominantly of balsam fir, in the subsequent succession in areas such as northeastern Nova Scotia which previously supported mixed spruce stands.²⁴

The claim by Bowater Mersey Paper Company Limited in promotional literature, that clearcutting can be justified ecologically,²⁵ can only be seen as paying lip service to ecological ideas, while at the same time following practices which can lead to further ecological disruption of the forest. Perhaps more revealing, in terms of attitude towards the environment, is the following statement by Bowater in the same literature referred to above:

Bowater Mersey is fortunate to be located on the Mersey River estuary where Atlantic tidal action disperses much of the waste materials which find their way to the harbour.²⁶

3. The ecological perspective considers that the corporate rationality of the pulp and paper companies in Nova Scotia has led to a social and ecological irrationality and what can be called the Tragedy of the Forestry Commons in the province. The metaphor is taken from an essay “The Tragedy of the Commons”²⁷, where the author points out that the Commons eventually becomes a desert as a result of each individual herdsman maximizing his individual interest, i.e. by increasing his herd, which leads to undermining the long term collective interests of all the users of the Commons. The analogy here is that a common resource, the forest of Nova Scotia, is being fundamentally degraded precisely because it is being treated as a Forestry Commons by the pulp and paper companies, aided and abetted by the provincial and federal governments.

The general degradation of the Canadian forest is pointed out in the following information: About 8,000 square kilometers of Canadian forest are cut annually. Of this, 2,000 to 3,000 square kilometers regenerate naturally. About 2,000 square kilometers are planted or reseeded, while “about 3,000 to 4,000 square kilometers a year are abandoned to lie idle or produce unusable scrub or trees.”²⁸

In Nova Scotia the Department of Lands and Forests has claimed that about one third of the softwood area that is logged off does not regenerate adequately.²⁹ Provincial crown land in Nova Scotia makes up about 24% of forest land. Federal crown land is about 3%.³⁰ (Large private land owners [over 1,000 acres] account for 21% of forested land. Small land owners [1,000 acres or less] account for 52%.) The principal function that provincial crown land serves is well understood by Lands and Forests personnel:

H. Burt Robertson, Senior Director of the Department's Land Services Branch, which administers the Surveys Division, Land Acquisition and Registry Division, and Provincial Crown Lands Record Centre, says that the main reason for the crown to hold large blocks of land has been to attract forest industry: "the new companies can be sure of their wood supply before investing large amounts of capital."³¹ (Our emphasis)

The above information appeared in a 1980 issue of the magazine Conservation – For the Wise Use of Our Natural Resources, put out by the Department of Lands and Forests. The same issue also stated that there are about 3.4 million acres of provincial crown land in the province today.³² Historically, the province has acquired crown land by pursuing an active land purchasing policy. In the past, much of this land was bought at tax sales at prices of 25 cents to \$1 per acre. Since 1937, the Crown acquired about 1,000,000 acres in this manner.³³

The pulp and paper companies continue to press their claims on the remaining crown lands section of the Forestry Commons of Nova Scotia. Thus Bowater in their presentation to this Commission on Forestry stressed that more wood should be made available from both federal and crown lands.³⁴ Nova Scotia Forest Industries, at the 49th Annual meeting of the Nova Scotia Forest Products Association, advocated cutting wood in the federal parklands of the Cape Breton Highlands and in Kejimikujik.³⁵ The pulp and paper companies, as players in the capitalist economic system, must continually expand, in order to provide additional outlets for capital investment. This is the nature of the system and it is profoundly opposed to a policy of ecological restraint. The whole question of land ownership patterns in Nova Scotia is very much up in the air. It is non-Canadian interests that can benefit in such a situation. One person who appeared before this Commission estimates crown lands (provincial and federal) as slightly under 4 million acres and that major non-resident pulp and paper companies own about 1.9 million acres. The context of this is that Nova Scotia has a total land mass of about 13 million acres. We do not know how much non-resident land ownership there is in the province.³⁶

The Land Holdings Disclosure Act (1969)³⁷ defined non-resident to include Canadians from outside Nova Scotia as well as foreigners, e.g. Americans and Germans. Disclosures under the Act are not open to public inspection except to persons "authorized" by the Minister of Lands and Forests. The penalty for non-residents who do not disclose their land purchases, under the Act, is a maximum fine of \$1,000. As of March 1981, there had been no convictions under the Act.³⁸ Doug Bancroft, registrar of land holdings for the Department of Lands and Forests is quoted as saying in an article that, "I think only five percent of (non-resident) landowners actually declare what (land) they buy."³⁹ Conscious loopholes in the legislation make it easy for foreign owned companies, like foreign-owned pulp and paper companies, not to have to register. Thus a corporation is exempt from having to register under the Act if it

- (a)... is incorporated by or under any Act of the Legislature of Nova Scotia;
- (b)... holds a certificate of registration issued under the Corporations Registration Act; or

(c)... actually carries on its business and has erected an office, plant, factory or other structure on the land holding.⁴⁰

As is well known, in addition to tying-up good forestry or agricultural land in non-Canadian hands, foreign land ownership leads to great increases in land prices and related increases in land taxes for Nova Scotians. A Select Committee of the Nova Scotia Legislature held hearings on non-resident land ownership back in 1973. Its Report took the following cop-out position:

It is the conclusion of the Committee that the problem is not one of the purchase and sale of land but the use of land.⁴¹

From the perspective of this Committee, there was then no solution to the problem of foreign land ownership in Nova Scotia. It is of course absurd, the idea that there can be concern about “use”, i.e. stewardship, without control over ownership.

In discussing the question of land ownership and its implications for the Forestry Commons of Nova Scotia, the Socialist Environmental Protection and Occupational Health Group supports the position of the native people of Nova Scotia, the Micmac, on land claims. The Micmac state that native title to traditional lands in Nova Scotia, and in the Maritimes generally, have not been voluntarily ceded. Therefore the question of aboriginal rights and native land claims have to be settled to Micmac satisfaction. The Micmac people today only control 19,600 acres out of the total land mass of Nova Scotia and are interested in unoccupied crown lands as settlement for aboriginal land claims.⁴²

4. The ecological perspective looks on wildlife variety and abundance as a barometer of the healthiness of the forest ecosystem. The key to wildlife abundance is a diverse habitat that will provide food and shelter for many species of fish, birds and mammals. Clearly you cannot “manage” wildlife if you do not manage the habitat. If the habitat is being “managed” for large scale clear cuts, with consequent even-aged stands, and the promotion of a softwood monoculture at the expense of the hardwood component of the forests, then clearly wildlife will not be abundant and of great variety. Selection forestry – individual tree selection and group selection – resulting in openings of less than an acre in size, will bring about a natural, uneven-aged population of various tree species (depending on the site), which will promote wildlife. It is this kind of forestry, which preserves the naturally existing softwood/hardwood component of the Acadian Forest Region, which will maximize second growth wildlife.

Wildlife must be valued in its own right and not from the anthropocentric – hunting, fishing or game management – point of view currently found in the Department of Lands and Forests. The needs of all fish, birds and mammals must be a major consideration in any commercial exploitation of the forest ecosystem.

The following quotation, from the Environment Canada publication Environmental Quality in the Atlantic Provinces 1979, is a major indictment of commercial forestry in the Atlantic Region:

The extensive forests of the Atlantic provinces are of great economic importance to the region’s economy. Management of the forest resource continues to be focused on the needs of the logging and wood processing industries; the value of forest ecosystems as a habitat for wildlife and fish and as recreational and aesthetic amenities has been

maintained only by chance, rather than as a conscious management effort.⁴³ (Our emphasis)

5. The ecological perspective accepts the constraints of the ecosystem and does not accept the maximization of the Gross National Product (GNP), regardless of the destruction to the environment, as the *raison d'être* for any society. The nature and level of economic activity, from an ecological viewpoint, is then conditioned by the limitations of the ecosystem itself. There are limits to man's appropriation of nature for economic ends. A key question for Nova Scotia forestry is not "the price of toilet rolls in New York City"⁴⁴ but what level of resource exploitation is ecologically sustainable? It is clear that this means an opposition, at some level, to economic growth as an end in itself and the consumer society which accompanies this.

The pulp and paper industry in Nova Scotia is not motivated by a policy of ecological restraint. The Department of Lands and Forests estimates that, at the present time, there is an overcut of 20 percent in softwoods in the forests of Nova Scotia, while there is an undercut in hardwoods of 38 percent.⁴⁵ We are assured by the Department in a paper called "Herbicides in Forest Management", that forest plantations that are "properly managed", i.e. chemically assisted, can yield up to 400% more wood fibre than a stand that is unmanaged or natural.⁴⁶ More generally, the Department of Lands and Forests calculates that an average acre of forest land in Nova Scotia presently produces around 20 to 25 cubic feet per year of wood fibre, but under "good forest practice" can produce 70 cubic feet.⁴⁷ These projected increases in forest production rest on a vast increase of chemical use for insecticides, herbicides and, ultimately, fertilizers.

The Canadian national target for the forest sector, endorsed by the Canadian Council of Resource and Environment Ministers in early 1980, was for an increase of approximately 40% above the 1981 harvest. This should take place by the year 2000.⁴⁸ Whatever the rosy visions of the future, the President of the Canadian Pulp and Paper Association has said that, presently, Nova Scotia, Quebec, New Brunswick and British Columbia are all overcutting their forests.⁴⁹

In Nova Scotia, pulp and paper plant capacity expanded in the '60s and '70s. Through a federal/provincial Pulp and Paper Modernization Agreement,⁵⁰ which provides up to \$21,250,000 in grants, a new expansion of plant capacity is underway with Bowater's and Scott's already announced. This will lead to an increased annual production and corresponding increases in demand for pulp wood supply. Bowater will be spending \$70 million dollars and Scott \$51.7 million dollars.⁵¹ It is interesting that it is nakedly stated in the federal/provincial Agreement that "incentive grants" to the pulp and paper companies have, as one objective, "to increase the return on investments to acceptable levels."⁵²

From a corporate viewpoint, expansion of plant capacity hinges around an assured wood supply. A Scott representative, speaking before this Commission, put the matter quite bluntly:

Before Scott can make a prudent decision to expand our forest product business in Nova Scotia, we must be confident that a government policy is in place in Halifax that assures us that we and others can manage, protect and improve the forests we operate.⁵³

This is the old corporate blackmail game, with which the people of this province are rather familiar.

The ecological perspective asks questions about the uses to which the output of the pulp and paper industry is being put. It also sees that wood demand must be brought down to what a healthy and natural forest can sustain indefinitely. It sees an industry based on waste – the throwing away of the product after a single use – when much of the product can be recycled. Ecologists question the orientation of the 127 pulp and paper mills in Canada (as of 1980), with 19 in the Atlantic Region,⁵⁴ which are geared towards supplying over half of the United States newspaper requirements⁵⁵ – a country which has been estimated to consume some 50-60% of the exploited resources of this world. It is in asking these kinds of questions that the environmental or ecological movement is subversive, i.e. challenging the direction, values and, ultimately, the institutions of capitalist society. Unfortunately, most environmentalists do not yet realize that what they are asking for, cannot be accomplished within capitalist society, and hence will require a socialist solution.

Chemical and Biological Controls versus the Forest

Chemical Controls

SEPOHC strongly opposes any use of chemicals in forestry. We oppose the use of chemical insecticides whether they be organochlorides, organophosphates or carbamates. We oppose the use of chemical herbicides whether phenoxy, triazine or other. We also oppose the use of chemical fertilizers in forestry, because of the implicit and faulty forest management assumptions which lie behind their use. Pesticides have not yet been created that are without environmental hazards, and that are purely selective in regard to target organisms.

The people who promote chemical use in the forests and in agriculture usually have a direct economic interest at stake or are concerned about their upward career mobility, whether as epidemiologists, weed control specialists, “environmentalists”, etc., which is contingent upon their defending the use of chemicals in forestry or agriculture, and assuring a sceptical public that everything is safe. We note that the chairman of the Forest Practices Improvement Board, just prior to his reappointment, publicly declared that “the proper application of chemical weed control agents can be a useful tool in tree nurseries and young tree plantations.”⁵⁶ This does not convince us. We ourselves do not expect to “convince” such people by citing all the contrary evidence and we leave this to others to do.

We note that the Canadian Agricultural Chemicals Association, in their “Pesticides: A Position Statement”, is still prepared to argue that the banning of DDT “deprived agriculture of one of its safest and most effective pest control weapons.”⁵⁷ This kind of blindness, motivated by self-interest, is not worthy of rebuttal. We prefer to believe Ross Hall, who in his 1981 publication “A New Approach to Pest Control in Canada” stated

If Environment Canada were to apply rigorous criteria to the assessment of the environmental toxicity of pesticides, few if any of the 405 currently registered ones would be likely to pass. In addition, it is unlikely that any new chemical pesticide would be registered.⁵⁸

That an insecticide or herbicide is duly declared “registered” by the federal government does not then mean a great deal, from the viewpoint of environmental safety.

Jan Newton’s An Economic Analysis of Herbicide Use for Intensive Forest Management, Parts I and II,⁵⁹ is a good antidote to the position of the Department of Lands and Forests in their paper “Herbicides in Forest management”. The Department points out that herbicides have been in continual use in Nova Scotia for the last 7 years, and their use dates back to 1966. Also, that hand “weeding”, i.e. removal of competitive vegetation in softwood stands, is in most cases neither economical nor practical; that the use of herbicides is “absolutely essential”; and without herbicide use there would be a “serious loss of employment”, because of the loss of the projected increase in Annual Allowable Cut.⁶⁰ Newton’s conclusion to her study is quoted here as rebuttal.

- 1) There are people out there who choose to use herbicides, regardless of whether they work as claimed.
- 2) Since the main use of herbicides is for release and the long run effects of this practice are not known, the intransigent insistence on carrying out this practice primarily benefits chemical companies.
- 3) Because field monitoring of herbicide impacts on conifers is non-existent, the real objective of intensive management with herbicides must be other than future yield increases. If yield increases were the objective there would be some measurement to see whether it was being met.
- 4) The release of conifers through aerial application of herbicides is a high-technology way of justifying increased liquidation of old growth.
- 5) The purpose of using herbicides for intensive forest management is to circumvent the constraint of sustained yield harvesting, permitting higher present cuts on the promise of better yields tomorrow. [This is the same for Nova Scotia - D.O.] (Our emphasis)
- 6) Much insult to science has been committed in defense of these ulterior motives.⁶¹

SEPOHG does not believe that whether or not to allow chemical poisons to be used in the forests of N.S. is a question only for “experts” to decide. We believe that this position shows a great contempt towards the people of this province; that whatever the “experts” decide, the people of this province will vigorously and creatively continue to resist the use of insecticides and herbicides in the forests of Nova Scotia.

Biological Controls – *Bacillus thuringiensis* variety *kurstaki*

Elizabeth May claimed in a letter to the editor in the Chronicle Herald of December 4, 1982 that “use of the biological agent B.t. can protect foliage without killing budworm predators and other non-target species.”⁶² This position was also defended in the presentation given before this Commission by the Ecology Action Centre on February 11, 1983. The use of B.t. is also promoted by the provincial and federal forestry services. As is well known, minister of Lands and Forests Henley offered publicly to drink a glass of B.t. spray because it was so harmless.⁶³

SEPOHG opposes the use of B.t. as a method of budworm control on two grounds: The first is that spraying B.t. does not deal with the underlying cause of the spruce budworm problem, i.e. mature balsam fir/spruce trees. Secondly, *Bacillus thuringiensis* variety *kurstaki* acts by causing septicemia (blood poisoning) in insects of the order Lepidoptera – the moths and butterflies.

Unlike Ecology Action Centre and the “experts” from the N.S. Department of Lands and Forests and the Canadian Forestry Service, we do not consider moths and butterflies to be expendable. They obviously accept the elimination of such species as the Monarch and Swallowtail butterflies as a necessary consequence of spruce budworm control, yet at the same time claim that B.t. does no harm to non-target organisms.

There are over 10,000 species of moths and butterflies in North America. In the larval stage many of them feed on leaves. Some are agricultural pests, such as the Cabbage Looper, but others are beneficial, such as the Painted Lady, which feeds on thistles, or the Cinnabar moth, which defoliates tansy and ragweed. Adult Lepidoptera feed mainly on nectar, and thereby exert a good function as pollinators, e.g. the Black Swallowtail.

Apart from the direct damage B.t. can thus cause, it also indirectly affects other organisms in the ecosystem, such as those nesting birds for whom a main food source are spruce budworm larvae or other Lepidoptera. Another insect in this order, the Water Lily Leaf Cutter, is food for fish. Budworms, through their various stages from egg to adult, serve as food for a large variety of beetles, spiders, ants, flies and birds.

One can see that B.t. is not the harmless agent it is claimed to be, quite apart from the other constituents of the spray mixture, whose safety also has not been demonstrated in our view. For example, chitinase – an enzyme which breaks down the chitin in the gut wall of the budworm – could also have a detrimental effect on the exoskeleton of other insects. Or xylene, used as a stabilizer, is an aromatic hydrocarbon, belonging to the same group of chemicals as benzene, a known carcinogen; etc.

We believe that the 1976 National Research Council study Bacillus thuringiensis: Its Effects on Environmental Quality⁶⁴ presents the necessary data for why, from an ecological point of view, the use of B.t. should not be supported.

Conclusion: SEPOHG’s Position on the Forest Issue

We believe that the problem of the more or less total control of the forestry sector in Nova Scotia by the pulp and paper companies cannot be sorted out within the existing capitalist system. But, as interim measures, SEPOHG advocates,

1. Banning clearcutting, and enforcing and closely supervising selection forestry.
2. Replantings, where necessary, must be a diverse intercropping of conifers and hardwoods in harmony with the ecological characteristics of the sites being planted.
3. Woodlands to be managed to fully satisfy, on a basis of equality, forest, wildlife, recreation and watershed interests.
4. No use of insecticides, herbicides, fertilizers or any other chemicals in Nova Scotia forests. No use of B.t.
5. No use of machinery large enough to cause ecological damage to the forest.
6. Promotion of labor-intensive, not capital-intensive forestry.

7. No export of pulp or saw logs from the province.
8. All existing long term crown leases to be cancelled.
9. No crown lease to be issued for a period of longer than 5 years.
10. All crown leases to be preceded by public hearings where all interested parties are free to speak.
11. No non-Canadian ownership of land above 1-5 acres in size to be permitted in Nova Scotia. (Canadian is defined to include landed immigrants.)
12. Nationalization of all foreign-owned timber or agricultural lands.
13. Public accounting of all financial contributions to the various provincial and federal political parties, given by the pulp and paper industry and other large commercial forest interests.
14. Nationalization of all foreign owned pulp and paper companies in Nova Scotia.

FOOTNOTES

1. SEPOHG wishes to acknowledge two papers by Michael Clow from which ideas have been freely borrowed. We recommend these papers to those people interested in a socialist ecology, and who consider themselves part of the environmental Left. See: “A Left-Environmental Perspective on Canadian Industrial Strategy”, by Michael Clow, Department of Political Science, York University. Paper presented at the Ecology, Energy and Resources Section of the Canadian Political Science Association, 1981 Annual Meeting at Dalhousie University, Halifax, Nova Scotia, May 27-29, 1981: and “Alienation from Nature, Marx and Environmental Politics”, by Michael Clow, Alternatives, vol. 10, no. 4, Summer 1982.
2. The Pulp Industry in Nova Scotia 1880-1960, by John S. Donaldson, Bulletin no. 27, p. 1. This publication is a paper presented to the Nova Scotia Institute of Agrologists on February 15, 1961 at Kentville, N.S. The quotation setting the theme of our presentation is taken from this source.
3. The Trees Around Us, Forest Practices Improvement Board, 1980, p. 10.
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54. Status Report on Abatement of Water Pollution from the Canadian Pulp and Paper Industry (1980), Economic and Technical Review Report 3-WP-82-3, Water Pollution Control Directorate, July 1982, P. 18.
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57. “Pesticides A Position Statement”, p. 10.
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59. An Economic Analysis of Herbicide Use for Intensive Forestry Management, Part I: Evaluation of "Forestry Related Impacts of 2,4,5-T in Oregon", and Part II: Critical Assessment of Arguments and Data Supporting Herbicide Use, by Jan M. Newton, 1979. The quote is from Part II, pp. 63-4.
60. Herbicides in Forest Management.
61. An Economic Analysis of Herbicide Use for Intensive Forestry Management, Part II, p. 64.
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(This is the second printing of this Presentation. Apart from a few grammatical changes, some minor additions have been made. Also, some portions of the text have been underlined for political emphasis.)

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Last updated: February 25, 2012