

WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT

FIFTH MEETING
Ottawa, 28-30 May, 1986

WCED/86/Info. 6

BACKGROUND BRIEFING ON THE CANADIAN COUNCIL
OF RESOURCE AND ENVIRONMENT MINISTERS (CCREM)

Action Required: Information Paper

May 7, 1986

WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT

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MEMORANDUM

TO: All Members of the World Commission on Environment and Development

FROM: W. H. Lindner, Secretary

DATE: 6 May, 1986

RE: CCREM Roundtable, Edmonton, Canada

On Saturday, May 24, 1986 the Commission will be meeting in joint session with the Canadian Council of Resource and Environment Ministers (CCREM) in Edmonton as the guest of the Alberta Government. As I mentioned in my memo of 7 April, this meeting will most certainly be one of the most important events held in connection with the Commission's visit to Canada. CCREM is a ministerial council made up of the environment and resource ministers of the provincial and federal governments in Canada and operates as a national forum for the discussion and exchange of views on environmental and renewable resource issues among the federal, provincial and territorial governments. Its purpose is to stimulate and develop compatible policies and co-operative programs among the two levels of government. The meeting which has been arranged for the Commission in Edmonton is a special one to be held in closed session between the ministers and the Commission and the topic for discussion will be the politics of environment, more particularly "how to move environment up the political agenda".

The discussions in Edmonton should provide a unique opportunity for the Commission to obtain the insights of serving ministers on the practical constraints of, and possibilities for, integrating environmental considerations into policy planning. The session is planned to last for three hours and will be followed by a lunch to which each of the minister's deputies has been invited. The session will begin with statements by the Chairman of CCREM and the Commission. Following the opening statements the Federal Minister and one minister

from each province will make a short statement on his perceptions of the practical and political constraints under which he operates. The discussion will then be opened for general participation. on the part of all attendees.

Attached to this memo is a short briefing note on CRREM and a list of the ministers who are members of CCREM. I should mention that the current chairman of CCREM is the Hon. Fred D. Bradley of Alberta, but he is currently involved in an election campaign and may be replaced by the time of the meeting in Edmonton. Should he be replaced we will advise you in Canada.

CANADIAN COUNCIL OF RESOURCE AND ENVIRONMENT MINISTERS

Background Information

The Canadian Council of Resource and Environment Ministers (CCREM) operates as a national forum for the discussion and exchange of views on environmental and renewable resource issues among the federal, provincial and territorial governments in Canada. The purpose of the Council is to stimulate and develop compatible and policies and co-operative programs among the two levels of government. CCREM has proven to be a very important means of fostering a cooperative federal-provincial spirit in the environment and renewable resource fields.

How CCREM Does Business

CCREM is a ministerial level Council, with representatives from all ten provincial governments and the federal government. The territorial governments have observer status at CCREM; they participate in discussions at annual meetings, but do not contribute financially or take part in decision-making of the Council. CCREM was created and is financed jointly by the eleven senior governments in Canada, with the federal government providing one third of the annual budget. There is a small secretariat to the Council, which provides administrative support and co-ordination and which sometimes takes on a catalyst role. The main structure of the Council is provided through the Board of Directors, the chairmanship of which rotates to each government according to an eleven-year schedule.

Each annual meeting of CCREM represents the culmination of a year of work by the Council under a variety of intergovernmental committees and task forces set up to study or to resolve specific issues.

Throughout the year, the responsible Ministers and Deputy Ministers as well as committees and task forces, carry out the work of CCREM. These committees and task forces are focussed on problem-solving and their efforts are usually directed towards the implementation of a specific task, such as the publication of a report or the staging of a seminar or workshop.

Membership on CCREM is by government rather than by department. Thus, in cases where several ministers represent the environment and various renewable resource sectors, more than one member may be warranted for an individual government.

Decisions at CCREM are made on the basis of consensus reached at the annual meetings of Ministers of the specific sectors or of the Council as a whole. Such consensus is reached by a round-table type of discussion, usually carried out in an open friendly manner.

Evolution of CCREM

CCREM was originally established in 1964 as the Canadian council of Resource Ministers and was expanded in 1971 to include ministers of the environment. The type of tasks addressed by the Council and its role as well as that of the Secretariat have varied somewhat over the years but perhaps the most significant change has been the evolution of the "sectoral" division of CCREM. The diverse nature of items on the CCREM agenda eventually came to indicate the need for separate annual meetings of the Wildlife, Forestry and Environment Ministers, in addition to the annual meeting of Council as a whole.

Corporate Planning Group

September 25, 1984

LIST OF CCREM MINISTERS

Federal Government

The Hon. Tom McMillan
Minister of the Environment
OTTAWA
Canada

Alberta

The Hon. Fred D. Bradley
Minister of the Environment
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The Hon. Donald Sparrow
Minister of Forestry
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British Columbia

The Hon. Austin Pelton
Minister of Environment
Parliament Buildings
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Manitoba

The Hon. G. Lecuyer
Minister of Environment and
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The Hon. Leonard S. Evans
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The Hon. Malcolm N. MacLeod
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Newfoundland

The Hon. John Butt
Minister of Environment
Elizabeth Towers
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The Hon. Bill Mathews
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L'Honorable Yvon Picotte
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The Hon. Colin Maxwell
Minister of Parks and
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Nortwest Territories

The Hon. Red Pedersen
Minister of Renewable Resources
P.O. Box 1320
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Yukon

The Hon. Dave Porter
Minister of Renewable Resources
P.O. Box 2703
Whitehorse, Y.T.
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Alberta

HONOURABLE FRED D. BRADLEY
MINISTER OF THE ENVIRONMENT
M.L.A. for Pincher Creek/Crowsnest



Born in Blairmore, September 17, 1949.

Educated at Blairmore and University of Alberta.

Small businessman involved in Crowsnest Pass retail clothing store.

Active in Crowsnest Pass Historical Society and founding member of Crowsnest Highway 3 Association.

Served on the Alberta Environmental Research Trust from 1975-79, latterly as Chairman.

Chairman, Crowsnest Pass Municipal Amalgamation Liaison Committee, 1978.

Member of Kananaskis Country Citizens Advisory Committee from 1978-82.

Member of the Syncrude Board of Directors from 1979-82.

First elected as MLA for Pincher Creek/Crowsnest in March 1975, re-elected in March 1979, and November 1982, and subsequently appointed Minister of the Environment.

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MEMORANDUM

TO: All Members of the World Commission on Environment
and Development

FROM: W. H. Lindner, Secretary

DATE: 7 May, 1986

RE: Canadian Visit

To provide you with some general background information on each of the provinces we will be visiting during our stay in Canada and to familiarize you with the environmental issues in those provinces, I have asked the provincial authorities in Canada to prepare and have attached to this memo a series of general and environmental briefing notes for the provinces of British Columbia, Alberta, Ontario and Nova Scotia. The briefing notes for Quebec, which are in the process of being translated, will be given to you in Canada.

In each of the provinces, the Commission will be joined at some point during its stay by provincial authorities, representatives of non-governmental organizations and the press. The enclosed briefing notes are intended to give you some broad informational background on topics likely to arise during discussions in these provinces.

For those of you joining the visit in Vancouver, I would call your particular attention to the briefing notes on Wilderness Protection, South Moresby and Queen Charlotte Islands. The proposed development of these areas and in particular the consequent effects on the Haida Indians has resulted in a nationwide debate in Canada between environmentalists, indigenous peoples and the provincial authorities in British Columbia. Questions about this issue are very likely to arise during our stay in Vancouver, particularly as we are to lunch with the members of the Wilderness Committee (referred to in the briefings). These materials should be reviewed before your arrival in the province.

Action Required: Background Information

ALBERTA BRIEFING

The Province of Alberta

Location

- between 49°N and 60°N latitude.
- bordered by British Columbia (B.C.) to the west, Saskatchewan (Sask.) to the east, the Northwest Territories (N.W.T.) to the north and the United States to the south.

Area

- Canada - 9,922,330 km²
- Alberta - 661,185 km² or 6.6% of Canada

Climate

- continental; long cold winters; short warm summers.
- annual precipitation varies from less than 305 mm to greater than 508 mm.
- mean July temperatures range from greater than 20°C to 14°C.
- mean January temperatures range from -23°C to -9°C in the Chinook belt of southwestern Alberta.
- frost free period is longest in the southeast being more than 120 days.

Topography

- Alberta is the only province which includes parts of the Canadian Shield, the Western Plains and the Cordillera or Rocky Mountains.
- The plains cover 3/4 of the Province; topographic diversity within this region is provided by isolated hill regions such as the Cypress Hills in the southeast and by major river valleys including the Milk, South Saskatchewan, Red Deer, North Saskatchewan, Peace, Athabasca and Slave.

Vegetation

- short and mixed grass prairie of southern Alberta grades into aspen parkland in central Alberta and boreal forest in the north.

History of Settlement

- human habitation of Alberta has been documented for at least 11,000 years and possibly 30,000 years.
- the first European to explore the province came in 1754.
- widespread settlement began in the 1880's with the arrival of the transcontinental railway.
- Alberta gained provincial status in 1905.

Population

- Canada (1985) 25,444,900
- Alberta (1985) 2,357,600 or 9.5% of Canada
 - Edmonton Metro Area - 683,600
 - Calgary Metro Area - 625,600

Economy

- major commodity producing sectors include mining (including oil and gas), construction, manufacturing and agriculture.
- gross domestic product at market prices in 1983 was \$56,539 million compared with a figure of \$402,084 million for Canada.
- per capita personal income for 1984 averaged \$15,376.00 in Alberta and \$14,412.00 in Canada.
- Alberta is highly dependent upon external markets which account for approximately one-quarter of the gross domestic product; exports are mainly primary products such as natural gas, petroleum, sulphur, coal, and agricultural products.

Government

- Alberta is one of ten provinces; legislative authority is vested in a single-chamber legislative assembly which has 79 elected representatives and a Lieutenant-Governor, the representative of the Queen of England.
- the Progressive Conservative Party, led by Premier Don Getty, currently has a large majority.
- the Minister of Alberta Environment is the Honourable Fred Bradley.

Economic Development Issues
Province of Alberta

Petroleum Industry

Alberta's economy is largely dependent upon revenues generated from the petroleum industry. The Alberta Heritage Savings Trust Fund, established in 1976 to improve the quality of life for Albertans and to invest in the expansion and diversification of the Alberta economy, receives funds from the industry.

The recent drop in world oil prices has caused severe financial hardship within the petroleum industry and supporting service industries, particularly for the smaller companies. Reduced activity has led to lay-offs throughout the industry.

There has been much controversy over the appropriate role of the federal government in responding to the recent events.

Agriculture

Severe drought has plagued southern Alberta farmers during 1985 and 1986. In the face of high interest rates and declining profit margins, experienced by all Canadian farmers, the effect of two successive crop failures has been to force many operators out of business. At a more general level it has served to heighten public concern about soil erosion and water management.

During 1985 crop conditions were aggravated by a major grasshopper infestation. Heavy application of pesticides was used to control the outbreak; this gave cause for concern for the environment.

Drought assistance programs were established to provide some relief to farmers/ranchers, but it will require much more to counter the debt load incurred by most operators.

Conservation of Natural Areas

Alberta has been richly endowed with a diversity of natural landscapes, ranging from mountain to prairie. Representative and unique areas have been afforded protection through various measures, such as designation as national or provincial parks or as migratory bird sanctuaries. Additional sites will be protected under Alberta's new ecological reserve program.

Historically, wetland habitat on private land has not fared well, however, as landowners have sought to maximize cultivated area and productivity. As a result of many individual decisions to drain sloughs or potholes, there has been a large incremental loss of prairie wetlands and wetland populations. Through the cooperative efforts of concerned interest groups with landowners and governments, some success has been achieved in reversing the previous trend. Much work is required yet.

Hazardous Waste Management

The Province of Alberta is the first in Canada to undertake construction of an integrated hazardous waste treatment facility designed to handle both organic and inorganic wastes. The facility will be operated under the strictest of environmental standards. Scheduled for completion in 1987, the site is located near the town of Swan Hills approximately 200 kilometres northwest of Edmonton. The Alberta Special Waste Management Corporation, a Crown Corporation, was established in 1984, to manage hazardous wastes in Alberta. The facility will be 60% privately owned and 40% publicly owned.

Water Management

Increasing pressure upon Canada's water resource, in response to population growth and economic development, has resulted in a variety of management problems and issues related to jurisdiction, quantity and quality. Jurisdictional issues include the apportionment of transboundary waters and water diversion or export. The future allocation of water among competing uses and natural hazards including drought and flooding are major water supply issues. The introduction of toxic chemicals and excess nutrients into rivers and lakes pose major water quality problems.

Water management in Alberta is complicated by the fact that the highest demands for water occur in the more developed south where water is in short supply. Large scale irrigation, developed to increase stability and productivity in the agricultural sector, is the major consumer.

Determining the priorities for future water use is one of the main tasks facing the provincial government. The recently completed Inquiry on Federal Water Policy attests to the national significance of water management.

BRITISH COLUMBIA BRIEFING

ISSUE

Wilderness Protection in British Columbia

BACKGROUND

The British Columbia Minister of Environment appointed the Wilderness Advisory Committee in the fall of 1985 to make recommendations on 16 areas proposed for wilderness protection and eight park boundaries. One of these issues was the South Moresby area in the Queen Charlotte Islands, which has received international attention due to its unique environmental characteristics. The Committee was also asked to prepare recommendations on legislative change and procedures for improving the decision-making process for wilderness area designations in the future. The Committee submitted its report to the Minister of Environment in March 1986, after receiving over 1000 briefs from a range of public and private interests and conducting public meetings across the province.

DISCUSSION

The major conflicts associated with wilderness preservation involve maintenance of ecosystem diversity, potential loss of economic development in the forest and mining sectors and provision of recreation and tourism opportunities. Some of the measures of this conflict include:

- wildlife protection. British Columbia contains the greatest number and diversity of wildlife species in Canada. Of the total world's population British Columbia contains 25 per cent of the grizzly bears, 99 per cent of the mountain caribou and 60 per cent of the mountain goats. The annual expenditures on wildlife-based recreation (both hunting and non-hunting) is \$736 million. Many of the province's wildlife species depend on wilderness habitats.
- forestry. Wilderness preservation in the 16 areas considered by the Wilderness Advisory would involve the removal of 350,000 m³ from the provincial annual allowable timber harvest (approximately 0.5 per cent of total provincial harvest). Compensation for this timber loss to forest companies is estimated to lie between \$15 and 20 million.
- mining. There is one operating mine and 672 mineral claims in 12 of the existing Provincial Parks. There are no estimates for compensating for these claims to protect wilderness areas. Much of the province is unexplored, so wilderness protection could have large costs on loss of mineral, oil and gas development potential.

- recreation. Wilderness protection of the 16 areas would add 587,000 hectares to the provincial parks or approximately 12 per cent of the present land base. The present system of parks attracts 16 million visitors days annually.

BRITISH COLUMBIA BRIEFING NOTE No 2

Study Area #1: South Moresby

BACKGROUND

South Moresby is that part of the Queen Charlotte Islands south of Tasgil Peninsula on Moresby Island. The study area encompasses about 145,000 hectares.

The area is renowned for its diverse and high-quality of ecological values. These include many seabird colonies, special stands of old-growth trees, falcon nesting sites, special alpine and sub-alpine areas, salmonid habitat, lakes displaying Stickleback evolution, sea lion rookeries, and so on. Burnaby Narrows, Dodge Point and Windy Bay are just a few of the sites of exceptional ecological interest. Special holistic ecological values derive from whole islands and whole watersheds being in a wild state.

The South Moresby area is unique because of a combination of circumstances: it is part of an isolated island area; it largely escaped glaciation; it is a high-energy temperate system driven by a nutrient-rich oceanic system and a high precipitation rate; and it is largely free of large-scale modern industry and settlement, although the past century has seen some development.

Its ecological values, cultural values and scenic values give South Moresby considerable recreational and tourist appeal. In addition the Queen Charlotte Islands have a certain mystique as represented by the well-known artist Emily Carr, which attracts people in spite of a generally inhospitable climate.

South Moresby has important cultural and archeological values. The large numbers of archeological sites throughout the area are tangible evidence that the Haida people have occupied the area for a long time. The sites of occupation and use are of great interest and value, which derive partly from the character of their surroundings.

South Moresby also has high commercial forest values. These are largely found along its eastern side with Tree Farm License (TFL) 24, held by Western Forest Products. Tree growth rates in this area rank among the highest in the province. Consequently forestry has become the economic mainstay of the

Queen Charlotte Islands. On the basis of the government's on-going commitment to logging in this area (as implied by the renewal of TFL 24 in 1979), the forest company, contractors and employees have made considerable investments. Many residents see logging as the best assurance of a sustained livelihood, which would be lost or reduced if the integrity of TFL 24 were compromised.

The mining industry and the Ministry of Energy, Mines and Petroleum Resources (MEMPR) have emphasized that the South Moresby area has considerable mineral potential particularly for complex iron-copper-gold-silver deposits and for gold deposits. Many claims exist throughout the area. While the petroleum and natural gas potentials are thought to be low in the islands, the immediate offshore area is considered to be more promising. Applications for permits have been filed, but no permits for oil and gas exploration have as yet been issued.

Interest in preserving all or some part of the area dates back more than a decade. The issue of preservation versus resource development came to a head in the late 1970's.

The Minister of Forests established the south Moresby Planning Team, representing varied interests from government and public. Their major document ("South Moresby Land Use Alternatives") reviewed all resource values and presented government with four options in 1983. These ranged from resource development, to preservation other than for active logging areas on Lyell Island.

In the period since 1983, the Cabinet has evidently been unable to settle upon a course of action. Meanwhile, interest groups have become increasingly polarized and frustration levels have risen.

The South Moresby issue stimulated the greatest number of submissions and presentations to the Wilderness Advisory Committee, and included correspondence from other parts of the world. In addition to the original four options, the Committee was presented with other alternatives. For instance, a pro-conservationist suggested Windy Bay be logged so that a more intact unit of wilderness south of Lyell Island could be protected. Western Forest Products also outlined a further alternative.

CONCLUSIONS AND RECOMMENDATIONS

The South Moresby Issue involves a conflict between interests who wish to preserve the area for cultural, recreational and scientific reasons, and those who wish to develop its forest and mineral resources and leave only the highest value wilderness components.

The material submitted regarding South Moresby's cultural, natural and resource values has persuaded the majority of the Committee that the recommended protected area of South Moresby as shown on the map should be preserved. The minority believe that a reduced area should be preserved.

The whole Committee concluded that, given the high forestry values of Lyell, Richardson, Tenu and Kunga Islands, and their past history of logging, they should continue to be used for logging. Therefore, the Committee recommended:

- Lyell, Richardson, Tenu and Kunga Islands remain within TFL 24 except for an Ecological Reserve at Windy Bay-Dodge Pt., conforming to the Option B boundary (675 hectares), and a protective buffer up to a high point of land (taking wind firmness into account) along Darwin Sound on the west side of Richardson and Lyell Islands.

Parks Canada, in its presentation to the Committee, and the Minister of Environment Canada have publicly stated their intent to provide half the funds for any compensation needed to remove TFL 24 tenure from South Moresby lands and for acquisition of other interests necessary to establish a National Park. In light of this and given the majority preference for preservation, the recommendation of the Committee is:

2. The Provincial Government should offer Parks Canada the opportunity to create a national park on South Moresby, within the recommended protected area shown on the map, provided that an agreement in principle on all issues, including compensation, can be achieved within two years (one year before the renewal date for TFL 24 in 1989) to avoid the uncertainty caused by long negotiations such as occurred over Pacific Rim National Park, or failing that, proceed as in recommendation #1.
3. The Provincial government should act independently to establish the recommended protected areas as a Provincial Park prior to the renewal date of TFL 24 in 1989. If no agreement is reached with Parks Canada or if Provincial Government is not prepared to proceed with the establishment of the recommended protected area as Provincial Park; then it should include as a minimum the Timber Supply Area lands and such areas of TFL 24 area included in

- * Viewscapes from Anthony Island
- * Burnaby Narrows
- * Juan Perez sound, as defined by the present Recreation Reserve
- * Darwind Sound
- * Skincuttle Inlet-porth tide and islands
- * Nostoo Inlet.

Parts of this Provincial Park should be designated a Wilderness Conservancy with management guidelines developed in accordance with this report's recommendations.

The Committee explored the opportunities for compensating Wester Forest Products and looked carefully at the following possibilities:

- A) Addition of adjacent lands to the remnant of TFL 24, specifically, the transfer of Louise Island from TFL 39 and the addition of lands from the timber Supply Area. The transfer of Louise Island could be done with special legislation, but it would require that MacMillan Bloedel be compensated for the lands transferred from their TFL 39. This might be handled by expanding their tenure boundaries in other coastal areas. this would spread the required timber compensation among the coastal timber companies.
- B) Granting of cutting rights in the Kingcome and Midcoast Timber Supply Area. Higher operating costs of approximately \$7 to \$10 per cubic metre and poorer-quality timber make the area less attractive to the operator than the Queen Charlotte Islands. This option would also reduce supply to other operators in the Timber Supply Areas.
- C) Special legislation to allow the present rate of cut for the remainder of TFL 24 to be retained until the old-growth forestry is depleted. This would undermine the longer-term integrity of the remainder of TFL 24 for sustained production.

BRITISH COLUMBIA BRIEFING NOTE No 3

ACID RAIN

British Columbia, the other western provinces and Canada have developed a joint research and monitoring program which is providing the basis for an acid deposition management strategy in western and northern Canada. The program has four elements, (1) lake and terrestrial sensitivity mapping, (2) development of a target loading, (3) deposition monitoring, and (4) emission management.

Most of coastal British Columbia is highly sensitive to acidic deposition, as are some of the interior mountains. The dry interior is moderately sensitive or insensitive. A total of 20% of the 720 lakes sampled in British Columbia to date are classified highly sensitive, but there is no evidence of any damage due to acid deposition. Monthly monitoring has been instituted at all sensitive lakes in southwestern British Columbia.

The National Research Council of Canada has been contracted to recommend target loadings that are suitable for western Canada. This report will be ready by winter 1986.

Precipitation monitoring indicates wet sulphate deposition rates in the range of 15 to 25 kilograms/hectars/year in the urban areas of Vancouver and Victoria, with values of less than 10 outside these cities, and generally less than 10 to 12 in all other parts of the Province. In undeveloped areas the deposition rate is 3 to 6 kilograms/hectars/year.

Sulphur dioxide emissions in recent years have totalled approximately 200,000 tonnes per annum, and have exhibited a steady downward trend. The largest industrial sources are smelters and natural gas processing, both of which have greater than 90% control on sulphur emissions.

British Columbia also has participated in Canada's national acid rain program, and has been active in a recent study of the costs and benefits of using low-sulphur western Canadian coal to reduce acidic emissions in Ontario.

BRITISH COLUMBIA BRIEFING NOTE No 4

IMPLICATIONS OF WASTE MANAGEMENT TO THE VIABILITY OF THE BRITISH COLUMBIA ECONOMY AND ITS DEVELOPMENT

British Columbia is a Province that has an environmental quality which is the highest in the world.

Its industries, municipalities and taxpayers have spent, and continue to spend, hundreds of millions of dollars annually in the treatment and proper disposal of liquid, solid and gaseous wastes in order to protect the environment from the harmful effects of pollutants.

The costs of environmental protection from pollutants is now increasing significantly. Technology is identifying an increasing array of pollutants which appear to have ever greater implications on environmental health. This, in turn, is causing the province to demand more and more controls over waste discharges. Such actions in turn cause increases in research to deal with pollutants, and to implement, operate and maintain the physical works necessary to meet these demands.

The cost for all these controls ultimately accrues to the price of all the goods and services produced in the province and while these costs may not be of great consequence if they were experienced by all economic elements of the world, such is not the case. Many developing nations which have been assisted in establishing new industry employing the latest in technology,

also benefit by low labour and raw materials costs. Some of them benefit even further by lack of environmental controls, thus the costs of their goods and services are less than those of industrialized nations which have to compete for the same markets.

The same sort of problem can even exist within Canada where there are differences in environmental controls or the manner and extent to which such controls are administered and enforced.

It is important, therefore, that a reasonable degree of consistency exist on a world basis in environmental controls and their administration, not only for protection of the world environment, but to prevent disparities in the economic health of nations.

ONTARIO BRIEFING

ISSUE

Canada-Ontario Agreement on Great Lakes Water Quality.

The 1972 Great Lakes Water Quality Agreement with the United States was based on an International Joint Commission (IJC) study of Great Lakes water quality problems.

This international Agreement was not a static arrangement, it was designed to address new pollution problems when new scientific findings showed that there were better means of controlling Great Lakes pollution.

The Agreement was renewed in 1978 to place greater emphasis on the control of persistent toxic substance pollution associated with land-use and airborne source of pollution.

The Canada-Ontario Agreement (COA) was signed in 1971 to bring federal and provincial governments together in order to implement the international agreement.

COA was amended in 1982 to strengthen the emphasis on toxic substance control, to enhance control of pollution from land drainage and to increase the funding of municipal sewage treatment projects and monitoring and surveillance programmes.

COA has been revised to further the co-operative measures which were previously adopted.

The Agreement strengthens efforts to control toxic substances, initiates a phosphorus reduction erosion control plan from agricultural sources, provides funding for sewage works construction through 1986 and cost-sharing for co-ordinated Great Lakes surveillance by the federal and provincial governments.

Signatories to the Agreement are the federal Ministers of: Environment, Fisheries and Oceans, and Agriculture, and the provincial Ministers of Environment, Intergovernmental Affairs, Natural Resources and Agriculture and Food.

The programmes contained in the new Agreement are based on the provisions of the 1982 Agreement, enhanced to reflect current priorities and knowledge. They include:

- Municipal Waste Treatment
- Industrial Waste Control and Treatment
- Annual Inventory of Municipal and Industrial Compliance Information

- Phosphorus Management Plan
- Pollution from Shipping Activities; Dredging Activities; Offshore and Onshore facilities
- Hazardous Polluting Substances
- Persistent Toxic Substances
- Pollution Attributable to Land Use Activities
- Areas of Concern

Ontario Briefing Note No. 2

ISSUE

Great Lakes Surveillance and Nearshore Management

Canada and the U.S. have committed themselves to restoring and maintaining the integrity of the water of the Great Lakes under the 1972 Great Lakes Water Quality Agreement (which was revised in 1978). In support of this Agreement, Canada and Ontario have concluded the Canada-Ontario Agreement (COA) to survey and manage nearshore waters.

MOE conducts annual surveillance and investigations in the nearshore areas, connecting channels, harbours and embayments of the Great Lakes to assess:

- the impact of industrial and municipal discharges, agricultural and urban drainage and construction activities;
- compliance with and effectiveness of control measures;
- transboundary pollution;
- emerging problems; and

to recommend control measures to achieve objectives.

Seventeen nearshore locations or "Areas of Concern" where water quality, sediments or aquatic life have been adversely affected have been identified to the International Joint Commission (IJC). Degradation is mainly due to municipal and industrial discharge (historic or ongoing) or storm and combined sewer overflows.

Annual reports to the COA Review Board and the IJC, which monitors the international Agreement, include progress on remedial actions, municipal and industrial compliance, nutrient loadings and radioactivity levels, general water quality conditions, trends and emerging problems.

Federal cost-sharing of MOE's surveillance activities will be a maximum of \$1.6 million in 1985-86.

The federal government made \$65.0 million available for the construction of municipal sewage treatment facilities from 1982-85, under the Canada Ontario Agreement Sewage Programme.

All industries and municipal facilities discharging to identified "Areas of Concern" are operating under MOE Control Orders or Certificates of Approval; both are subject to periodic revision.

A 1984 Supplement to the 1978 revised international Agreement requires the parties to further reduce phosphorus loadings to the Great Lakes to meet water quality guidelines, especially for Lakes Erie and Ontario.

Ontario in co-operation with the federal government, has developed a Canadian Phosphorus Load Reduction Plan to meet the Target Loads for Lakes Erie and Ontario. Major emphasis is now on agricultural source since major load reductions have been achieved for municipal and industrial sources.

Ontario Briefing Note No. 3

MINISTRY OF THE ENVIRONMENT (MOE)

ONTARIO ISSUES

ISSUE

Water Quality Management

Water quantity and water quality are inter-dependent issues.

MOE has the lead agency role for management of water quality in Ontario, but shares responsibility with the Ministry of Natural Resources (MNR) for water quantity management.

MNR has traditionally been responsible for the management of water levels, high water flows, and floodplain control. MNR manages Crown lands including the beds of navigable waters, and the beds and shorelines (to the high water mark) of all natural watercourses in the province. MNR has the authority under the Lakes and Rivers Improvement Act to approve and control all structures in watercourses including docks, dams and diversion works.

In the area of water quantity, MOE has traditionally had responsibility for low-flow management, especially as it relates to water quality. Under the Ontario Water Resource Act, MOE is responsible for water supply regulation.

Permits to Take Water and Certificates of Approval are specific mechanisms whereby MOE exercises its authority to approve all major water users in Ontario, in order to promote the fair-sharing and conservation of water sources and supplies for users and the public interest.

ISSUE

Drinking water

There is public perception that Lake Ontario is contaminated with toxic chemicals and that these chemicals are in treated drinking water.

A Drinking Water Surveillance Programme (DWSP) has been developed to provide a centrally controlled, readily accessible information system on current drinking water quality in Ontario and to provide the basis for rapid remedial action in problem areas.

At least 35 municipal water supplies, covering 66% of the 7,200,000 people in Ontario receiving water from piped municipal systems, will be included in 1986-87, the first year of the programme.

Analysis for a total of 122 chemical compounds (and 139 parameters) addresses current Ontario Drinking Water Objectives, organic substances of concern and process parameters. Substances to be monitored were selected from MOE's Interim Priority List of Hazardous Contaminants in Drinking Water and relevant International Joint Commission, World Health Organization, U.S. Environmental Protection Agency and Ontario Drinking Water Objective documents.

Sampling and analysis follows strict, standardized protocols to ensure the highest quality data.

ISSUE

Municipal-Industrial Strategy for Abatement (MISA)

MOE is developing a Municipal-Industrial Strategy for Abatement(MISA).

Presently, industrial and municipal discharges to water bodies are controlled by specifying maximum permissible concentrations for individual pollutants, normally in the form of guidelines.

MISA establishes a new approach to environmental control in Ontario. MISA:

- adds a regulatory component to enforce technology-based standards (effluent limits specified in both concentrations and loadings); and
- imposes either technology of water quality based criteria, whichever is the more stringent.

ISSUE

Recreational Water Quality of Ontario Beaches

Ontario's bathing beaches are an important recreational attraction for the people of Ontario and the tourist industry. High levels of bacterial contamination in beach waters is the main reason for beach closures.

1983 was a particularly bad summer for beach closures with over 100 beaches posted out of about 1,300 monitored. In the year before and for two years following 1983, about half this number were posted.

Field studies have indicated that the problems arise from:

- urban storm drainage;
- agricultural drainage;
- animal wastes;
- sewage treatment plant discharges; and
- combined sewer overflows.

During 1985-86, MOE provided Metro Toronto municipalities almost \$4.2 million under a Metro Toronto-MOE agreement on Waterfront Water Quality Improvement for accelerated sewer separation projects and studies and physical improvement activities.

MOE provided \$5.6 million to Metropolitan Toronto for improvements to sewage treatment works, and funded the Toronto Area Watershed Management Strategy (TAWMS) and related research studies with an additional \$0.4 million.

MOE also provided municipalities outside Metropolitan Toronto \$3.5 million for sewage plan and system improvements related to beach pollution problems.

MOE has initiated urban and rural beach pollution control studies through agreements with local conservation authorities and the City of St. Chatharines; MOE has committed \$0.65 million for these studies.

ISSUE

Ontario's Acid Gas Control Programme

Total emissions of sulphur dioxide (SO₂) in Ontario were cut by 50% during 1970-1980 to meet ambient air standards.

On March 6th, 1984, the federal and provincial Ministers of the environment decided to reduce annual emissions of SO₂ by 1994 to 2.5 million tons (2.3 million metric tonnes) (50% of the 1980 base case) to move towards the sulphate deposition target of no more that 20 kilograms per hectare per year.

On February 5th, 1985, the federal and provincial Ministers agreed to achieve reductions totalling 2.1 million tons (1.9 million Metric tonnes) per year and to commit to further SO₂ reductions (taking into account U.S. control actions) to meet the 1994 objective of 386,000 tonnes. Ontario agreed to reduce its SO₂ emissions by 53% (61% of the planned reduction for Eastern Canada).

A new package of controls, announced in December 1985, reduces the legal SO₂ limit for each of the four major Ontario corporate sources and applies a blanket Boiler Regulation to new or modified smaller sources.

Ontario's SO₂ emissions will be cut to 885 kilotonnes per year by 1994 from the 1980 base case of 2,194 kilotonnes (1976 thousand tons from 2,418 thousand tons)

ISSUE

PCB Management in Ontario

PCB's were never manufactured in Canada. Estimated imports are 35,000 tonnes. About half have been dispersed directly into the environment through dissipative uses such as in paint in printing ink. Existing stock has been used in closed applications such as transformers.

In Ontario, there are approximately 6.5 million litres of askarel (40-70% PCB). 75% is in 15 Ontario locations; over 90% is still in service, while about 05 million litres are in storage.

Additional PCB sources includes contaminated mineral oil (50-5000 ppm PCB) PCB equipment and PCB contaminated soil and equipment. The total volume of the oil is not known. However, over one million litres are in storage as waste.

Federal legislation (Environmental Contaminants Act and Regulations) restricts the usage of PCBs to "closed systems". The sale of and emissions from equipment using askarel is controlled by federal regulation. Federal guidelines on PCB usage also exist.

Ontario has Regulation 11/82 which regulates the management of PCB wastes. Lacking disposal outlets, current regulatory initiatives are limited to the establishment of PCB storage sites on an owner's property. Currently, there are over 400 such storage sites across Ontario.

Ontario is engaged in an on-going national dialogue through the Canadian Council of Resource and Environment Ministers (CCREM) on PCB management.

Amendments to Regulation 11/82 (to reflect transportation concerns expressed in the federal Transportation of Dangerous Goods Act) are being implemented.

ISSUE

Pesticides Control Programme

Pesticide control programme in the U.S. and Canada are similar. Both programmes are based on pre-market evaluation and registration of pesticides. Both federal governments administer umbrella legislation which determines conditions for sale and use in each country as a whole.

The U.S. Environmental Protection Agency (EPA) administers the Federal Insecticide, Fungicide, Rodenticide Act and Agriculture Canada administers the Pest Control Products Act.

States and provinces have varying complimentary programmes to provide for greater regional or local conditions. Ontario has a comprehensive pesticides control programme under which policies, procedures and guidelines are established to develop an acceptable balance between the beneficial uses of pesticides and the protection of human health and of the natural environment. an extensive field programme involving enforcement, surveillance and monitoring supports this programme.

A number of pesticide products are registered in the U.S. for domestic or commercial use which may not be available or registered in Canada. For example, chlordane is restricted in Canada for limited use only by licensed applicators for termite control. Restrictions in the U.S. are only now being implemented.

In Canada, the federal government plays the primary role in the control of pesticides and their use by administering the Pest Control Products Act. This Act allows for the registration of pesticides and regulates the condition under which the products are to be sold and used.

Ontario and some of the other provinces have complementary legislation to the federal legislation covering the sale and use of pesticides in greater detail which provide for local and regional conditions.

In Ontario, each pesticide product is classified according to its toxicity, persistence, etc. this classification system also allows for restrictions with regard to availability of products, such as for a licensed applicator or a homeowner. This classification system channels products into the hands of those persons who need the product and can use them safely.

Marketing and use of each product must be made in accordance with the regulation relating to the classification.

All pesticide products must be applied according to label directions. Furthermore, in Ontario, commercial applicators must be licensed under the Pesticides Act and Regulation.

The pesticides control programme is designed to provide for an acceptable balance between the beneficial use of pesticide and the protection of environmental health and the natural environment.

NOVA SCOTIA BRIEFING

OVERVIEW OF THE NOVA SCOTIA ECONOMY

At a Glance

	1974	1979	1984
Gross Domestic Product (\$ million)	3,275	5,812	9,283
Real Domestic Product (\$ million 1971)	2,582	2,976	3,348
Employment	294,000	311,000	338,000
Labour Force	313,000	346,000	388,000
Unemployment Rate (%)	6.8	10.3	13.0
Participation Rate (%)	55.8	56.6	59.4
Population	812,000	847,000	870,000
Personal Income (\$ million)	3,375	6,135	10,011
Personal Income per Capita (\$)	4,156	7,183	11,648
Retail Trade (\$ million)	1,441	2,523	4,004
Inflation (CPI) (annual rate) (%)	9.9	8.9	4.4
Housing Starts	4,281	4,538	4,598

Source: Various Statistics Canada Publications; Conference Board of Canada

Structure

- The Nova Scotia economy, overall, has experienced steady growth over the past decade. Real domestic product (RDP) increased by an average annual rate of 2.6% between 1974 and 1984.
- The Nova Scotia economy came through the international recession of 1981-82 less damaged than the Canadian economy. The decline in the Province's RDP and employment was significantly less than the contraction in output and employment Canada-wide.

- **Two prominent factors cushioned the Province from the severe impacts of the recession:**
 - **acceleration of offshore oil and gas exploration;**
 - **sustained level of merchandise exports from the Province.**

- **In the recovery which got underway in early 1983, Nova Scotia emerged with demonstrable economic strength. RDP and employment growth in the Province topped the Nation's performance.**

- **Nova Scotia's economic upswing in 1983 was due largely to three sources of strong demand operating inside the Province, namely:**
 - **heightened offshore oil and gas exploration activity;**
 - **sharply higher housing construction;**
 - **resurgent retail trade.**

- **The strong performance of Nova Scotia's service sector reflects the emergence of the Province as a financial, commercial, and institutional centre in the Atlantic region. In aggregate, the service sector accounts for 70% of output and employment in the Province.**

- **Commercial services have grown very rapidly in recent years due primarily to the accelerated pace of offshore exploration activity.**

- **Given the nature of the demand for services and government policies towards supplying public services, these industries have been considerably insulated against economic cycles and have provided a significant degree of economic stability in Nova Scotia's economy.**

STRUCTURE OF THE NOVA SCOTIA ECONOMY

	Real Domestic Product (\$ million 1971)			Real Domestic Product (% of total)			EMPLOYMENT ('000)		
	1974	1979	1984	1974	1979	1984	1974	1979	1984
Agriculture	29	38	46	1.1	1.3	1.4	8	7	7
Forestry	15	15	14	0.6	0.5	0.4	3	2	3
Fishing	37	55	49	1.4	1.8	1.5	8	6	7
Mining	71	67	99	2.7	2.3	3.0	6	5	7
Manufacturing	363	404	432	14.1	13.6	12.9	46	46	43
Construction	186	183	204	7.2	6.1	6.1	21	21	19
Utilities	72	87	97	2.8	2.9	2.9))) 32	30	28
Transportation, Storage and Communications	252	333	378	9.8	11.2	11.3			
Wholesale and Retail Trade	351	417	433	13.6	14.0	12.9			
Finance, Insurance and Real Estate	297	384	427	11.5	12.9	12.7	12	17	15
Community, Business and Personal Services	496	557	698	19.2	18.7	20.8	79	89	111
Public Administration	413	436	471	16.0	14.7	14.1	24	29	32
Total	2,582	2,976	3,348	100.0	100.0	100.0	292	311	337

Note: Totals may not add due to rounding.

Source: Statistics Canada #71-201; Conference Board of Canada

- Development policy focus is on:

- . better development of people's skills and abilities;
- . encouragement of technological innovation;
- . tax systems that encourage and reward success;
- . a reformed regulatory system;
- . less direct government interference in the economy;
- . expanded emphasis on marketing and trade development policies;
- . clear guidelines for that government involvement which is necessary to improve competitiveness, and;
- . improved consultation and cooperation among economic actors.

- Issues:

- . role of public sector in supporting and promoting industry development;
- . policy attitude towards industries in difficulty, e.g., shipbuilding, forestry, inshore fishing;
- . need to develop new manufacturing opportunities and expand existing manufacturing base as a condition to sustained economic growth;
- . further processing of natural resources;
- . promote clustering of firms to generate agglomeration economies (cost savings);
- . regional disparities within Nova Scotia;
- . affect of offshore activity on the economy.

ATLANTIC CANADA (PARTICULARLY NOVA SCOTIA)
ENVIRONMENTAL QUALITY ISSUES

Air Quality

- The air in many cities in Atlantic Canada is cleaner now than it was five years ago.
- The most serious local air quality problem in this region exists in the vicinity of the Sysco steel plant at Sydney, Nova Scotia. Although levels of SPM there have been reduced in recent years, they remain consistently above the acceptable objective and both national averages. Levels of polycyclic aromatic hydrocarbons (PAHs) in the residential areas adjacent to the coke ovens have been some of the highest in North America, even with the coke ovens operating at less than 50% of capacity. The coke ovens were shut down in December, 1983, but reopened in December, 1985, without pollution controls.
- Other Industrial point source emissions have been consistently reduced over the last five years.

Water Quality:

- The abundant inland water resources of Atlantic Canada support fish and wildlife, and supply water for drinking, agriculture, industry, power generation and esthetic enjoyment.
- Many of the popular sport fish populations in the region have been declining over the past several decades, due to decreased water quality and habitat disruption.
- Groundwater contamination has only recently been recognized as a serious threat in this region, as increasing numbers of cases of contamination from bacteria, salt, nitrates, pesticides and petroleum products are being found.
- Most of the population of Atlantic Canada lives on or near the coast and much of the industry is located there as well.
- The offshore waters of the Northwest Atlantic are relatively uncontaminated.

Toxic Chemicals

- Toxic chemicals such as mercury, cadmium, lead, arsenic, PCS, dioxins and PAH are widely distributed throughout the Atlantic region, but generally at concentrations where adverse environmental effects are unlikely.
- The number of pesticides registered for use in Canada has steadily grown from 400 in 1979 to 514 by the beginning of 1985.
- The Atlantic region generates approximately 5% of the hazardous wastes in Canada.

Other Environment Issues:

- The most recent budworm infestation has essentially destroyed the fir and spruce forest of the Cape Breton Highlands, and has resulted in conifer mortality in New Brunswick, mainland Nova Scotia and Newfoundland.
- The energy consumption in the Atlantic region has declined slightly since 1978. Although the use of refined petroleum products declined by nearly 24%, the use of coal rose by 74%.

Human Health and the Environments

- Chronic symptom of arsenic poisoning have been found in approximately 30% of the consumers of water from contaminated wells near Waverley, Nova Scotia.

Alberta

HONOURABLE FRED D. BRADLEY
MINISTER OF THE ENVIRONMENT
M.L.A. for Pincher Creek/Crowsnest



Born in Blairmore, September 17, 1949.

Educated at Blairmore and University of Alberta.

Small businessman involved in Crowsnest Pass retail clothing store.

Active in Crowsnest Pass Historical Society and founding member of Crowsnest Highway 3 Association.

Served on the Alberta Environmental Research Trust from 1975-79, latterly as Chairman.

Chairman, Crowsnest Pass Municipal Amalgamation Liaison Committee, 1978.

Member of Kananaskis Country Citizens Advisory Committee from 1978-82.

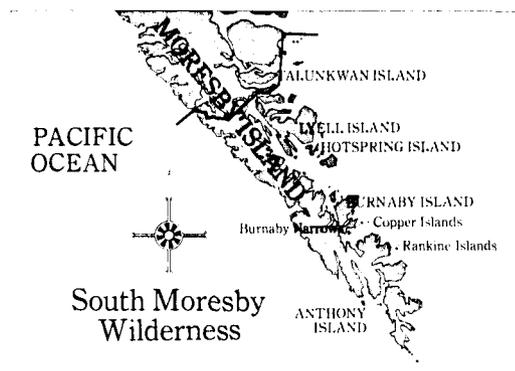
Member of the Syncrude Board of Directors from 1979-82.

First elected as MLA for Pincher Creek/Crowsnest in March 1975, re-elected in March 1979, and November 1982, and subsequently appointed Minister of the Environment.

War of the Worlds

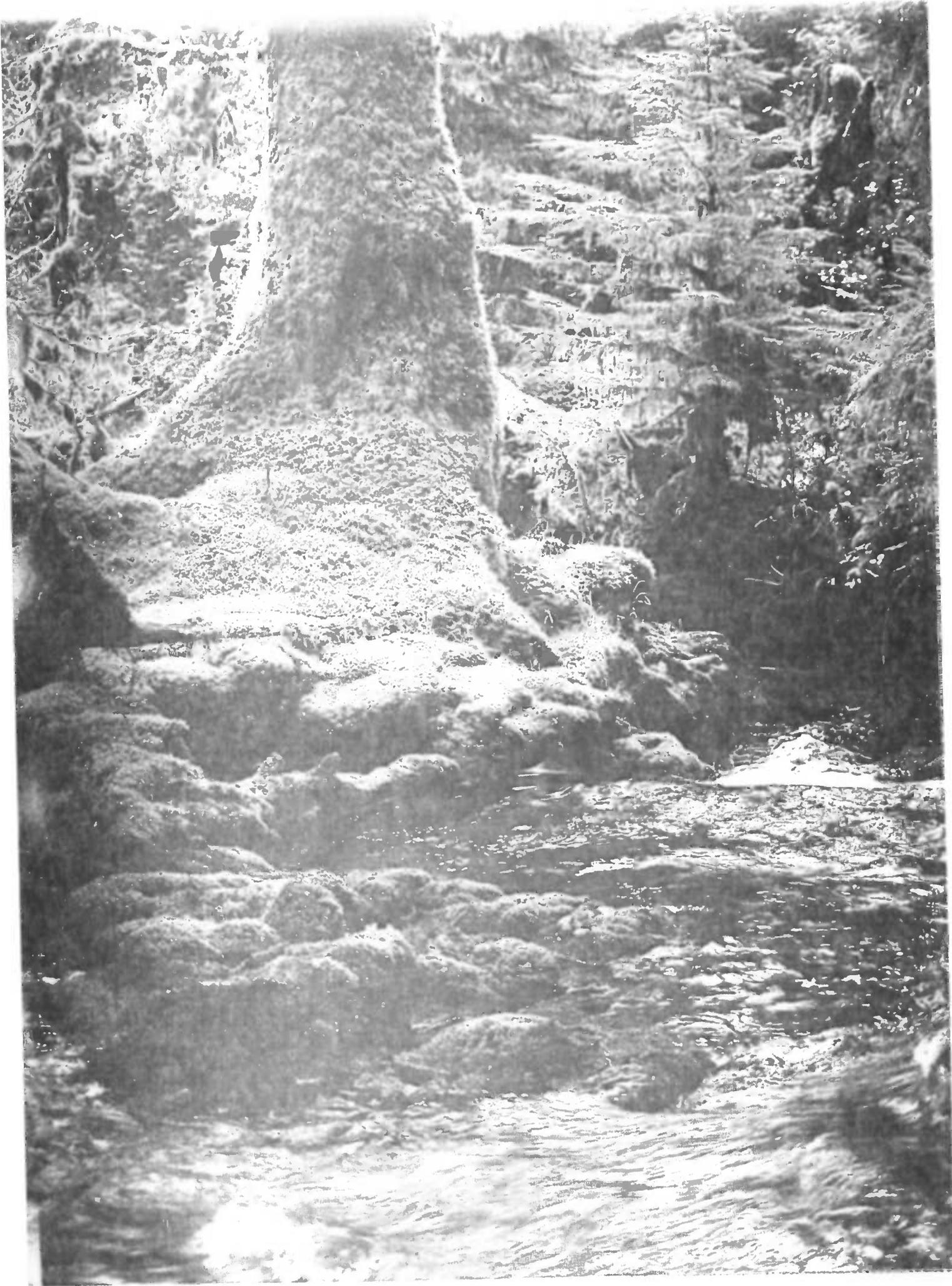
Remote, majestic, and imperilled, the Queen Charlotte Islands are one of the world's natural wonders.

They're also one of British Columbia's natural resources **BY JOHN GODDARD**



In 1974 two men, concerned about Moresby Island, drew a line across a map. They named the southern half South Moresby and they and others have since fought to save it

T **HOM HENLEY** is a high-energy, well-exercised, clean-cut man now, with a goal he feels ordained to achieve. But in 1973 he was a wanderer. He was drifting far from his hometown of Lansing, Michigan, with a packsack, a collapsible kayak, and a vague intention to paddle the Amazon, but he changed his mind in Honduras and headed north. He hitchhiked as far as Seattle, put his kayak in the water, paddled partway up the British Columbia coast, and crossed 100 kilometres of open water to the Queen Charlotte Islands. Approaching from the south, he entered what is now called the South Moresby wilderness. What happened there changed his life and led to the current national movement to save South Moresby from logging. "I got as far as the hot springs one morning," Henley recounted in Victoria where he now lives, in a house overlooking the sea, "and I was paddling around the east side of Lyell Island when the tide turned against me. So I pulled into a bay, which turned out to be Windy Bay. I decided to sit out the tide for six hours, then catch the reverse tide north again. It was a beautiful sunny day. I hiked



up the river – I had never seen such a magnificent forest in all my life – and I came back and made a little fire on the beach and I was sitting there cooking bannock when all of a sudden, right beside me, there was this dead eagle. Incredible. I don't know why I hadn't seen it before." Henley extended his right palm over a spot on the hardwood floor to indicate how near the eagle had lain. He had never seen a bald eagle in the wild before.

"I thought if I dressed this eagle maybe someone could use it in a museum. So I filled the body cavity with damp sphagnum moss, and I wrapped the wings around and put the whole thing in the stern of my kayak. When the tide was right, I set off, and the eagle's mate was in the tree crying as I left, and I asked it to give my kayak the wings of an eagle sort of thing. I was really spaced out. Anyway, just as I got outside the bay, a southwest breeze came up, so I hoisted my sail and I thought, 'I can make Vertical Point before dark.' It was late June and the days were long.

"So I'm paddling and paddling and paddling away and it was just about dusk and I landed on the beach at Vertical Point, and I started pulling the kayak up the beach and I looked up and there was this old Indian sitting on this log, just staring at me, and I thought, 'Oh, I want to show this guy my eagle.' I hadn't seen anybody for a couple of weeks. So I took the eagle out of the stern and I walked up to him and he got up and took about three steps back and he said, 'Why do you bring me this eagle?' And I said, 'Because there aren't many left.'"

The Indian was Percy Williams, and he interpreted the event as a spiritual sign. "I was out deer hunting at Vertical Point," Williams explained at his home in Skidegate, a Haida fishing village of frame houses, arranged in tiers on a hill side overlooking a gravel beach. He is a spry man with unkempt white hair, and he was eating fresh prawns as he talked. "Suddenly, son of a gun, I could see movement out there. I looked through my scope but I couldn't make out what it was. I could see movement on one side, then the other, like wings, and finally I saw it was a man in some kind of boat. I had never seen a kayak before. Then he came ashore and it struck me kind of strange why a person would carry a dead eagle around. The boat was so tiny and he had this huge eagle lying in there. My first impression was that this was some kind of sign."

The two men did not see each other again for more than a year. Henley eventually reached Alaska, then returned to

the Charlottes in the spring of 1974. He settled on Graham Island, the large island that constitutes the northern half of the Charlottes, where the population of the islands is centred. But he continued to reflect on the snow-capped peaks, jagged fjords, and verdant hills of South Moresby, the southern fifteen per cent. The area was little studied when Henley first saw it, but scientists now know that more than 1,000 kinds of plant grow there, including some of the largest specimens of western hemlock, Sitka spruce, and red cedar, some trees more than 500 years old. Unique plant, bird, and animal subspecies have evolved in the region, including the world's largest black bear. Sixteen hundred kilometres of jagged shoreline provide habitat to humpback whales, porpoises, seals, salmon, herring, a great many crustaceans, half of B.C.'s Steller sea lions, and more than half a million nesting sea birds. The South Moresby wilderness is the most spectacular vestige of old-growth forest in Canada.

One night in a house where he stayed for awhile, Henley met Gary Edenshaw, a resident of Masset at the north end of the islands, who has become one of several carvers who are helping revive Haida art.

"Neither of us could sleep," Thom Henley recalled, "so we started talking. I told him I was really concerned about Moresby Island and something should be done. We went inside and lit a lamp

right to hear the details because for 10,000 years the Charlottes had been their exclusive homeland. Henley and Edenshaw took seats at the back of the hall as the chief councillor of Skidegate rose to begin the meeting. It was Percy Williams. Henley didn't recognize him at first, but Williams recognized Henley.

Williams had grown up on Burnaby Island. He was among a number of Haida who left Skidegate village during the Depression to live off the land. The richest seafood beds on the Canadian west coast are on Burnaby Island at Burnaby Narrows. Clams, crabs, sea cucumbers, seaweeds, and other foods are all easy picking at low tide. Also, the kelp-rich shores are important spawning grounds for herring. And Williams still traps on the island every winter, on a trapline passed down from his father and grandfather.

Spontaneously, Williams recounted the story of the dead eagle. He introduced Henley as the eagle's messenger, then turned the meeting over to Henley and Edenshaw, who asked pointed questions of the Rayonier representatives.

"We asked what type of road-building techniques they were going to use," Henley recalled, "and what type of guarantees they could give that there wouldn't be a lot of landslides. They were embarrassed. They couldn't deal with it. They were just there to do a snow job on the Indians."

The Islands Protection Society

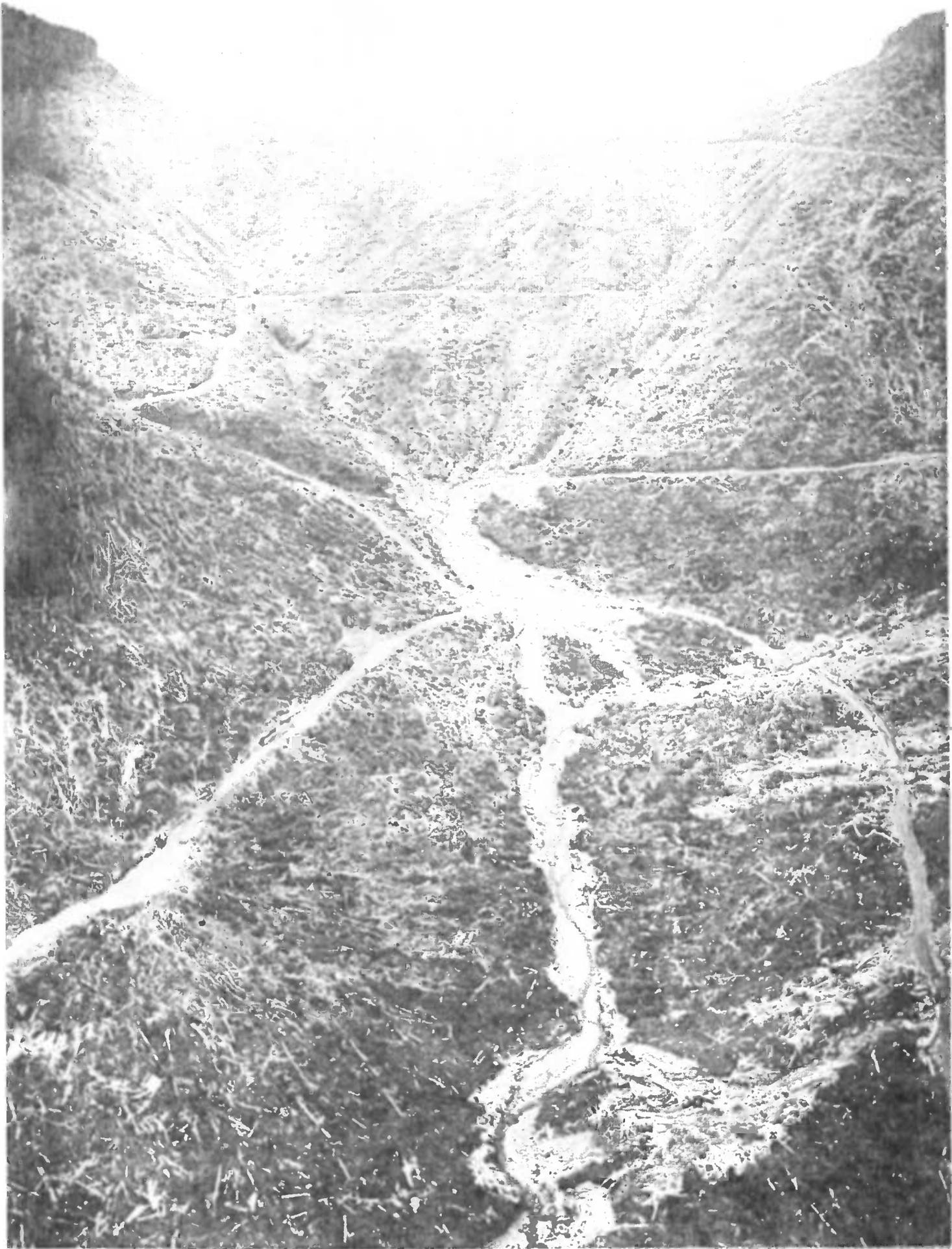
TALUNKWAN ISLAND *Logging began in 1969. "Talunkwan" has since become a synonym for environmental ruin, and opponents use it as an example of the fate that could befall South Moresby*

and pulled out a map of the islands." After talking all night, Henley and Edenshaw drew a line across the Tangil Peninsula on Moresby Island. Everything south of the line they named South Moresby. They decided it must be saved as wilderness, an idea they later turned into the South Moresby Wilderness Proposal. They declared themselves a committee, which became the Islands Protection Society.

Their first public intervention came in October, 1974. It was at a meeting called by the Skidegate band council to hear a proposal to log South Moresby for the first time. Rayonier Canada (B.C.) Limited had acquired a timber licence in 1958 to log in the southern half of the Charlottes. Now its representatives proposed to log on Burnaby Island in South Moresby. The Haida considered it their

quickly expanded its support from two to 500 people. Henley drafted a petition calling for "a moratorium on all logging in the southern Moresby Wilderness Area until such time as complete environmental impact studies have been conducted." A delegation of islanders took the petition to Victoria to NDP Premier David Barrett. In response, the government banned logging on Burnaby Island for five years pending study. But after the fuss subsided, Rayonier quietly applied to log Lyell Island, at the north end of South Moresby. The ministry of forests granted permission in April, 1975, and logging on Lyell began the following year. Lyell Island was where Henley had found the dead eagle.

The Social Credit government of Bill Bennett, in power since 1975, has continually assigned new studies on South



Moresby while allowing logging on Lyell Island to proceed. In 1975, a cabinet committee, called the Environment and Land Use Committee, examined Henley's wilderness proposal. After four years, the committee recommended a land-use planning study be done over a further five years. In response, the government created the South Moresby planning team, with representatives from the Islands Protection Society, Rayonier (now Western Forest Products Limited), the Haida Nation, the scientific community, and various government departments, provincial and federal. The team reported in 1984, outlining four options the government might consider. Option 1 was pro-logging, and made minor adjustments to the timber licence. Option 4 was pro-park, and restricted loggers to a portion of Lyell Island. Options 2 and 3 were compromises that received little attention.

The government has yet to respond to the report, but three key ministers have made known their preferences. Tom Waterland, minister of forests for ten years until he resigned in January, took a boat tour of South Moresby in 1984, and signed the guest book with a play on the words "clear-cut logging": "A clear-cut issue! A great forest resource!"

Parks minister Anthony Brummet quietly pushed his own option last spring. He called it Option 1-A, and it resembled the pro-logging option. "Option 1-A is maybe the best kind of compromise," he told a Vancouver *Province* reporter without apparent irony. "It won't satisfy those in favour of total preservation, but it likely will be accepted by logging and mining interests."

Environment minister Austin Pelton has called South Moresby "the jewel in the crown." But on October 18, he announced yet another study. He created an eight-member committee, called the special advisory committee on wilderness preservation, to review sixteen potential park areas in the province and reassess boundaries of seven existing provincial parks and one national park. Leaders of environmental and naturalist groups, including Henley, have said the review threatens even established parks with industrial development. On October 18, Pelton also announced that logging would continue on Lyell Island.

Thom Henley, sitting in his living room in Victoria, shook his head at how protracted the effort has been to try to persuade the provincial government of South Moresby's wilderness value. The Islands Protection Society is still pushing, now with the support of all federal

political parties, the Assembly of First Nations, numerous nature groups, tourism organizations, and scientists. Henley and John Broadhead, an artist and researcher, run the lobbying effort from Victoria, both having moved from the Charlottes three years ago to be close to government offices. They coordinate their main actions with the Haida Nation, of which Gary Edenshaw is now a director.

"In 1973," said Henley, long-faced, "I was naive enough to think that just because Gary and I took the position we did the government would put a moratorium on logging, send in some key scientists, realize the values there, and make it a park. Then I started reading about John Muir establishing Yosemite, the first national park in the United States. That was a sixteen-year battle."

WAYNE CAMPBELL thrust his arm into the ground to look for birds. "The little guys are here somewhere," he said resolutely, meaning he was prepared to spend all afternoon plunging his arm into forbidding holes to prove the existence of a strange sea bird that burrows underground to nest.

"Right now, here on this hill, I would say there are 15,000 birds," he told nine sceptical vacationers on a birding trip through South Moresby aboard a luxury sailboat called *Darwin Sound II*. On a tiny unnamed island in the extreme south, they followed Campbell through the moss and over tree roots as he scrambled from burrow to burrow.

Campbell, at forty-four, is associate curator of vertebrate zoology at the provincial museum in Victoria. He is also British Columbia's foremost ornithologist. At age seven, he wrote bird descriptions for his grandfather. One year he banded 1,200 house finches at his parents' back-yard feeder in Burnaby. As a high-school student, he drove from Vancouver to New York and back in twenty-eight days with three friends to see how many bird species they could record: 325. He has sighted more of the province's 444 bird species than anybody else, and he can recite intimate details about almost all of them: habitat requirements, gestation periods, nesting materials, seasonal colorations. He can mimic their mating calls. And, to the delight of the nine vacationers in South Moresby, he eventually did pull out of the ground an adult Cassin's auklet and a two-week-old chick.

"Here, you hold it - it's such a neat little guy," he said, passing the chick to

Herb Howe, a bricklayer from Victoria. "Just relax. You won't hurt it. This is a very hardy little bird."

A Cassin's auklet spends most of its time at sea, Campbell told the group, now pressing close to snap pictures and stroke the downy fluff on the chick's head. In spring, the birds aggregate in colonies and excavate burrows in coastal forests. Each pair produces a single, large white egg, and the mates take turns flying to sea for food.

"They're nocturnal, which is just as well," Campbell said, the bird in his hands looking around calmly. "If 5,000 Cassin's auklets flew into this forest in the daytime, bald eagles and falcons would be walking around eating them all."

"So how do they find their burrows at night?" asked Susan Dawson, a first-year UBC student.

"Nobody is really certain," said Campbell, holding the bird up to another camera. "Some say they do it by olfaction, by smell. Some say they use ultrasonics, communicating between mates. Some say they have keen sight, and know their landmark."

"But they find their nests?"

"They sure do," said Campbell. "If you were to stand in this colony at eleven o'clock at night, all of a sudden you'd hear thousands of them coming in from the sea - *few, few, few*. They bump into trees, they fall on you, they scramble around the ground, but somehow they find their own burrow." Campbell crouched to the burrow entrance, releasing first the chick, then the adult, the birds scooting into the earth one after the other. "Doesn't that blow your mind?" he said, tidying the entrance with fresh moss and dry sticks.

The Queen Charlotte Islands are a bird haven. They support the world's highest breeding density of rare peregrine falcons: an estimated 152 adult peregrines, ninety-two of them living in the southern half. Bald eagles thrive on the islands because the old trees are big enough to support nests up to three metres across and a metre-and-a-half deep, and because there are plenty of sea birds to eat. An estimated 1-million sea birds also breed on the Charlottes, half of them in South Moresby. About fifty nesting colonies have been found in South Moresby, accounting for half of B.C.'s Cassin's auklets, half the tufted puffins, three-quarters of the ancient murrelets, and a third of the Leach's storm petrels. Millions of migrating birds feed offshore. One day the tour group counted 20,000 sooty shearwaters in one hour: a seemingly infinite line of dark grey

birds, half a metre long, diving to the water, then shooting into the air again like skeet. "The reason all these birds are here is because the food supply and nesting areas are here," said Campbell. "It's that simple."

"What happens if someone logs here?" asked Kathryn Kelly, a nurse and yoga instructor in Queen Charlotte City, an unincorporated town on Graham Island.

"Those birds would be in trouble," said Campbell, leading the group back down the hill. "You notice how damp the soil is? You get rid of those trees and there would be nothing to hold that, not in the heavy weather you get here. You'd have serious erosion."

Campbell said this particular bird colony was protected, being in the environs of Ninstints, the best preserved of dozens of aboriginal Haida villages abandoned in the last century. In 1981, the United Nations Educational, Scientific and Cultural Organization (UNESCO) declared Ninstints a world heritage site, like Versailles and the Egyptian pyramids. Several other bird colonies in South Moresby are protected as B.C. ecological reserves: Jeffrey Island, the Rankine Islands, and Copper Island. A large ancient-murrelet colony on Lyell Island is also proposed as an ecological reserve. "But if you want to protect the birds," he said, "you've also got to have buffer areas. Some nesting colonies are ephemeral, the birds move around."

Another reason scientists advocate protection of South Moresby is its value as a naturally functioning environment. "You need places like South Moresby to know what a natural system is like and how it functions," Campbell explained. "South Moresby is critical. If I find that storm petrels, say, are incubating for forty days down south and for fifty days up here, that tells me something is happening to the environment in B.C. But to tell what's going on, you need to be able to compare what isn't natural with what is." A few nights later, with the *Darwin Sound II* anchored off the Rankine Islands bird colony, half a dozen vaca-



PHOTOGRAPHS • NIGEL DICKSON

THOM HENLEY has tried to persuade the B.C. government of South Moresby's value for more than a decade. "Then I read about John Muir establishing Yosemite. That was a sixteen-year battle"

tioners went ashore in a rubber dinghy, churning up a greenish, bioluminescent wake in the cold, clear water. In the forest up from the water's edge, they found comfortable seats among the bird burrows. At 11:15, the sea was a flat calm. A strong, musky smell wafted from the burrows, and faint chirpings could be heard that sounded like "let me out, let me out."

The first *tjew* came at 11:17—a fluttering shadow out of the darkened sky into the trees. Then another *tjew*. And another. By 11:25, the forest was filled with thousands of fluttering wings and frenzied, high-pitched calls. Cassin's auklets, Leach's storm petrels, and fork-tailed storm petrels fluttered into branches, scurried over the ground, ran into legs and arms, and, in a few cases, bonked headlong into tree trunks, some

of them hitting so hard they lost their day's work—a scarlet, unctuous mix of sea plankton that streamed from their mouths like glue.

In the middle of this mayhem, somebody's flashlight picked out a two-day-old ancient-murrelet chick—a tiny ball of down feathers on adult-sized feet—hopping comically out of the woods like a wind-up toy. Its parents would have flown to sea as soon as the egg hatched, and the chick, beckoned by faint cries from the flock offshore, plunked itself into the water and paddled out on stubby wings to find its parents.

AL WHITNEY pushed a Vivaldi tape into the cassette player and ran back up on deck to regain the wheel. Wayne

Campbell had seen spray erupt against the evening sun off Ikeda Cove as the trip continued up the east coast of South Moresby, and Whitney, the boat's skipper, said whales are drawn to loud classical music. He steered the *Darwin Sound II* off the wind in line with Campbell's pointing finger as the vacationers scrambled to the foredeck and *The Four Seasons* thundered from speakers fastened to the inside hull. Two humpback whales were soon following the boat, clearing their blowholes, rolling to expose pectoral fins, diving, and resurfacing after a minute or so, sometimes suspensefully close to the bow.

"Did we make our quota?" Whitney asked an hour later, steering to an anchorage on the lee of an island. His question played to an in-joke among the group: the trip had been so eventful that they now expected five highlights a day.

"Let's see," said Herb Howe, beginning to add up the day. They had sailed alongside the largest rookery of Steller sea lions in British Columbia. They had seen a peregrine falcon dive from a great height into a flock of gulls, only to miss its prey. They had jogged together barefoot along an empty beach. They had taken turns climbing a Sitka spruce to view an eagle's nest.

"That's only four," Howe said.

"And the whales," said Nancy Davis, his wife.

"Oh right, the whales."

Whitney got the idea for what he and his wife, Irene, now do from a university course he gave in the 1970s at Simon Fraser University. He taught environmental studies and his favourite course was a month-long field trip involving eight professors and eighty students – in his words, "a mixture of urban studies, field ecology, value issues, and hiking through the mountains."

"On that course we had geographers, biologists, an architect, all kinds of people," Whitney said one rainy day below decks, "and it was just so incredibly interesting what happens when you start mixing a bunch of different disciplines. Often, the personal growth exceeds the academic growth."

He came to believe that in environmental studies personal growth is more important than scientific learning, personal growth being that expansion of the human spirit that comes with discovering the natural world. He decided to pursue personal growth as a line of work. Whitney left his job at Simon Fraser and in 1980 with his wife, a former French teacher, formed a tour-boat company they call Pacific Synergies.

Now they sail for six months of the

year in their sleek, white, twenty-two-metre ketch, the largest sailing vessel registered in Vancouver harbour. They hire additional expertise for most cruises – sometimes the Haida carver Bill Reid, or the native-art specialist Hilary Stewart, or the biologist Bristol Foster, or in this case Wayne Campbell.

"We started Pacific Synergies to educate people about the B.C. coast – to increase people's chances of getting caught up in the marvellous place this coast is," Whitney said, reclining on a top bunk. "We offer a chance to be off in a big boat, to hike in true wilderness country, and to have a whole bunch of different kinds of experiences. You might come aboard not knowing there is such a thing as an ancient murrelet. And you might leave recognizing that an ancient murrelet is important to you. That's personal growth."

Whitney believes that only if enough people learn to value South Moresby can it be saved from logging, which is why almost all nineteen of his trips last year were conducted there. "It's not that I'm only interested in South Moresby. It's just that South Moresby is the most crucial parks-related issue in Canada."

The trips also bolster an economic argument for saving the wilderness: tourism revenue. On this trip the Whitneys had nine guests for eight days paying \$1,200 each. A number of other small-scale tour operators in Vancouver and Queen Charlotte City also offer trips to South Moresby in small boats and rubber dinghies. Thom Henley has compiled figures that show "visitor days" in South Moresby have increased an average of sixty-three per cent a year between 1980 and 1985, and tourism now generates \$1.4-million annually.

The problem with tourism is that too many hikers could trample away the wilderness value. Al Whitney, lying on his bunk bed, was prepared to take the risk. "Three million tourists a year could go through South Moresby," he said, "and do less damage than Western Forest Products does right now."

AROUND THE tiny islands opposite the Haida village of Skidegate, the herring had begun to spawn. The weather had cleared, producing one of those long, sunny days so welcome on the Charlottes in early summer, when the sea thickens with photoplankton, setting off a biological reaction that compels the ancient murrelets to lay their eggs and the herring to discharge theirs. In the Charlottes, spawning begins among the kelp

beds at the edges of Burnaby Island in South Moresby, and progresses north along the coast as far as Skidegate. Opposite the village, milky patches appear on the water around the islets as the herring spew out their eggs over the broad kelp leaves.

Three weeks into the season, Skidegate was draped with roe-encrusted kelp. In ragged pieces, like pebbly chamois cloths, it was hung to dry over every available fence, clothesline, and porch railing. It gave the village a distinctly Haida look, complementing the two totem poles on the beach, one the lone survivor of dozens that had lined the beach a century ago, the other carved eight years back by Bill Reid, the renowned Vancouver artist whose mother was originally from Skidegate. Individually, the kelp pieces looked limp and colourless. But hanging in rows before neat frame houses, they took on the festive air of pennants strung up for a parade.

"Suddenly everyone is healthy," said Diane Brown, the community health worker, sitting in a large empty room at the nursing station. "The calls to this office have dropped, calls for home visits have dropped, and referrals to the doctor have dropped."

Brown has the broad build of the Haida and a poise that suggests strength. She holds no political position but is a pivotal community figure, administering to the sick, comforting the elderly, counselling the drinkers, and organizing community dinners and picnics. Lately she had also been out at low tide to pick roe-on-kelp, which the Haida call "ghow." Pickers lean over the gunwales of small boats, hands in the frigid water, tearing off the roe-laden leaves, and piling them in the boat. Then they bring the leaves home for drying, freezing, or salting.

"You have an inner need to go out there, your whole being wants to go out," she said, emphasizing her words with outstretched arms. "Weeks before spawning starts, you watch the water for milk. When it starts and you don't have a boat, you're desperate. It's the worst feeling in the world. You're hoping to get a ride. Then you get out there, and it's maybe 4:30 in the morning, it's still dark and the water is a flat calm. You start picking at five when the sun is coming up. And everybody is teasing each other and laughing."

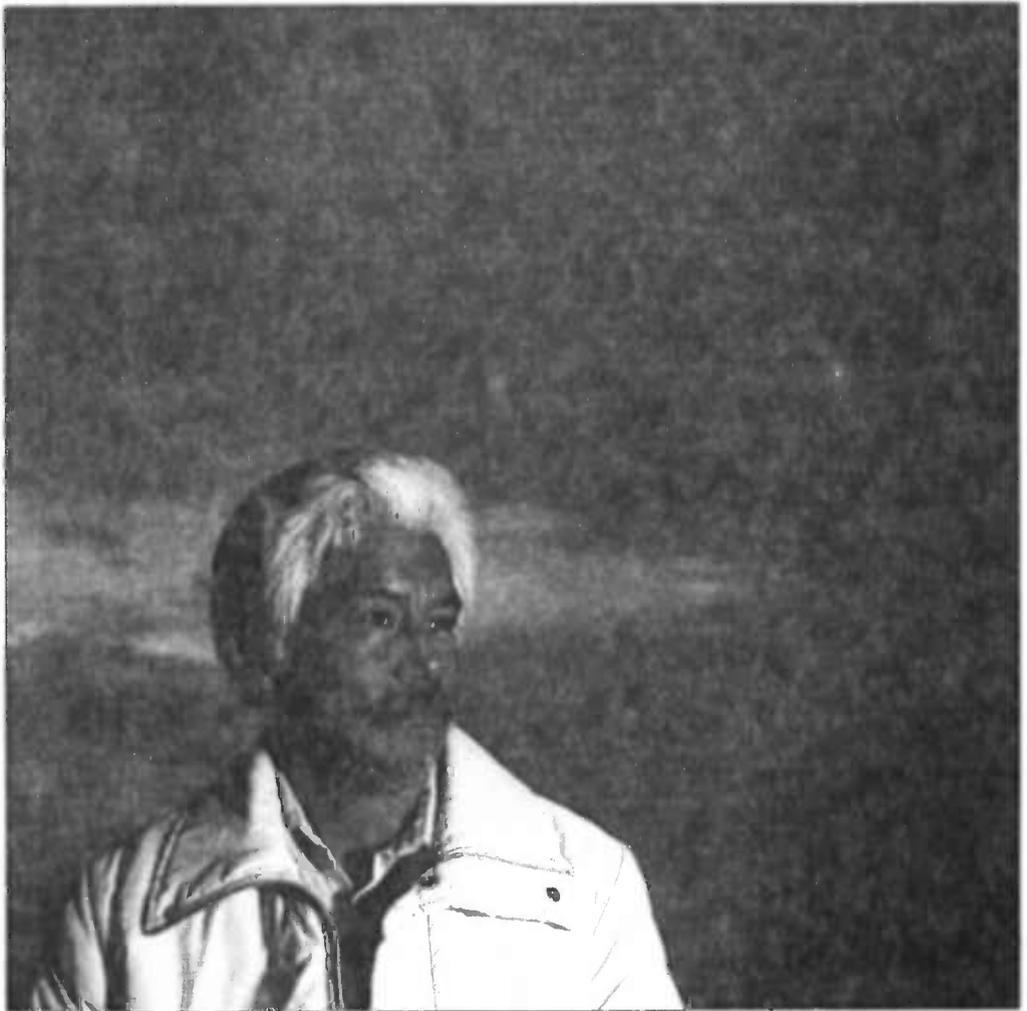
Picked fresh and fried lightly in oil, ghow has a squidgy texture and a bland, neutral taste that oddly leaves a person craving more. It is a particularly nutritious food, the kelp providing vitamin C, the roe providing iron and protein. But

nutrition alone does not account for 350 villagers suddenly finding themselves healthy. For the Haida, ghow gathering is a source of spiritual renewal. And ghow can be worth a lot of money. To protect the resource, the Skidegate Haida are adamant that logging be stopped in South Moresby.

"I've had a connection with the sea ever since I can remember," said Brown. "When I was a kid, we used to go down to Burnaby Island every summer to dig clams, and once a week we went to Hotspring Island [in South Moresby, north of Burnaby]. Every Sunday after church we would have a big meal of fish, herring eggs, bread, tea, and preserved berries. We were taught that the food was a gift from the ocean and we must never say 'yuk,' because the food might go away."

As Brown grew older, such traditions began to fade. Pressure to assimilate increased. Many Haida men became loggers on Graham Island, and the Skidegate economy came to depend on logging. But six years ago the B.C. logging industry slumped badly, and many loggers were laid off. By then, a lucrative market in ghow had developed.

In the early 1970s, Clarence Collinson, a fisherman and hereditary chief of Skidegate, and several other Haida fishermen asked the federal fisheries department for permission to export ghow. Kelp is a soup base in Japan, and herring roe a traditional delicacy. When the fisheries department approved an experimental commercial harvest, Collinson produced a high-quality product that sold well. The department approved twenty-eight commercial licences on the B.C. coast, seven of them to Skidegate residents. In 1986, each licence sanctions taking 12,000 pounds of roe-on-kelp. At the current price of sixteen dollars a pound, a crew of three or four people can gross up to \$200,000. Almost all ghow gathered commercially by Skidegate licence-holders comes from South Moresby. The trade created a black market in ghow, with Japanese



PERCY WILLIAMS is one of 6,000 Haida who live on the Queen Charlottes. In claiming aboriginal title to the islands and surrounding waters, the natives are posing serious opposition to the lumber companies

buyers also dealing with non-licensed Skidegate ghow gatherers. Brown was reluctant to discuss the details but provided some background on how the trade works. "The average family eats a pound of ghow at one sitting which means you try to put aside one three-gallon bucket for each month, or enough to fill a medium-size deepfreeze for the year." Anything left over might go to relatives, and some of the extra might be sold to the Japanese at the same rates licensed gatherers are paid.

Far from being guilt-ridden about breaking the licensing laws, Skidegate residents are angry at how the resource is regulated. Ghow is a traditional Haida food, the Haida developed the market themselves, and there is no evidence herring stocks are declining – the last point confirmed by Randy Brahniuk, the

federal fisheries officer in charge, who acknowledges "there have to be some changes in the regulations." Yet Brahniuk, his fellow fisheries officers, and the RCMP watch the pickers, monitor the mails, check airline cargo, and question families who seem to be collecting more than their share – even though Haida can legally pick as much as they want for themselves. While federal authorities harass the Haida for ghow gathering, provincial authorities allow logging in South Moresby, and logging debris smothers the kelp that herring need for spawning.

"On the logging issue, our food is the main concern," Brown said, the phone at the nursing station still silent as she brewed another pot of tea. "It is all we have left as Haida. Our language is basically dead: I'm thirty-seven and the

youngest to speak it. Our dancing and our songs are going. We have our art and our clan system [partially revived in the 1970s], but food gathering is the most important - mussels, clams, salmon, halibut, abalone, scallops, octopus, sea urchins, devilfish, Chinese hats. Out on the boat, the whole family becomes close.

"Ghow gathering is special. I can't explain it exactly. The energy, the feeling of picking it. I don't know what a good English word is. Going out there, you just feel really . . . whole."

MILES RICHARDSON added another dimension to the Haida case for saving South Moresby.

"The issue is not logging, the issue is land," he said, strolling along the water's edge below Skidegate one balmy afternoon. Richardson is president of the Haida Nation, thirty years old, with a heavy build and an economics degree from the University of Victoria. "The bottom line is that [South Moresby] is Haida land."

Put another way, the issue for the Haida is not the environment but human rights. The Haida Nation represents 8,000 Haida living on the Charlottes, in southern Alaska, and along the B.C. coast. Collectively, they now claim aboriginal rights to the Queen Charlotte Islands and surrounding waters. In 1980, they submitted a land-settlement proposal to the federal government, aimed partly to protect two areas in particular: Duu-Guusd, a forested area at the northwest corner of Graham Island, and South Moresby. In 1983, the Office of Native Claims accepted the Haida claim for negotiation, but nothing has happened since. The claims office negotiates only six comprehensive claims at a time; the Haida must wait their turn.

A more serious obstacle to a land settlement is the Bennett government, which does not recognize aboriginal title and has persistently blocked all aboriginal claims in the province. "We believe that the land that [native people] say is subject to aboriginal title has long since become the land of all the people of British Columbia," B.C. attorney general Brian Smith reiterated recently.

Richardson rejects that view. Walking in the sand, he tried to address the question evenly but agitation soon constricted his voice. "We are trying to work out an agreement with the rest of Canada through land claims, an agreement that respects us as a people. But this claims process is a joke. Ottawa tells

us we're going to sit down and talk about land and resources . . . and at the same time the land and resources are being compromised every day at an increasing rate. We can't keep sharing and sharing and giving and giving."

The Haida have a sad history. Once they inspired awe in European traders. They were skilled carvers, gallant wanderers, and fierce fighters. They were a distinct, homogeneous people distributed throughout their isolated archipelago in scores of villages and fishing camps. But when the profitable sea-otter trade came to an end in the early nineteenth century, the Haida's decline began. Smallpox nearly wiped them out. Between censuses taken in 1836 and 1894, their numbers dropped from 6,000 to 639. Lodges, camps, entire villages were abandoned. Survivors on Graham Island regrouped at Masset. The remnants on Moresby Island straggled to Skidegate, most of their relatives dead, their villages in ruin.

The best preserved of the ghost villages is Ninstant, where twenty-five totem poles still stand, bearing weathered likenesses of chiefs, bears, whales, frogs, wolves, and the mythical sea grizzly. Each was created to contain the essential spirit of an individual or family, and all were carved in bold, symmetrical Haida style. Huge lodges - some of which housed as many as fifty people - lie collapsed all around. "These were people for whom death was an integral part of life, to be treated as a celebration," Al Whitney had told nine hushed vacationers at the site. "But in the 1860s, people were dying so fast they couldn't deal with it. They dumped bodies into the sea, they dumped bodies behind the village. Nineteen of every twenty people here died."

Early in this century, the Haida began to lose their land. Skidegate, Masset, and a few of the ghost villages had become reserves - which protects them today from outside logging companies. But the rest of the land was opened to white settlers who could stake 160 acres each.

"When the government granted logging rights to South Moresby in 1958, I don't think anyone knew the Haida existed," Richardson said, nearing the end of the beach where twenty-one bald eagles perched in two adjacent trees, monitoring the herring activity.

"Our job now is to try to convince them to change their system, to protect an area we feel is necessary to our survival as a people."

In late October, after environment minister Pelton extended logging on Lyell Island, Richardson led a move to

stop the logging. Haida protesters arrived in fishing boats and stood across the logging road as the loggers started for work. The protesters backed down temporarily when Western Forest Products, the logging company licensed to cut the trees, sought an injunction against the blockade. Richardson and the other Haida fought the injunction, but the B.C. Supreme Court sided with Western Forest Products and ordered the Haida to stay off Lyell Island. Defiantly, Richardson and other Haida resumed the blockade, leading to a number of arrests, convictions, and suspended sentences. By January, Thom Henley had a new protest planned, taking the heat off the Haida: a caravan from St. John's to Vancouver in March, with rallies in major cities, demanding that South Moresby be saved.

"Our chance of success is contingent on the government and the logging industry having some desire to see us survive," Richardson said.

"Maybe they don't."

"CHARGE US WITH rape and pillage, and any judge will acquit us," said one of the Lyell Island loggers. "You don't get convicted of rape for stealing a kiss."

After working all day in heavy fog and intermittent drizzle, a dozen of the camp's seventy loggers were sitting around a table sliced from a giant spruce. The table is the centrepiece of their beer parlour, a rough-hewn, wood-panelled room looking out on log booms in the bay. The beer parlour is part of a recreation hall the loggers built two years ago in their spare time. Almost all of them have homes and families elsewhere in B.C., but the rec hall is their way of saying this is a community, not a camp, and they intend to keep logging.

"There's been more furore raised about South Moresby than the Aswan Dam," a second man said.

"You get the feeling after a while that loggers are the bad guys," said a third, "that we're doing something terrible."

"There's nobody fighting for our side," said a fourth. "It's us against the environmental movement."

Cooped up together in a colony of house trailers and mud streets in Powrivco Bay on the north coast of Lyell Island, the loggers feared for their jobs and fed off each other's anxieties. One reason for their defensiveness could be seen out the window. The hills around the bay were a wreckage of stumps, waste timber, and mud. Little was left

standing or growing.

The licence to log Lyell Island - Tree Farm Licence 24 - covers a 112,500-hectare area in the southern Charlottes. It extends into South Moresby, covering almost forty per cent of South Moresby's land base. Half that area, or twenty per cent of the land base, is regarded as "operable," meaning the whole east coast of South Moresby and its adjacent islands are scheduled to be logged over the next forty-two years.

In 1980, the logging licence passed from Rayonier Canada (B.C.) to Western Forest Products of Vancouver. Some logging under both ownerships has been contracted out to Frank Beban Logging Ltd. of Nanaimo, B.C. In 1969, Beban began logging Talunkwan Island, outside South Moresby, moving to Lyell Island in 1976. "Talunkwan" has since become a synonym for environmental ruin. Tree stumps have lost their grip on the soil, causing landslides that have washed away entire hill sides and river beds. Provincial environment officers concluded that piles of dirt from road construction caused the slides. Thom Henley and other naturalists sometimes say, "We can't allow loggers to Talunkwanize all of South Moresby." Or they say, "We can't allow South Moresby's Talunkwanization."

The camp manager on Lyell Island is John McLaughlin, a round-faced, beefy man, forty-one years old, constantly on the move from the office to the machine shop, from the cutting sites to the sorting dock. He is a born logger, almost literally. He grew up off the mainland coast north of Vancouver at his father's logging camp, a raft the size of a football field with houses on it. "The logging business was little timber licences then," McLaughlin said on his way to a cutting site by truck one cold, foggy morning, interrupting himself occasionally to issue instructions on a walkie-talkie, or take a phone call on a specially equipped radio. "My dad would bid on some timber in a little bay and we might log for a while there. Then when that was



DIANE BROWN *worries that logging in the Queen Charlottes endangers the Haida tradition of food gathering, which is a source of spiritual renewal and economic benefit in the native community*

finished we'd float the camp to the next site, maybe two islands away, and we'd move like that from timber site to timber site, living on the float camp." On a notepad he easily sketched where every building had been: his family's home, the washhouse, the cookhouse, and the spot where he first fell overboard while playing.

McLaughlin came to the Queen Charlottes when he finished high school twenty-five years ago, although his wife, his two children, and his permanent home are in Mission, B.C. In 1972, he joined Frank Beban Logging on Talunkwan Island. By 1973, when Thom Henley paddled into Windy Bay and found the dead eagle, McLaughlin was woods foreman, second in command.

"We build roads differently now," he said when asked about the slides on

Talunkwan; the truck was driving over a wide, solid road spread with gravel. "You used to make roads with a cat, and all you could do is push the dirt over the side. Now you do it with a backhoe and you can put the dirt anywhere you want."

Despite new methods, a major slide occurred on the south side of Lyell a year ago, "doing a number on the fish down below." By all accounts, the lumber company had logged by the rules, and replanted two months later. But four years after the cut, when the stumps lost their grip, the hill sides of seven tributary streams simultaneously let go in a storm. They converged in the river bed, scraped it to bedrock for almost two kilometres, and clogged with an enormous pile of logs and boulders the estuary into which 2,000 chum salmon had

swum the previous year on their way to spawn. "To be honest with you," McLaughlin said, "a real good storm could take down a whole pile more."

He accepted the possibility with equanimity. "Things green up again," he said, driving through the thick dull mist, the logged landscape around him looking like wreckage strewn over an ocean floor. "In twenty years' time, what looks like hell now is going to look one hell of a pile different."

RICHARD VIVIAN pointed to a black-and-white etching on his filing cabinet in his twelfth-floor office on West Pender Street in downtown Vancouver. "That's what I looked like in 1951," he said. The etching showed an energetic young man dwarfed by giant trees; it resembled Vivian taking tree inventory on Talunkwan and Moresby islands. Grey-haired now but still trim, the manager of forestry and lands for Western Forest Products looked back without fondness to his one summer on the Charlottes. "Most of us got seasick." Of a more recent trip to Ninstints he said: "I thought, well, it's nice sitting here, but it really doesn't turn me on."

The company's stand is that South Moresby is large enough to accommodate both logging and recreation. Vivian emphasized that only twenty per cent of South Moresby would be stripped of trees and dismissed an argument put forth earlier by Al Whitney: "They're destroying 100 per cent of the wilderness for twenty per cent of the trees." Vivian said Western Forest Products is prepared to give up only the most sensitive ecological and cultural areas of Windy Bay, Hotspring Island, the immediate area of Burnaby Narrows, and a zone surrounding Ninstints. The concessions amount to five per cent of the logging licence and, under the B.C. Forest Act, the government can withdraw up to five per cent for parkland without compensation.

The Forest Act also gives the provincial government authority to buy back timber rights for a park, offering an alternative timber source, or cash, or some of both. A study that was commissioned for the Islands Protection Society calculated up to \$17-million as equitable compensation. Vivian said the company would fight any compensation offer.

In any event, the B.C. government has been refusing to consider compensation proposals. When federal environment minister Tom McMillan offered last year to pay half the buy-out costs to create a park, Premier Bennett ignored him.

McMillan is reluctant to press the issue because South Moresby is B.C. crown land. When John Broadhead, Henley's colleague, worked out detailed compensation options involving timber-licence trades, the forests ministry dismissed them. "There is no land available," declared Ray Addison, a forest resource manager in the strategic studies branch in Victoria. If timber land did become available through bankruptcy or other means, Addison said, the ministry would regard the timber rights as available for resale only, not as compensation for South Moresby.

Vivian said logging South Moresby is important to the B.C. economy. But in trying to substantiate the statement, he floated inflated figures, retracted them, suggested lower figures, then fudged on them. The seventy logging jobs on Lyell Island represent 364 jobs total when spin-off jobs are added, he said at first. When pressed, he reduced the figure to 210. The work generates \$5-million in provincial revenue, he said. When pressed he adjusted the sum to \$2-million. This is perhaps the most surprising aspect of the South Moresby debate: neither the company nor the government has been able to produce hard figures showing the dollar value of logging the area. Government spokesmen talk about the importance of even seventy jobs when unemployment stands at fourteen per cent. But when it comes to putting a dollar figure on South Moresby, foresters and company executives seem to have as much trouble as Thom Henley might have putting a price on a hike in Windy Bay.

Western Forest Products is anxious to keep South Moresby because some of the best trees in the province grow there and the company has terrible financial problems. The company was created in 1980 by three other companies: B.C. Forest Products Limited, Whonnock Industries Limited, and Doman Industries Limited. The forest-products industry was booming. The new company borrowed heavily and bought all Rayonier's assets in British Columbia including logging rights in South Moresby. Eight months later, world wood prices crashed. Since then, Western Forest Products has reported losses of between \$20- and \$40-million a year on its holdings. The company is carrying huge debts: the Royal Bank and the Toronto-Dominion Bank now hold 37.5 per cent of the company's shares. Wood prices are still depressed. The company depends on South Moresby's prime timber to meet interest payments at the bank.

The slump has hurt the industry in

general. In 1982 alone, B.C. forest-products companies lost \$500-million. More than 20,000 forestry jobs have been lost in the last five years. In response to the problems, the B.C. forests ministry has relaxed its standards. Logging companies are allowed to cut faster than the forest can replace itself and take only the best wood to market, leaving the rest to rot. The result has been enormous waste. "Sure there is more waste than a couple of years ago," said Russ Haas, a timber resource officer in Queen Charlotte City. "But prices are poor and a lot of the big companies aren't solvent now. We have a choice: shut the industry down or allow it to continue at a less demanding level." Standards have become so lax that American politicians are complaining that the B.C. government essentially subsidizes its forest industry through overcutting, waste, and stumpage rates (a form of tax) that are much lower than fees paid by U.S. companies to their government. In retaliation, several bills were introduced in Congress last year aimed at restricting Canadian softwood imports, which account for thirty-two per cent of the U.S. market. "The industry is facing a massive and traumatic adjustment," John Broadhead said. "The question is whether they will face it now, or in fifteen years, after the wilderness has been creamed."

To try to explain why the B.C. cabinet might be unwilling to face changes in the industry, or to protect South Moresby, critics such as Broadhead have offered generalizations about Social Credit's affinity for the status quo, or suggestions that key cabinet ministers are closely tied to the industry. The conflict-of-interest scandal in January gave some substance to the explanations. Forests minister Tom Waterland and energy minister Stephen Rogers were found to have investments in a tax shelter created to renovate two pulp mills owned by Western Forest Products and fed in part by wood from South Moresby.

In 1983, Western Forest Products needed to raise \$110-million as part of a \$214-million renovation of the mills. The company did so by offering "the best tax shelter of 1983," said Dick Matthews, general counsel to the company. It created Western Pulp Limited Partnership. On a minimum investment of \$10,000, the tax saving to someone in the fifty per cent bracket was almost \$9,000.

Waterland invested \$20,000 and resigned when this became public knowledge. Rogers invested \$100,000 and did not resign, although he withdrew his money. As energy minister Rogers was reviewing an application from the

mills for cheaper hydro.

Richard Vivian picked at his plastic coffee cup and prepared a final line of defence. It may be unfair to put him on the spot. He works for a logging company that has a licence to log in South Moresby; the government is ultimately responsible for how the area is used. In any case, Vivian appealed for sympathy on behalf of the loggers on Lyell Island.

"It's not our company's profits that matter, it's the livelihoods of the individuals we employ," he said. "They don't know where else to go, and actually I think their morale is getting very, very low because this issue has been dragging on and dragging on, and there are not many other opportunities. It's really tough on them. And I just feel that people are important."

BILL REID sat hunched over the jewellery bench in his workshop, a former warehouse on Granville Island in Vancouver. In the jumble around him were examples of the work that has made him famous: prints of mythical beasts; carvings of totem figures; and, on skids in the centre of the room, an eight-metre Haida canoe. It was carved from a single red cedar by Reid and his colleague Gary Edenshaw, a model for a sixteen-metre canoe they're carving for Expo 86. Reid was fiddling at his bench with bits of wire and sheet metal. "I have a friend who has trouble putting on his socks," he said. "I'm trying to design a gadget that will help him."

At sixty-six, Reid is a kind of elder statesman to the South Moresby wilderness movement. "This could be a setting for the Peaceable Kingdom," he once wrote of Windy Bay on Lyell Island. His father came from Scots-German parentage, but his mother was Haida, and her ancestors were from Tanu village in South Moresby. Reid grew up in Victoria, and as a young artist began visiting the ghost villages on the Queen Charlotte Islands, particularly Tanu and Ninstints.

He resurrected Haida art forms when they were in danger of dying out, and



MILES RICHARDSON is the thirty-year-old, increasingly militant president of the Haida Nation. He insists "the issue is not logging, the issue is land. The bottom line is that South Moresby is Haida land"

became the mentor to a generation of Haida artists and carvers. As a gift to Skidegate, he carved the fifty-seven-foot totem pole that stands on the beach there. And he still visits South Moresby twice a summer as expert-in-residence on Al and Irene Whitney's *Darwin Sound II*.

"Whenever I come in sight of South Moresby, I get hungry," Reid said, bent over his work. "I love the accessibility of those clams, those mussels. I love cooking them. I love eating them."

Reid has Parkinson's disease and this was one of his bad days. His voice was weak, his arms trembled, and when the phone rang he shuffled awkwardly across the room to answer it. But the illness has not weakened his resolve to defend the South Moresby wilderness. If anything, the illness has made him a

more compelling speaker: robbing him of his strength, it forces him to put complexities in a nutshell.

"So much of B.C. today looks like somebody's untidy back yard," he said, returning from the phone. "But those old forests are such a sensuous bloody experience. All those impulses and feelings. You become part of the life process again."

Reid wasn't getting too far along with his sock-pulling invention so he put it down to concentrate on what he was saying. "I'm all for land claims and birds and food gathering and tourism as reasons for not cutting down trees," he said, rallying his energy, "but the only real reason is you just shouldn't do it."

"South Moresby is one of the treasures of the world. Logging it would be like bombing Venice."