

Information

FORESTRY

PACIFIC FORESTRY CENTRE

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Marc Bell Photo

Western Redcedar
British Columbia's Official Tree
 (see story page 4)



Government of Canada

Gouvernement du Canada

Canadian Forestry Service

Service canadien des forêts

Green Gold Grants Promote Forest Awareness

A Green Gold Grant has given 50 Victoria junior high school students a golden opportunity for hands-on experience in British Columbia's most important industry.

Operation Green Gold is a national forest awareness program sponsored by the Canadian Council of Forest Ministers. The program in British Columbia is jointly sponsored by the Governments of Canada and British Columbia. Central Junior High in Victoria received a \$2 100 grant in 1987 to bring a portable sawmill to the school, along with two instructors. **Charlie** and **Gerri Parsons** of Powell River taught the students the basic operating techniques and safety procedures in handling the equipment.

Approaching the practical instruction eagerly, the students sawed and shaved raw logs into workable lumber. After kiln-drying, the lumber was then made into furniture designed by the student builders.

It was not only woodworking students who staffed the sawmill. A third of the students who applied for a shift on the sawmill were academic honor students.

"They were doing units in Canadian ecology and industry, so this direct experience of working on a sawmill was a perfect idea," said **Maria Marson**, Victoria School District Communications Project Coordinator. "Once they have experience like this, it is something tangible in their lives. In a book, it is often fleeting and temporary."

The sawmill project was of benefit to more than just the 50 students who worked on it. The sawmill operation, while at Central Junior High, was visited by tours from other elementary and high schools in the district. They, too, got to see a small-scale sawmill in action and to learn first-hand about the forest industry.



Students at Central Jr. High School in Victoria learn about sawmilling first hand thanks to a Green Gold Grant.

Other students at Central Junior High were also involved in the project. Photography Club members and writing students compiled a record of the project. Students in the catering classes turned out "lumberjack" meals for the hard-working crews.

When the project was completed, not only had many Victoria students a better understanding of the forest industry; the school also had a good number of pieces of solid new furniture built of fine British Columbia lumber.

All in all, the Victoria junior high project was an excellent example of what Operation Green Gold seeks to achieve.

Green Gold Grants will pay for projects which are aimed at increasing public awareness of the importance of forestry in the province and are sponsored by non-profit organizations.

During the first year of the Green Gold Grants program, 26 non-profit organizations throughout British Columbia received funding totalling close to \$105,000. An additional \$105 000 is available in 1988/89 and again in 1989/90.

The first year's grants ranged from \$100 to \$10 000, the maximum amount allowed, and averaged \$4 000. Non-profit organizations must match the amount funded through volunteer labour or other goods and services.

Green Gold Grant projects included brochures for interpretive forests; portable displays for woodlot associations; forestry radio announcements; portable sawmill demonstrations at schools, a Knowledge Network television program; a brochure on horse logging; and slide tape shows.

Application forms are available from any Ministry of Forests and Lands or Government Agent's office or by writing Green Gold Grants, Box 4115, Station A, Victoria, B.C. V8X 3X4. ■

Visiting Scientists Enjoy Work and Leisure in Canada

by Steve Lundin

The Pacific Forestry Centre is currently host to three scientists from the Far East. As participants in the Visiting Scientist Program, they are spending a year in Canada to continue their research activities in forestry. **Dr. Kazuyoshi Futai** has come from Japan, and foresters **Zhang Song-dan** and **Fan Bao-sheng** have come here from China.

From Japan's Kyoto University, Dr. Futai has been working with **Drs. Sutherland** and **Panesar** on pine wood nematodes (see *Information Forestry* Vol. 14, No. 3, 1987), which are a major source of tree damage in Japan and are now impacting on the export of Canadian wood products to some countries.

This is Dr. Futai's first visit to Canada. "The pace in Japan is faster," he explains, "though it doesn't take long to adjust to Canada's more relaxed life style." Arriving with his wife and their three young children – the oldest is aged twelve – the year in Canada is becoming something of an adventure. "We found a place to live near the University of Victoria. In Japan housing is much more space-conscious. The available land is so limited. Here in Canada, the available land seems endless. We're not used to seeing such large houses and wide streets."

One of the most surprising things Dr. Futai found upon coming to Canada, however, concerned not our lifestyle so much as the products we consume. "When we went shopping, we expected to find Canadian products for sale," he says, smiling. "And yet almost everything we found was made elsewhere – in Hong Kong, Taiwan, Korea and Japan. We found that very strange. Although in Japan we have many goods imported, we also produce and purchase our own. It's difficult to find Canadian products in Canada."

As foresters, Zhang Song-dan and Fan

Bao-sheng have come to Canada to gain expertise and experience in all areas of forestry. They are working under the guidance of PFC remote sensing researcher, **Dr. Y. Jim Lee**. "While essentially, the forestry practices are the same between our two countries," Zhang explains, "there are some aspects of technology that are more readily available to Canadian foresters. Inventorying by helicopter is rare in China, for example, as is the common use of digitized computers. For us, such experience has been tremendous."

Presently, Zhang and Fan have been doing research at the provincial inventory branch in downtown Victoria. "We have been working on forest planning and stumpage appraisal," Fan says. "In the Spring we will be touring the private sector as well as doing field work."

The two foresters, who come from Beijing, have been making an effort to enjoy Victoria's attractions while here. "We've gone on tours through the whole city and have visited the museums," Zhang says, "and we also went to a MacDonald's Restaurant – our first time. The Filet O'Fish was very good."

Zhang played his first game of curling at the PFC Bonspiel in February. "I still don't know all the rules, but it was fun."

Although both foresters are married, their families remained in China. "When I return," Fan smiles, "my son will be two years old."

"We enjoy watching television," Zhang says, "though there are too many commercials for my liking. In China there are only four stations, and they are all owned by the government. Fan and Zhang have become hockey fans, and are avid watchers of professional wrestling. "The hockey is exciting, but we're not so sure about the wrestling – is it real?"

The Visiting Scientist Program is designed to broaden the spectrum of expertise and experience for both its participants and the Canadian Forestry Service. Many scientists and researchers come to Canada to provide expertise; others come seeking experience. Living a year in a foreign country with a foreign culture, however, can offer experience outside the professional realm which is equally as valuable, and interesting. ■



Dr. Kazuyoshi Futai at work in pathology lab.

Ross Macdonald, Regional Director-General Retires

Close to 150 friends and colleagues of **Ross Macdonald** attended his recent retirement dinner presenting gifts and tributes. Some of the many presentations included those by **Tony Sheb-bear** of COFI; **Jack Toovey** of BCFP; **Bruce Devitt** of CIP Inc.; **Dave Handley** of MacMillan-Bloedel. Letter of congratulations from many others in the forest sector, as well as from **Gerald Merrithew**, Minister of State, (Forestry and Mines) and **Jean-Claude Mercier**, Associate Deputy Minister, were read.

Ross retired after 35 years of service with the federal government – all of them with the Canadian Forestry Service. He started his career with the CFS as a summer student in Ontario and held various research and management positions in CFS Maritimes and Headquarters before becoming regional Director-General of the Pacific & Yukon Region in 1980. He was the senior federal negotiator for the Canada-British Columbia Forest Resource Development Agreement and was, until his retirement, co-chairman of the FRDA management committee.

Bob Dobbs, Senior Program Director, Research, is acting as Regional Director-General, until a person is appointed to replace Ross Macdonald.



Bill Young (l), past president of B.C. Forestry Association, makes a presentation to Ross Macdonald at his recent retirement dinner.



Management Appointments

Jean-Claude Mercier, Associate Deputy Minister, CFS, recently announced the interim appointments of Dr. R.C. (Bob) Dobbs (r) as Acting Regional Director-General and Mike Heit (l) as Acting Senior Program Director, Development. Dobbs replaces Ross Macdonald and Heit replaces John Edwards both of whom recently retired from the CFS. (see stories elsewhere).

Western Redcedar Proclaimed B.C.'s Official Tree

VICTORIA – The western redcedar, *Thuja plicata* Donn, is now British Columbia's official tree.

The selection was based on public nominations, essays from students in grades five to seven, the distribution and characteristics of the species, and the cultural, historic and economic importance to the province.

The tree's official and accepted common-botanical spelling is "western redcedar" with "redcedar" as one word. It is not a true cedar.

Its form is like that of a spire. It is a lighter green than most conifers and is easily identified by its long, sweeping branches that are covered by drooping branchlets, or fronds, which give it a lacy, misty appearance.

Historically, western redcedar has

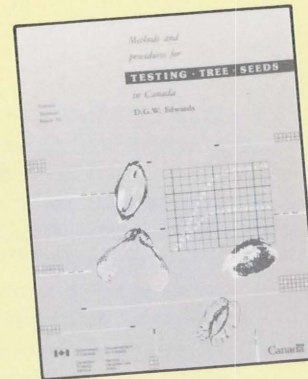
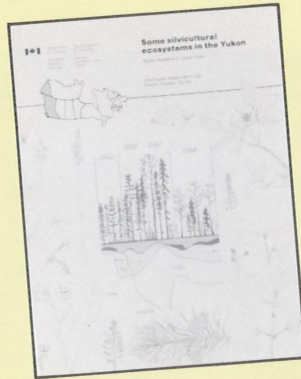
played a key role in the lives of the west coast Indians, whose use of this wood is well-documented.

Western redcedar is native to British Columbia and is well-suited to grow in a variety of moist environments found throughout the coastal and interior wet belt areas of the province.

The western redcedar is also well-known in the province and around the world as a decorative, aromatic wood used in interior decoration and furniture – for 'cedar' chests – and externally for siding on buildings and as a roofing material.

It joins the dogwood flower, jade and Stellar's jay as official provincial symbols.

Publications



Economic and social aspects of tree planting in British Columbia: A survey of workers and contractors

G. Alex Fraser and W.G. Howard

This study reports social and economic information on planting contracts and on workers employed to plant trees in British Columbia.

BC-X-291



Design and testing of a prototype rock separator for sortyard debris

Michael A. Pottie and A.W.J. Sinclair

A prototype rock separator designed to separate rocks greater than 2.5 cm was built and tested at Nicholson Murdie Machines Limited. Results of trials are reported.

BC-X-292 (also known as FERIC Special Report No. SR-41)



Some silvicultural ecosystems in the Yukon

Walter Stanek and Laszlo Orloci

This guide provides a key to the differentiation of eight silvicultural ecosystems contained within forest complexes in the southern Yukon to aid the forester in designing silvicultural measures within the scope of a forest management plan

BC-X-293



Estimation of the supply of forest biomass for energy conversion in British Columbia

T.L. McDaniels and G.H. Manning

This paper, using data from the national biomass inventory and other reports, derives economic supply curves for forest biomass fuels for B.C. These curves allow the analysis of the potential for use of bioenergy in B.C.

BC-X-294

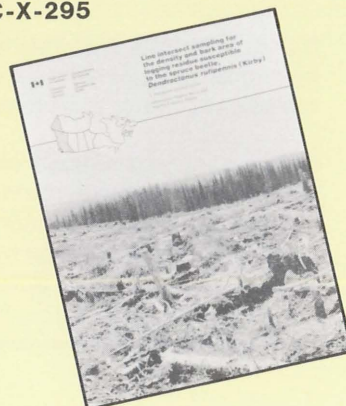


Line intersect sampling for the density and bark area of logging residue susceptible to the spruce beetle, *Dendroctonus rufipennis* (Kirby)

L. Safranyik and D.A. Linton

Twenty-two clearcut areas were sampled in central B.C. Estimates based on line intersect sampling were compared with estimates based on fixed plot sampling.

BC-X-295



Forest insect and disease conditions – British Columbia & Yukon 1987

C.S. Wood, G.A. Van Sickle and L.M. Humble

More than 40 forest pests are discussed and some predictions are made for 1988.

BC-X-296



Program Review – Pacific Forestry Centre, 1986/87

E.L. Teske (ed.)

The organization and activities of the research and development programs at the Centre are reported on.



Methods and procedures for testing tree seeds in Canada

D.G.W. Edwards

Standardized methods and procedures for sampling, and for testing purity, germination, moisture content and seed weight of forest tree seeds are described.

Forestry Technical Report 36

Copies of these publications may be obtained by filling out the enclosed card and returning it to the PFC Information Office.

PFC Researcher Reviews Forest Hydrology in Canada

Water is a key element in our forested landscape. Because of water's importance, many popular beliefs have arisen concerning water, forests and man's intervention, such as "logging dries up streams." However, there is a growing body of scientific knowledge which helps us put such beliefs into perspective. Studies of the relationships between forests and water, which constitute the science of forest hydrology, have been going on in Canada for over 20 years.

Canadian research in forest hydrology has recently been reviewed by Pacific Forestry Centre's forest hydrologist **Dr. Eugene Hetherington**. His review appears as chapter 7 in the book *Canadian Aquatic Resources*, edited by M.C. Healey and R.R. Wallace, sponsored by the Rawson Academy of Aquatic Science and published in 1987 by the Department of Fisheries and Oceans.

Interest in forest-water interactions often arises because of concerns about possible adverse impacts of forestry operations, such as logging or spraying, on streams and water subject to fisheries or domestic uses. These concerns vary regionally across Canada, but nowhere are they more prevalent than in British Columbia with its resource-based economy, diverse topography and climate, extensive network of fish-bearing streams and widespread forestry activity.

A proper evaluation of man's impacts on the hydrologic cycle in forested areas must begin with a sound understanding of the basic relationships between water, forests and soil. Dr. Hetherington begins by considering the influence of forests and forestry operations on microclimate, including data on energy balances, evapotranspiration, soil freezing, wind reduction, precipitation interception and snow accumulation and melt patterns. He then traces the effects of forests on runoff through their influence on the movement and storage of water in the soil mantle. Canadian research



Dr. Eugene Hetherington

watersheds have provided information on the effects of forest harvesting operations on streamflow. Changes in streamflow have been found to vary according to the extent of harvested area in a watershed and the presence or absence of snow. Runoff from rainfall, snowmelt and rain-on-snow plus the broader question of forests and floods are dealt with. This section concludes with a review of some popular beliefs concerning forests and water.

Streams draining from naturally forested lands are generally of high quality. The possibility of changes in water quality resulting from forestry operations such as logging or the use of pesticides is a frequently expressed concern. Dr. Hetherington reviews Canadian research data relating to sediment, water chemistry, water temperature and the effects of forest fertilizers, herbicides and insecticides on stream waters. He also gives a brief summary of the role played by forested lands in the filtering of acid precipitation.

Dr. Hetherington's review demonstrates that forests and forestry operations have both positive and negative effects on stream water as perceived in relation to the fisheries resource and to human use and convenience. He stresses the need for continued study of forest-water relationships and an even greater need to incorporate this knowledge into the management of both forests and water in Canada.

Canadian Aquatic Resources costs \$20 (payable to the Receiver-General for Canada) and can be ordered from the Canadian Government Publishing Centre, Ottawa, Ontario, K1A 0S9. Quote catalogue number Fs 94-21 SE. ■

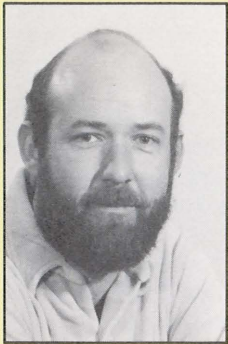
Assistant Deputy Minister Appointed

Dr. Jag Maini has been appointed Assistant Deputy Minister, Forestry Policy, Canadian Forestry Service. He was formerly special advisor to the Associate Deputy Minister of the Service.

Dr. Maini holds a doctorate in ecology from the University of Saskatchewan and joined the Canadian Forestry Service in 1962 as a research scientist at Richmond Hill, Ont.

He has served as regional director, Laurentian Research Centre, Quebec City, and with the Ministry of State for Science and Technology and Environment Canada, as well as participating in the executive interchange with the International Institute for Applied Systems Analysis in Vienna from 1983 to 1985.

New Appointments



David Haley



Dr. Caroline Preston



Art Shortreid

Caroline M. Preston has joined the PFC Growth and Biology Program to work on nitrogen and soil chemistry in managed forest ecosystems. She will be concentrating on determining the fate of nitrogen fertilizers, mechanisms of loss, effects of fertilizers on soil, and development of chemical and spectroscopic techniques for studies of forest soils. Prior to joining PFC she was engaged in research on soil nitrogen, nitrogen fixation, and agricultural applications of nuclear magnetic resonance spectroscopy with Agriculture Canada in Ottawa.

Art Shortreid has been appointed Technology Transfer and Development Officer at PFC. He will provide operational liaison between the CFS research and development staff at PFC and clients throughout the Pacific and Yukon Region to facilitate technology transfer and ensure client feedback and input to CFS programs.

Mr. Shortreid has been employed as an industrial silviculture forester and computer consultant in British Columbia. Prior to this appointment, he was a mensurationist with the CFS District Office in Prince Albert, Saskatchewan. ■

David K. Haley, R.P.F., has joined the FRDA Research Program at PFC. He is to administer and monitor the federally managed component of the Extension, Demonstration, Research and Development (E,D,R&D) sub-program of FRDA. In addition to this, he will assist in providing input to the cost-shared portion of the E,D,R&D sub-program.

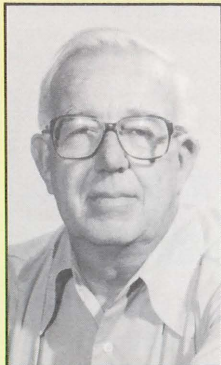
Prior to joining PFC, he worked for the Ministry of Forests and Lands as the Program Management Assistant for the FRDA Coastal Technical Advisory Committee (CTAC), part of the cost-shared E,D,R&D sub-program. Previous

experience includes extensive silvicultural activities with Western Forest Products Ltd. and administrative, silvicultural, harvesting and job development experience with the Municipality of North Cowichan.



National Forest Week
May 1-7, 1988

Retirements



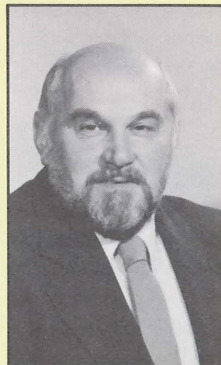
Dick Andrews



Hugh Craig



John Edwards



Dr. Walter Stanek

John Edwards

As Senior Program Director, Forest Development, John Edwards was responsible for negotiating and implementing the Canada/British Columbia Forest Resource Development Agreement for the CFS. John retires with over 35 years federal and provincial government service to his credit.

Walter Stanek

Dr. Stanek was a research scientist specializing in ecosystematic classification. His most recent work was "Some silvicultural ecosystems in the Yukon" (see page 5 to order a copy). Dr. Stanek retired after 21 years with the federal government. ■

Dick Andrews

FIDS Ranger with 33 years experience in all forest regions in B.C. except Vancouver. For the last seven field seasons Dick was FIDS Ranger in the Cariboo Forest Region based at Williams Lake.

Hugh Craig

Retired after nearly 48 years service with the federal government. Hugh was a pathology technician whose latest assignment was working with the regeneration pests research project under the direction of Dr. Jack Sutherland.

CFS Cooperates in Control of Debris in Coastal B.C. Waterways

Waterborne debris creates a safety hazard and causes damage to boats, seaplanes and foreshore structures, interferes with commercial and sports fishing and is a public nuisance both on the water and on the shore.

In 1979 the federal government (Canadian Forestry Service, Transport Canada, Fisheries and Oceans Canada) joined forces with the Council of Forest Industries of B.C. and the B.C. Ministry of Forests and Lands to establish and fund the B.C. Debris Control Board – whose mandate is to reduce the quantity of waterborne debris in coastal B.C. waterways.

Most of the activities of the Board are centered on containing floating debris originating from the Fraser River system and disposing of it before it enters the heavily travelled waterways of the lower estuary and the Strait of Georgia.

The Fraser River Debris trap is the largest project of the Board. The trap is located on the north side of the Fraser River midway between the communi-

ties of Agassiz and Hope. Due to the higher than normal water levels in the Fraser River during the 1986 freshet period, the trap was filled to capacity and it was necessary to remove debris to prevent its overflow. The amount of debris collected was equivalent to eight football fields piled three metres deep with trees, wood chunks, branches, animal carcasses, barrels, discarded construction waste and other floating material. Without this trap all of this debris would have passed through the Fraser Estuary and ended up in the Strait of Georgia.

A 1986 study, conducted to determine the source of debris which was contained at the Fraser River trap indicated the debris originated from the following sources.

	pieces	volume
natural debris	89%	59%
forest industry debris	8%	39%
other industries/debris	3%	2%

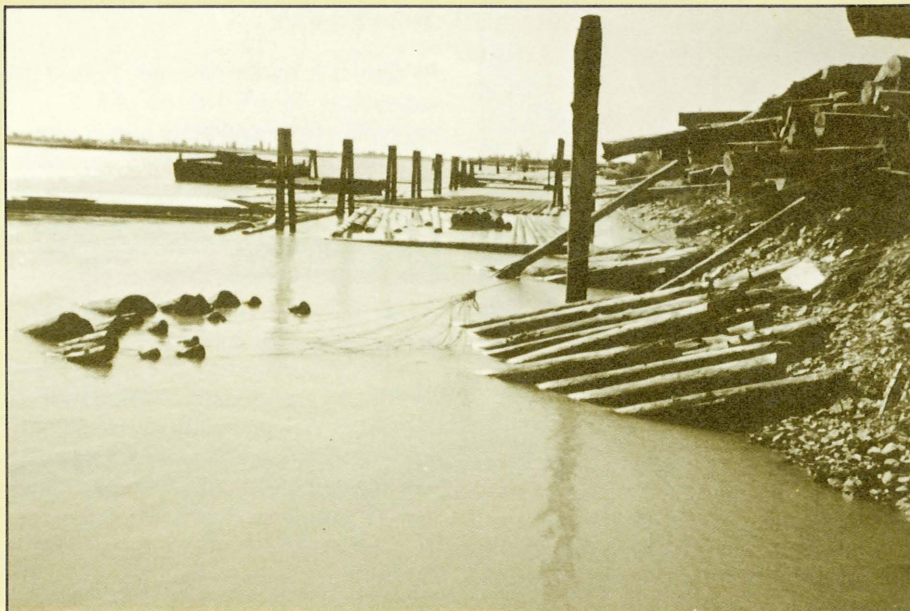
The Board also oversees several other operations. In the Howe Sound area a debris control and boom inspection program reduces log losses through

good booming practices and collects and contains industrial and natural debris for burning.

A relatively recent project is situated on Harrison Lake, a tributary to the lower Fraser River. Debris which collects naturally during the summer at the head of Harrison Lake is contained and piled on land for burning.

A systematic clean-up of deadheads and debris concentration is done on a periodic basis in the Fraser Estuary especially before the summer pleasure boating season and before commercial net fishing season. In addition, sunken trees and snags, which are a hindrance to salmon gill net fishermen are removed through a cooperative arrangement with fishermen. The Board supplies the gear for this work, fishermen locate and hookup the snags and the Board supplies heavy tugboats or other equipment when required to remove particularly difficult snags.

The B.C. Debris Control Board, is not only one of the few existing cooperative federal/provincial government industry initiatives in Canada, but has accomplished a recognized measure of success in correcting what was once a serious problem.



Unmerchantable deadheads and sinkers are collected in the lower Fraser River Estuary for disposal.

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