

INFORMATION

# F O R E S T R Y

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 Government  
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Service  
canadien des  
forêts

**The legacy of the Environment 2000 program can also be measured in individual terms.**

**All workers will increase their knowledge and awareness of the forest and gain the satisfaction of knowing their contribution will be long lasting and passed along to generations still to come.**

# ENVIRONMENT BENEFITS FROM CONSERVATION PROGRAM

## ENVIRONMENT 2000

**Yvonne Roy** grumbles a little as she laces up her caulked boots, shoulders a chain saw and scrambles into the bush for a 6 a.m. start. It can be hard to get rolling when you've been up during the night with your kids. Yet Roy insists it's worth the effort. Her job on an Environment 2000 project only pays minimum wage, but it has given her new muscles, new skills and considerable personal satisfaction.

In another part of the forest, **Trung Phan** applies his long handled pruning saw to the base of a branch far above his head. For him, this Environment 2000 job also means a new start. For the first time since arriving from Viet Nam about two years ago, Phan, is able to contribute to the support of himself and his younger brother. By the end of the 20-week project he will have gained skills, experience and references that should help him find work.

Roy and Phan are among the more than 750 people in B.C. who have worked on federally funded forestry jobs under the Environment 2000 conservation program. Environment 2000, launched in April of this year by Environment Canada, was designed with several purposes in mind. It provides short-term employment for those who have the most difficulty finding work — people under 24 years of age or over 50, with special emphasis on women, natives and disabled. The program also raises public awareness of the need for conservation efforts and forest renewal. Although B.C.'s forests support the province's number one industry, relatively few people are familiar with the management techniques required to keep them healthy and prosperous.

Across the country Environment Canada will spend an estimated \$50 million and create approximately 10 000 jobs on projects contributing to the conservation, preservation and restoration of the natural environment. Almost 80% of the \$5.6 million allocated for B.C. projects is being spent on forest management activities. That translates into 61 projects ranging from weeding plantations to tree spacing to developing field orientated forest education programs. Projects are sponsored by individuals, non-profit organizations, forest companies, Indian bands, municipalities and even high schools.

The emphasis on forest-related projects in B.C. reflects the important role played by forests in this province. The Canadian Forestry Service in Victoria has responsibility for administering this part of the program, and according to Project Officer **Mark Atherton**, "We had no shortage of very worthwhile projects to choose from".

The YMCA's Camp Thunderbird on southern Vancouver Island is surrounded by almost 500 hectares of forest land. The "Y" sponsored a \$36 000 Environment 2000 project to thin dense stands of trees, remove snags and clear out brush in order to grow a better crop. In the process this activity made this forest much more accessible to the hundreds of children who visit the camp every year. Some children have never spent much time in a forest, while others may never have stopped long enough to really look at their wooded surroundings. As a result, many camp activities and educational programs have been de-

signed to develop an appreciation and awareness of the forest environment.

The Municipality of North Cowichan, near Duncan on Vancouver Island, sponsored two \$129 000 projects designed to promote better forest growth on 5000 hectares of municipally owned land. Project workers are thinning, spacing and pruning trees, clearing road side brush to reduce the fire hazard, and rehabilitating creeks.

The effort expended on the North Cowichan forests now will result in increased timber revenues for the municipality over the long term. Short term benefits include the creation of 40 jobs in an area hard hit by the downturn in the forest industry. As well there are spin-off benefits from money pumped into the community for equipment and supplies needed by the projects. Municipal Forester **Dave Haley** estimates that a variety of federally funded job creation programs since December 1982 has injected a total of \$2.5 million into the local economy.

Near the entrance to a provincial government forest research station in the Cowichan Valley east of Duncan stands a large and attractive log building. Built in three months by a seven member Environment 2000 crew, it will become an information centre where the public can learn about ongoing research at the station. The young crew tapped the knowledge of a local old-timer at various stages of construction, but did all the work themselves, from felling and peeling the timbers to applying the cedar shake roof. Now the crew has shifted its attention to a nearby demonstration



◀ Women make up a significant proportion of Environment 2000 workers.

Women, who make up a significant proportion of Environment 2000 employees, have sometimes been introduced to new employment options. Many are working in the bush for the first time. Some take particular pride in outperforming the men.

For some young workers this Environment 2000 job is the first job they have ever had. Developing a good work attitude is as important as any other on-the-job skills they may acquire. They learn to show up at work on time, to get along with other crew members, and to persevere when the novelty of a new work experience wears off.

Supervisors receive up to twice the minimum wage, which in B.C. amounts to \$7.30 per hour. They, too, measure the project's worth in other terms. For **Wendy Jakovickas**, recently graduated from a two-year forestry program, the project means a chance to work in her chosen field and to make some good contacts in the industry. To **Bob Soles**, with little formal education but a wealth of experience in the bush, it's an opportunity to gain supervisory skills.

Some supervisors are over 50 years of age and can already draw on several decades worth of valuable work experience. Even they were not able to escape the unemployment caused by mill closures and job cutbacks. They find the physical and mental challenges of supervising a crew in the bush more rewarding than being unemployed and inactive.

The details of the individual cases are different, but the overall message is the same. In tough economic times, even a short-term job can mean a great deal. Since the importance of conservation efforts does not decline just because economic fortunes take a dive, there is always a great deal of worthwhile work to be done. The Environment 2000 program is one way that the energy and resources available in communities **today** can be used to improve the environment and resources we will all depend on **tomorrow**. ■

forest used by school groups and the public. Crew members are brushing out nature trails, cutting down snags and replacing rotting steps.

Communities throughout B.C. are gaining lasting benefits from federally funded projects such as these. Communities are also receiving a social and economic boost from the direct employment and spin-off benefits. But the legacy of the Environment 2000 program can also be measured in individual terms. All workers will increase their knowledge and awareness of the environment and gain the satisfaction of knowing that their contributions will be long lasting and passed along to generations still to come.

All project workers were unemployed before being hired. Although many had

previous jobs their youth, lack of experience and the state of the economy were a handicap in finding steady work. Either their unemployment benefits had run out, or they had not worked sufficient weeks to be eligible for benefits. Yet some of these young workers have families to support.

Environment 2000 project workers receive the minimum wage (\$3.65 per hour in B.C.) for up to 20 weeks of work. Most project organizers have tried to sweeten the pot by giving workers as much valuable on-the-job training and experience as possible. Many workers have taken part in forest fire suppression training (making them qualified for provincial fire fighting work) or courses in survival first aid. They gain experience working with power saws and other forestry equipment.

## NEW DEPARTMENT, NEW MINISTER FOR THE CANADIAN FORESTRY SERVICE



Gerald Merrithew (right) and Regional Director Ross Macdonald look at unveiled plaque at Pacific Forest Research Centre.

On September 17, 1984, Prime Minister **Brian Mulroney** announced the appointment of **Gerald S. Merrithew** as Minister of State (Forestry). The same day an Order-in-Council removed the Canadian Forestry Service from Environment Canada and placed it within Agriculture Canada.

Mr. Merrithew, who represents the federal riding of St. John, New Brunswick, was most recently Minister of

Natural Resources in the New Brunswick legislature — a portfolio responsible for provincial forestry matters.

In late October Mr. Merrithew made his first official visit to British Columbia — a get acquainted trip to meet industry and association representatives in the forestry sector. He met with the Northern Interior Lumber Sector directors in Prince George as well as directors of the Cariboo Lumber Manufacturers

Association in Williams Lake. Field trips in both locations were arranged to acquaint the Minister with the specific forestry issues. He then spent two days in the Vancouver region meeting with representatives of the Council of Forest Industries, Registered Professional Foresters, Canadian Institute of Forestry, Canadian Forestry Association, the Truck Loggers Association and the Faculty of Forestry, U.B.C.

On his final day in B.C. he travelled to Victoria to unveil a plaque at the site of the \$14 million expansion to the CFS's Pacific Forest Research Centre. He then travelled to Duncan where he toured the North Cowichan Municipal Forest where intensive forest management activities have been successfully carried out using federal government job creation programs.

Mr. Merrithew was accompanied by **Richard J. Herring**, recently confirmed in the position of Assistant Deputy Minister, CFS; **Dan Skaling**, Chief of Staff; **Warren Everson**, Special Assistant (Policy); **Jim McLean**, Executive Assistant; **Paul Hunt**, Special Assistant to Richard Herring; and, **Ross Macdonald**, Regional Director, Pacific and Yukon Region. ■

## ENFOR FUNDS DEVELOPMENT OF CONTAINER SYSTEM

In 1983 an ENFOR (**EN**ergy from the **FOR**est) study found that a conventional on-highway container system provided the most potential for biomass hauling from logging sites to dumps, but shortcomings were identified which suggested design modifications were required to bring the per tonne cost down. The system has been designed and built by Reliance Manufacturing under contract to FERIC (Forest Engineering Research Institute of Canada) and funded by ENFOR. It was installed on a Hayes HDX provided by British Columbia Forest Products. The system is currently being tested at MacMillan-Bloedel's Sarito Division. ■



## BIOLOGICAL CONTROL TRIP TO CHINA



Imre Otvos (left) and Mike Hulme.

**E**ntomologists **Mike Hulme** and **Imre Otvos** were two of a four-man Canadian Forestry Service delegation to China this past summer. The purpose of the visit was to review biological control as it is presently conducted in China, both through discussions with researchers and forest managers, and through visits to forested areas where control has been or is currently being carried out.

The trip originated in Guangzhou, where discussions were held with scientists at the Guangdong Provincial Institutes of Entomology and Forest Science, as well as at the Department of Biology, Chungshan University. A subsequent field trip into Xinhui County involved visits to a *Beauveria bassiana* production facility and the Biological Control Centre at Guifengshan, about 800 km west of

Guangzhou.

Two days were spent in Shanghai with visits to the Entomological Research Institute of the Chinese Academy of Sciences, where they presented a talk on forestry and biological control in Canada. From Shanghai the group travelled east to Harbin in Heilongjiang Province and then to Darling where research into the use of natural enemies of major pests of spruce and fir was discussed, and then on to Nancha, where utilization of *Trichogramma* and bird predators was presented. After the return trip to Harbin, the tour moved to Changchun in Jilin Province to the Baichuan Forest Pest Control Station where studies are being conducted on *Trichogramma* and other natural enemies of pest insects.

The visit terminated in Beijing, with stops at the Colleges of Forestry Science and Agricultural Science, the Zoological Institute of the Chinese Academy of Sciences and the Ministry of Forestry. At this last stop, progress of the visit was reviewed, suggestions were made based on Canadian experience with biological control, and areas for future cooperation were discussed. ■

## Fire Group Meets

**T**he Canadian Forestry Service recently hosted a tri-government meeting of the North American Forestry Commission's Fire Management Study Group.



Officials from Canada, the United States and Mexico met at the Pacific Forest Research Centre to exchange ideas and information and to provide assistance in matters relating to forest fires. A field trip was arranged to view a display of fire suppression methods as well as a look at coastal B.C. logging and forestry. Pictured left are John Birch, USA; Allan Jeffrey, Canada; John Goodman, Canada; Clifford Smith, Canada; Oscar Cedeno Sanchez, Mexico; Charles Philpot, USA; John Hafterson, USA; Lawrence Amicarella, USA; Max Almonte Noriega, Mexico; Ruben Rodriguez, Mexico; Brian Stocks, Canada; Bruce Lawson, Canada; Harold Mikell, USA; Hank Doerksen, Canada; Salvador Juarez Castillo, Mexico. ■

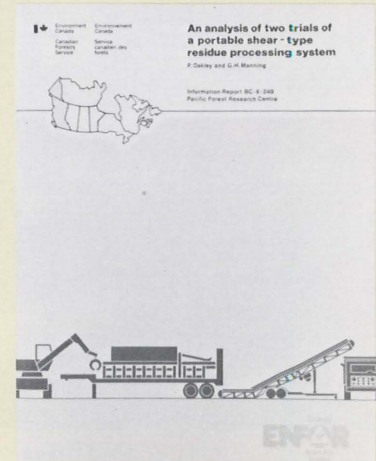
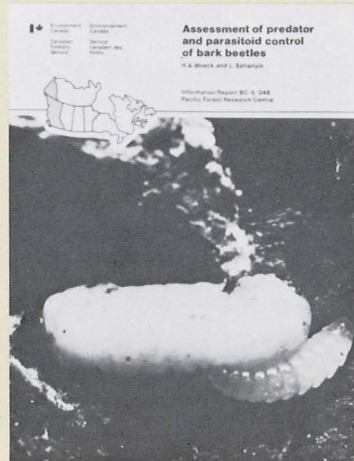
# NEW PUBLICATIONS

## Assessment of predator and parasitoid control of bark beetles

H.A. Moeck and L. Safranyik

Literature was reviewed and potential use for applied biological control of bark beetles was assessed in order to provide guidelines for initial investigations by the CFS.

BC-X-248

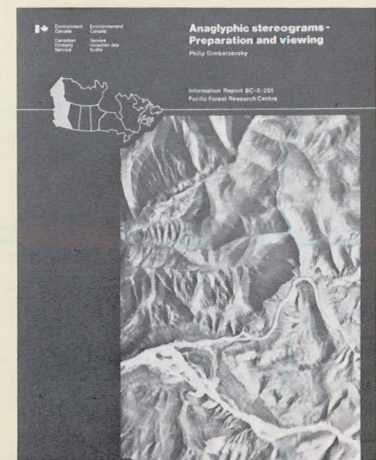
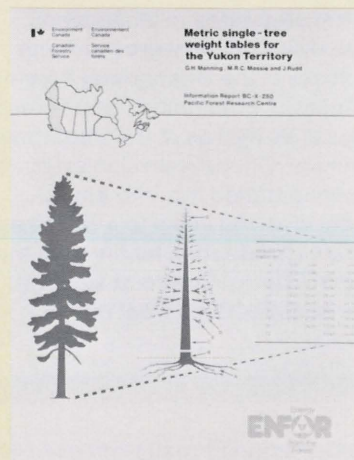


## An analysis of two trials of a portable shear-type residue processing system

P. Oakley and G.H. Manning

A summary of projects undertaken to test equipment and systems for transforming forest residue waste into an economic product, and provide a cost-benefit evaluation of the systems.

BC-X-249

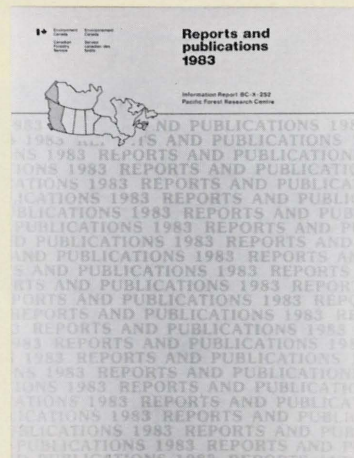


## Metric single-tree weight tables for the Yukon Territory

G.H. Manning, M.R.C. Massie and J. Rudd

Metric weight tables, by component, are presented for the four major tree species in the Yukon Territory.

BC-X-250



## Program Review — 1983-84 Pacific Forest Research Centre

This report on forest research and operations at the Pacific Forest Research Centre reflects the progress made during the fiscal year 1983-84 in achieving program objectives in British Columbia and the Yukon.

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

## **Anaglyphic stereograms — preparation and viewing**

**Philip Gimbarzevsky**

A method is described for producing color stereograms from conventional black and white aerial photographs based on the anaglyphic principle of binocular vision.

**BC-X-251**

## **Reports and publications — 1983**

**E.L. Teske**

A bibliographic listing of scientific, technical and interpretive publications published by the Pacific Forest Research Centre during the calendar year 1983.

**BC-X-252**

## **Remote sensing in forest damage detection and appraisal — selected annotated bibliography**

**Philip Gimbarzevsky**

This report is the result of a survey of technical literature dealing with the application of remote sensing technology for the detection and appraisal of forest damage. Titles cover 1969-83.

**BC-X-253.**

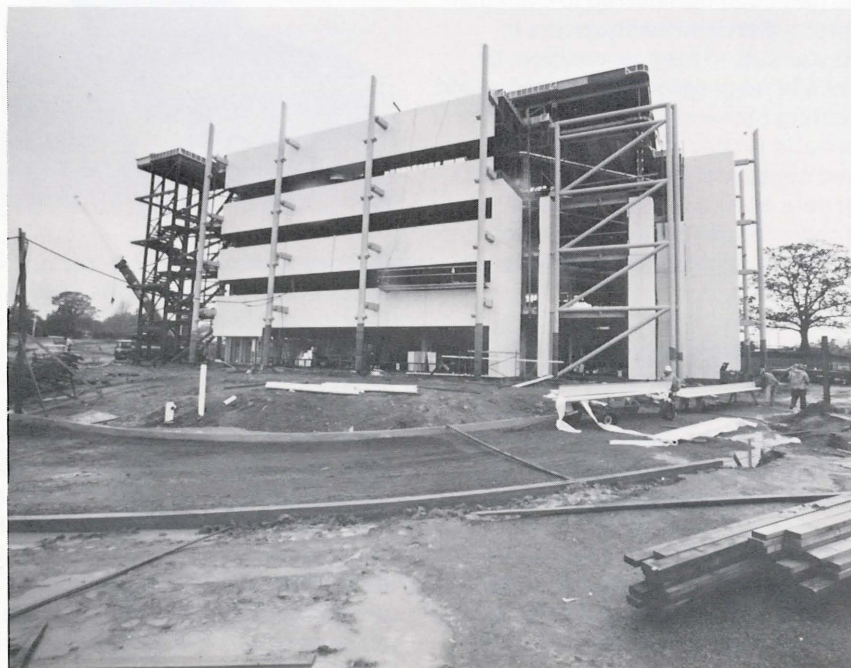
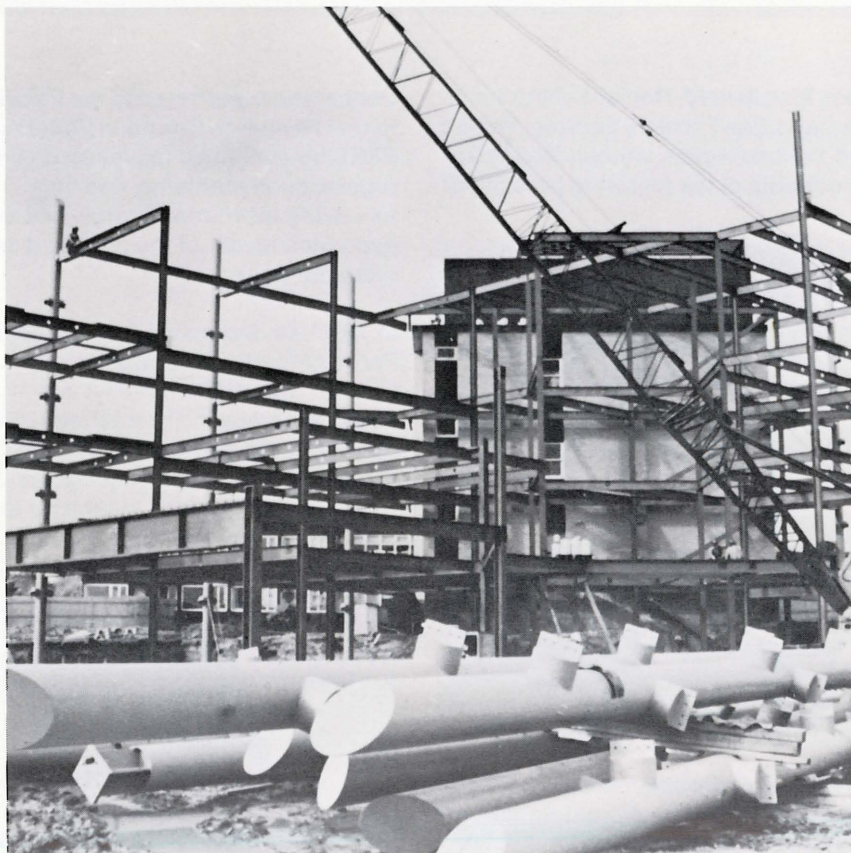
## **Recovery and transport of forest biomass in mountainous terrain**

**A.W.J. Sinclair**

Field tests were conducted to document the costs and productivities of conventional and integrated systems for recovering and transporting roadside biomass in mountainous terrain.

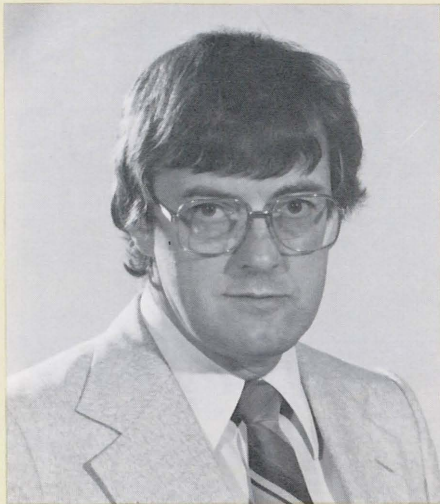
**BC-X-254**

## **P.F.R.C. ADDITION ON SCHEDULE**



# NEW APPOINTMENTS

**Ross Macdonald**, Regional Director of the Canadian Forestry Service, Pacific and Yukon Region, announces the appointments of the following personnel:

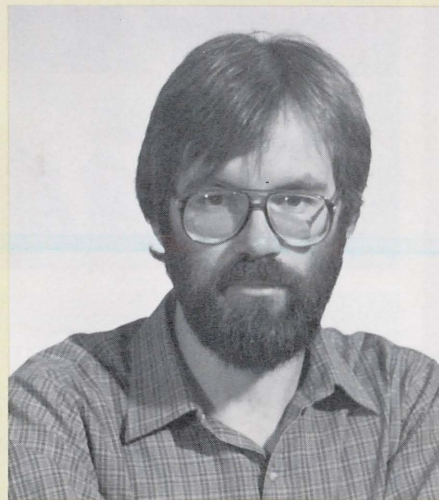


**Dr. Robert C. Dobbs** has been appointed Program Director, Forest Resources Research, replacing **Dr. Allan Auclair** who has been transferred to Canadian Forestry Service Headquarters in Ottawa/Hull. In his new position, Dr. Dobbs is responsible for managing and directing research into seed procurement and processing, forest renewal, weed control, stand tending, and baseline data acquisition. He is also the manager responsible for providing computing and chemistry services to the Centre.

Dr. Dobbs obtained his Ph.D. in forest autecology and silviculture from the University of Washington in 1966. In the same year he moved to Winnipeg where he began his career with the Canadian Forestry Service as a research scientist at the Manitoba-Saskatchewan Regional Lab. While there he carried out research on jack pine regeneration problems and became head of the Silviculture Section. With the closure of this lab in 1970, Dr.

Dobbs was transferred to the Pacific Forest Research Centre in Victoria. At PFRC he continued his research on regeneration problems, this time focussing on interior spruce, and was appointed leader of the cone and seed research project.

In 1977, Dr. Dobbs went to Canadian Forestry Service headquarters in Ottawa/Hull. While there he was Scientific Advisor, Forest Production Research and manager of the ENFOR (Energy from the Forest) program. In mid-1984 he returned to Victoria to take his present position.



**Dr. Tony Trofymow** has been appointed soil microbiologist in the Shawnigan thinning and fertilization study. He will conduct research on the effects of silviculture treatments on soil biological processes as related to decomposition and nutrient availability. The work will entail the development of a decomposition submodel to assist in the formulation of research needs. At a later date the submodel will be integrated with the SHAWN model of Douglas-fir growth and yield. The research will augment past and planned studies by **Dr. Val Marshall**, soil zoologist, **Dr.**

**Patrick Pang**, soil chemist and **Dr. Hugh Barclay**, mathematical ecologist.

Dr. Trofymow obtained his Ph.D. in soil ecology from Colorado State University in 1984, as well as a MSc in zoology from the same university in 1981. He earned his B.Sc in biology from the University of Lethbridge in 1978.

While at Colorado State University Dr. Trofymow was a teaching and research assistant in biology labs. Research conducted there included looking at soil/plant/microflora/microfauna interactions including identification of soil microbial and microfaunal populations, as well as laboratory and greenhouse experiments. ■

## New Telephone Number

Commencing mid-December 1984, our telephone number will change to

**(604) 388-0600**

All staff members may be reached by dialing this number.

## INFORMATION FORESTRY

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**Editor: Elaine Teske  
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