

Renewal

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Education Issue

This issue of Renewal highlights some of the forestry education initiatives underway through FRDA II.

If the past year is any indication, the Extension and Technology Transfer Worker Training program under FRDA II could do everything its planners hoped it would: help forestry workers understand more about the industry in which they work, introduce them to a broader range of forestry management skills, and more importantly implant the idea that upgrading of skills is a habit forestry workers must cultivate throughout their careers.

The four-year training program combines efforts by B.C.'s Ministry of Forests, Forestry Canada and several other federal and private sector agencies to enhance training and retraining opportunities for workers in all segments of the forest industry. By providing seed money for the development and delivery of several

Paul Commandeur
from Forestry Canada
points out some
features of the
rainfall simulator.

pilot training projects, it is hoped the program will kick start an industry-wide effort to develop a stronger, more coherent training regimen for

Making Forestry Education a Habit

forestry workers right across the province.

The first year has focused on silviculture workers for the most part, with some fairly fundamental yet important questions being posed. How have silviculture workers been trained in the past? Which forestry management skills are in greatest demand? What training initiatives must be developed to ensure workers get the kinds of skills most appropriate to B.C.'s changing silviculture needs?

Determining the kind and quality of training which exists for silviculture workers in B.C. is complicated by the uncertainty about the numbers of contractors operating in the province at any given time. A needs analysis conducted by Pacific Regeneration Technologies Inc. puts the current number at around 800, but this fluctuates with changing fortunes.

Another complicating factor: the tremendous range in company size, from the lone contractor working out-of-pocket to contractors with upwards of 900 or more employees, and staff levels that fluctuate significantly during the

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A number of 12,000 year old trees served as seats of learning for students of the Port Hardy Christian Academy on their recent visit to Forestry Canada in Victoria. James Clowater, a University of Victoria Co-op student, explained that by studying the ancient trees we can learn about the climate and natural events that occurred on Vancouver Island at the end of the last ice age. The trees were discovered, preserved in the peat bed of Heal Lake in the Victoria area, as the lake was being drained to form a new landfill. The Port Hardy students' lesson in paleoecology was part of a forestry education tour funded through the FRDA II 1992 Green Gold Grant Program.

Forestry Education *continued from p. 1*

year. Changing staff levels and workforce mobility make it difficult to assess the consistency of training provided British Columbia's silviculture workers.

At the same time, the study reveals that most of the silviculture training in B.C. is done by companies themselves—internally, with only modest help provided by forestry worker training schools or private agencies. Even more striking: workers at about two-thirds of the companies which responded receive the bulk of their information and training from each other.

And there are noticeable trends. While almost all companies (88%) reported that current training procedures meet their company's requirements, many said they'd still like assistance in training local workers. Eighty-eight per cent of those companies responding to the survey expressed a particular interest in receiving training support which would allow them to expand into new silviculture activities. Companies specializing in stand-tending form the bulk of these with the overall level of interest in training for new silviculture activities increasing with the size of the company.

Far and away the most exciting accomplishment in the first year has been development and delivery of several pilot training projects throughout the province. The program's centrepiece: train-the-trainer courses conducted at UBC's Research Forest in Haney.

These courses underscored an important point: you can't have a knowledgeable workforce trained in safe work procedures unless you first have the people in place to provide adequate training. This pilot course is seen as an important first step towards the establishment of a train-the-trainer program in B.C. to match existing programs in Sweden.

Not only does the silviculture industry need more and better trainers, it needs better business people, notably among First Nations groups. Aboriginal groups in six regions attended several pilot projects conducted this spring to learn more about the challenges of running a contractor business.

Verdict on that program: instructors, First Nations participants, forestry officials—everyone agrees the pilot projects for potential aboriginal contractors were an unqualified success.

The same holds true for silviculture pilot training programs conducted for aboriginals at correctional institutes in Prince George and Mission. The barometer for success at Ferndale Institute: half the aboriginal offenders taking part accepted job offers upon graduation.

Just how important the Worker Training Program has become to contractors and silviculture workers is illustrated by the number of unsolicited proposals to the Ministry of Forests. But while several projects have been approved for 1992/93, there has been some confusion about the program's purpose. The Worker Training Program, says Colene Wood of the Ministry's Silviculture Branch, is not a funding source for training:

"We have a very limited budget. We will fund the development of certain courses that haven't been developed elsewhere but we see our role primarily as facilitators. In this day and age finding out how to go about doing something is as important as getting it done. And that's again where we fit in—to work with people to figure out how to get the training happening."

Rewards of Education Were Immediate

For one week in March of this year, more than a hundred people from native communities throughout B.C. converged on community halls and classrooms in Williams Lake, Kamloops, Prince George, Smithers, Cranbrook and Whistler—a diverse group of native silviculture contractors and workers with good general skills in planting, stand tending and site preparation.

But one thing was missing, says Harold Derickson of the Intertribal Forestry Association of

coast Forestry Training Centre provided a comprehensive introduction to the complexities of operating a contracting business: bookkeeping, incorporation procedures, contract bidding, management of a contract once it's been awarded, WCB and safety regulations. Furthermore, says Training Coordinator Carol Scott, it was geared to specific community needs:

"People on the advisory groups from each area had input into the final design of the program. Some areas wanted an historical overview or a cultural perspective as part of the training package.

Others wanted highly specific business skills. And while there was some fundamental similarity among the packages, each one was designed for its audience."

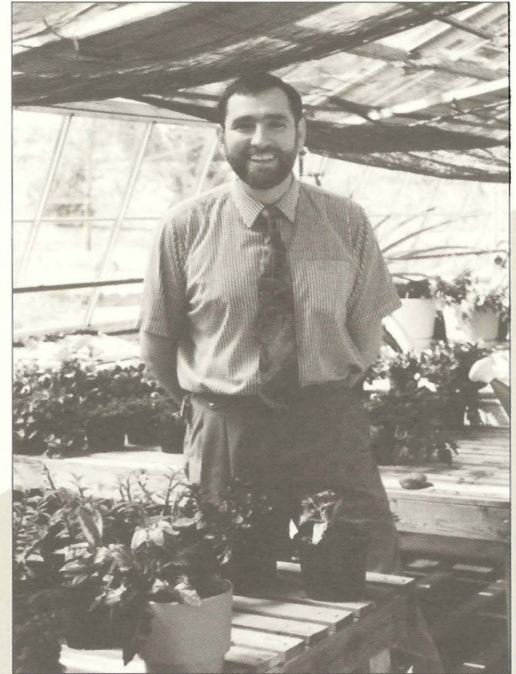
The goal was to provide a practical introduction to the challenges of running a contracting business to the broadest range of new and existing native contractors. That goal, Scott says, was reached.

If the number of participants in training programs at corrections institutes in

Prince George and Mission was modest, the challenge was not. The program goal, says Gary O'Keefe, Coordinator of Employment and Training at Ferndale Institution, was simple: give native offenders a chance at employment after they leave prison by providing silviculture skills.

"They need a program designed around knowing everything you can about the forest industry, about tree species, pow-

er saws, surveying, basic automotive maintenance and of course pruning and planting both deciduous and coniferous trees," says O'Keefe.

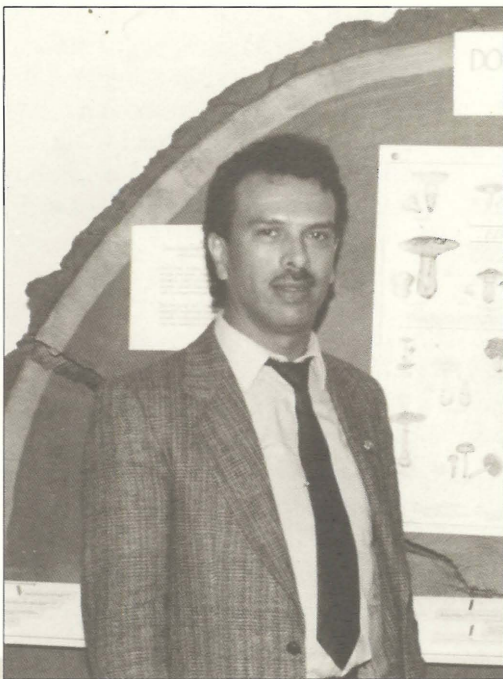


Gary O'Keefe

For more than a year representatives of FRDA, Correctional Services of Canada, Employment and Immigration and Indian and Northern Affairs wrestled with that issue. Each pledged to cover one quarter of the cost for a silviculture training program provided suitable candidates could be identified.

Of the 79 aboriginal offenders interviewed by Corrections officials, 24 were selected to take part. Each offender had to meet several selection criteria, two of which were a grade 10 education and good physical condition. They had to be cohesive as a group. There had to be minimal risk involved in taking each one out into the community.

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Harold Derickson

B.C., something crucial to prosperity in the silviculture industry:

"Understanding the normal process of running a successful silviculture contract company. How to put together a business plan. How to participate in the bidding process on a competitive basis. They really needed a good broad background in those areas."

The training package designed and delivered by West-

Training the Trainers

For Pamela Fraser it was an odd feeling. Instead of leading the discussion as she did so often with her own students she suddenly found herself wondering how her own performance would be judged, listening carefully to the teacher at the front of the class as he introduced himself and explained the purpose of the course, wondering about the others seated in the class, what their expectations were, wondering above everything else if others were feeling as strangely out of place as she was.

That day in the spring of 1992 gave Fraser and other participants in a train-the-trainer workshop at UBC's Research Forest an important perspective on worker training.

"I think it's very good because you're not only learning the skills, you're reacting to the course and instructor in the way we all do as students—what you like, what you don't like. You get to see your role as teacher more clearly, you get to compare it with what you have done in the past as an instructor and how you might change things," she says.

That first day was also one of the few times that participants would spend indoors. For most of the ten day course they'd learn to become better teachers—outside, a distinguishing feature of Swedish-based train-the-trainer programs. The idea is to turn the forest into the classroom.

"The emphasis was on hands-on training," Fraser says, "and the message was you have to make it as close as you can to the real experience to be effective."

Everyone in the program—training consultants, school



Don Whiteside (far left) with a six-man Unit Crew trained last summer.

instructors and contracting supervisors, was well versed in the theories and technical requirements of juvenile spacing, brushing and planting. But the biggest challenge facing them was neither theoretical nor even very technical.

The problem these instructors faced was how to communicate more effectively with adults and more importantly how to drive home the fact that the learning never stops. Teachers and students alike are faced with continuing technological innovation—like new uses for the clearing saw in brushing and spacing, a highlight of this year's workshops.

A gradual shift is occurring in silviculture in B.C., away from an historic emphasis on planting trees to other silviculture activities.

Silviculture workers, says Don Whiteside, Forestry Worker Training Coordinator for B.C.'s Ministry of Forests, will be expected to know a great deal more than they have in the past:

"We're looking at some people from the planting community expanding their skills base to cover things like brushing and spacing that also allows them to work for a longer period of the year.

But they'll also be expected to make more decisions in the field. They'll have to know regulations regarding quality, working around streams and much more. This is skilled work and it's becoming even more highly skilled as time passes and new technologies are introduced."

Hence the emphasis placed on training trainers. How to devise and develop lesson plans. How to accurately assess the specific needs of individual students—or simply demonstrating the safest and most efficient way of using a clearing saw as a brushing tool.

Efforts are already underway to develop B.C.'s own train-the-trainer program. With the help of instructors like Pamela Fraser and some attention to the special nature of B.C.'s forests, it's hoped a program will be established to match the quality of existing programs in Sweden.

The beneficiaries: the province's contractors who will be able to send personnel to learn how to train their own employees. A pilot workshop will be held in Prince George this fall to provide a more broad-based introduction to instructors' training methods.

Softwood Design Challenges Students

Grade eleven and twelve students throughout B.C. are trying their hand at making value-added wood products as part of a competition called the Wood Design Challenge. Many of them became aware of the Challenge by viewing a rap video produced by Linda Coss of COFI, co-ordinator of the competition, and performed by students from Frank Hurt secondary school in Surrey, B.C.

"It's a good opportunity for students to learn more about the province's secondary wood products industry, its products and its career potential," said Coss. "The program calls for students to design and build a value-added product, big or small, using a B.C. softwood and report on its manufacturing potential."

She adds that it can be anything from a table to a toy, something useful or something playful—but the student must come up with the idea and develop it from design to finished product.

Twelve cash awards, including a \$1000 first prize for both winning student and school will be awarded for the project judged to



These student dancers from Frank Hurt secondary school in Surrey, B.C. performed in a video to promote the Wood Design Challenge in the province's schools.

have the best potential for manufacture and export. Prizes will be awarded in the spring of 1993 and winning entries will be shown in a public exhibition soon after.

B.C. Wood Specialties Group, a 51 member group of secondary

manufacturers, is sponsoring the competition which is supported by FRDA II's Opportunity Identification Committee. For more information call 684-0211 or write to Wood Design Challenge, Suite 1200-555 Burrard Street, Vancouver, B.C. V7X 1S7.

Rewards *continued from p.3*

For ten weeks men at both sites at Ferndale and Prince George learned and worked. The results were remarkable. According to Dirk Brinkman whose company Brinkman and Associates conducted the Ferndale training sessions, what these men learned was not as impressive as how they learned.

"People at the institute had never seen anything like it. They have these peepholes on these guys and they were reporting to

us they'd never seen people studying up to 1 a.m. every night throughout the course."

And the rewards weren't long in coming. Shortly after graduation ceremonies in which entire native and non-native communities took part, five of the 12 men at Ferndale were offered jobs—four in silviculture, one in fire protection.

Corrections and Forestry Canada officials were ecstatic.

None more so than Dave Winston, Director of Forest Conservation and Health Research for Forestry Canada and co-chair of the FRDAII program funding Worker Training:

"For the first time they've actually seen the fruits of a training program where the people have left the correctional institution and have employment waiting for them. They're well-trained and they're successful."

Forestry Continuing Studies Network

A Commitment to Life-Long Learning

Every day new information becomes available on sustainable forest resource management. Prior to 1991 independent agencies and organizations developed programs to make this information available to professionals, technical personnel and other individuals who were interested in forest resource management issues, but no institution had the mandate to coordinate these initiatives.

The B.C. Forestry Continuing Studies Network (FCS Network), was founded in 1991, supported by Forestry Canada through FRDA II and Ministry of Forests. The FCS Network was developed based on input from organizations that had historically been involved in forestry education, with leadership from the UBC Faculty of Forestry.

"The FCS Network is an independent, non-profit organization committed to bringing British Columbia quality adult education in sustainable forest resource management," says founding Director Cindy Pearce.

"Learning doesn't end when you leave school—it's a life long experience," says Cindy. "Continuous learning is especially important in forest resource management, where technology and expectations are constantly changing."

Cindy, a Registered Professional Forester who has had ten years experience developing, organizing and delivering forestry education activities in B.C., has spent the last 18 months travelling throughout the province building the Network.

During 1991 UBC joined forces with the educational institutions offering forest programs in B.C.—Selkirk College in Castlegar, Malaspina College in Nanaimo, the University of Northern B.C. in

Prince George and the University College of the Cariboo in Kamloops—to create the FCS Network. Delivery Centres have now been established at these locations. The FCS Network intends to expand to include Northwest Community College in Hazelton and British Columbia Institute of Technology (BCIT) in Vancouver.

These Delivery Centres, along with the Provincial Office at the Faculty of Forestry at UBC, are developing and delivering long-term programs for the adult population of B.C.

Advisory Boards, with broad-based memberships, operate at the provincial and regional level to provide input into strategic and operational planning.

The FCS Network's first priority is to encourage cooperation and partnerships in forestry education.

"This is accomplished," says Cindy, "by maintaining a database of activity descriptions, holding regular workshops to bring organizations together to discuss issues and taking a lead role in developing a provincial strategy in forestry education."

The Network provides services for both interested participants and organizers of education programs.

Individuals who want to attend training sessions can receive a free catalogue twice a year from the FCS Network. These catalogues list upcoming activities that have been organized by a variety of sponsors (see page 8 for selected listings). One can also contact the FCS Network (phone numbers listed below) for "one stop shopping" for forestry con-

tinuing studies activities including brochures and advice on specific activities.

The FCS Network helps organizations develop and deliver forestry education activities throughout the province. They can recommend resource people, arrange for facilities and equipment, handle registration, distribute pre-reading materials, compile evaluations and provide financial management.

They can also produce materials or complete education needs assessments and market surveys.

By way of example, the FCS Network is working in partnership with resource agencies, timber companies, organizations representing logging personnel and BCIT to develop and deliver training on the updated Coastal Fish-Forestry Guidelines. The project is co-funded by these groups and the FRDA II Worker Training Program. The FCS Network is providing advice during the design and production of the course materials and will take a lead role to organize courses and field demonstrations for logging crews and forestry personnel throughout coastal B.C.



Contact the organizer nearest you for more information:

•Dwight Yochim, Vancouver, 822-9282

•April Anderson, Selkirk College, 365-7292

•Laura Poulk, University of Northern B.C., 565-5980

•Tom Rankin, University College of the Cariboo, 371-554

•Tom Molfanter, Malaspina College, 741-2597.

More Silviculture Training Needed

"Companies that want to stay in business have to look at expansion into other work opportunities and stand-tending is the biggest opportunity right now."

A FRDA-funded needs analysis conducted by Pacific Regeneration Technologies (PRT) Inc. appears to support this overall assessment by Don Whiteside of B.C.'s Ministry of Forests. Over 40 percent of contractors responding to a survey completed earlier this year expect to expand into new activities, notably stand-tending. But what's clear is that there are fewer trained people around to do that work.

About 20 percent of the 800 contractors operating in B.C. were surveyed, of which 20 percent or 33 companies responded. Eleven companies were engaged predominantly in tree planting, 16 in stand tending, six in site preparation activities. Companies were also grouped according to size.

PRT identifies some interesting trends: tree planting contractors had, without question, the highest number of both new and experienced workers of any activity in 1991. At the same time, a company involved in spacing had nearly as many spacers as a company doing tree planting had tree planters—a significant departure from other years when companies doing spacing relied on tree planting for most of their activity. More significantly, in 1992 demand for the number of workers in brushing/weeding, pruning and slash burning has moved noticeably upward.

Which leads to another instructive fact: the overall increase in number of workers employed in silviculture is in experienced workers rather than new. The reason for that seems to be that more demanding tasks such as brushing and spacing require more highly skilled workers.

What also is becoming apparent is that at its current rate silviculture training may not keep up with demand. Fully two-thirds of those companies responding to the survey revealed that their workers learn from each other on the job. In-house training by supervisors or trainers, where it did occur, was reserved for new employees. Only two companies, both stand-tending contractors, used the services of an outside agency or training school.

Just as remarkable are conclusions drawn in a second needs analysis of the business skills of contractors in B.C., and the availability of business administration and management training courses. Two facts from that study stand out: a lack of infor-

mation about available business courses and their application to actual contracting conditions prevents contractors acquiring the skills they need to compete effectively; and, while a variety of business courses are widely available, courses in Contract Administration, high on the list of most contractors, are not.

Nevertheless, the province is deemed to be well-served by private and public sector educators in both business administration and management training. In fact, the biggest concern of HR Solutions, the company which performed this needs analysis, is that the list of contractors currently operating in B.C. is woefully out of date. It recommends the list be regularly updated.

The survey group also makes several other recommendations: targeting business courses at new and established contractors as well as contractor supervisors, offering one and two day course formats for greater schedule flexibility, and merging of business training with technical training to maximize participation.

A Silviculture Contracting Business Course for existing and entry-level contractors is expected to go a long way towards upgrading the business skills of B.C.'s contractors. So too is another course designed and developed by Westcoast Forestry Training Centre. This Supervisory Course, described as a logical supplement to six highly successful pilot courses, for potential aboriginal contractors will be conducted this year.

And there's room for optimism where general silviculture worker training is concerned. Large companies in both tree planting and stand-tending have expressed desire for all forms of training assistance. Many are prepared to cover from 25 to 50 percent of training costs. Most companies want workshops on quality standards worker handbooks and training videos, and in-house trainers.



Monte Locke (right), a silviculture contractor, describes pruning techniques.

The B.C. Forestry Continuing Studies Network compiles a Catalogue of Activities from which the following listing is taken. Please contact their provincial office at the UBC Faculty of Forestry at 270-2357 Main Mall, Vancouver, B.C. V6T 1Z4 for more information or a catalogue.

COMMUNICATION TECHNOLOGY IN CONTINUING FORESTRY EDUCATION

This 1-day workshop is designed to familiarize forestry educators with the range of communication technology that is available and the relative merits of each option. A variety of technologies will be demonstrated. The workshop will focus on the appropriate technology for specific activities.

Audience: Individuals involved in the development, design and delivery of forestry education activities.

Date: Jan 1993

Contact: Dwight Yochim, Vancouver B.C. (604) 822-9282. Fax: (604) 822-3106

FIRE MANAGEMENT

This 2-week course provides a basic understanding of fire behaviour and its use to achieve silvicultural, timber, range, recreational and other land management objectives.

Audience: Forestry pupils, Forestry-In-Training, and individuals seeking further training in fire management. Accredited by the ABCPF.

Date & Location: Feb. 22-Mar. 5, 1993, Vancouver, B.C. Fee: \$595

Contact: Debbie Combe, Lorax, Vancouver, B.C. Phone: (604) 737-6000. Fax: (604) 733-4489

COASTAL FISH-FORESTRY GUIDELINES

The Coastal Fish-Forestry Guidelines have been jointly developed by federal and provincial resource management agencies and private industry. Revised guidelines will be issued in the next few months. Several training activities will be held throughout coastal B.C. to explain the new guidelines and review the underlying biological and technical information.

Audience: professional and technical personnel involved in forest resource

management in coastal B.C. Government, timber company and consulting firm employees.

Dates & Locations: beginning Jan. 1993 TBA; throughout coastal B.C.

Contact: B.C. Forestry Continuing Studies Network, Malaspina College, Nanaimo, B.C.

(604) 741-2597; Fax: (604) 755-8749

FOREST ENGINEERING TECHNOLOGY TRAINING

Environmentally sound road construction practices are critical to sustainable forest resource management in B.C. The Timber Harvesting Branch of the B.C. Forest Service, in cooperation with the B.C. Institute of Technology, has developed courses in Forest Engineering Technology to provide up-to-date training opportunities. Courses are offered as seminars, distance education and part-time studies.

Audience: those responsible for the planning, design, construction, maintenance and deactivation of forest roads.

Dates and Locations: throughout B.C. beginning in Nov. 1992

Contacts: Seminar courses - Dwight Yochim. Distance Education - Shari Monsma, BCIT, 3700 Willingdon Ave., Burnaby, B.C. V5G 3H2. Phone: 432-8784; FAX: 436-6113.

INTEGRATED RESOURCE MANAGEMENT

This 2-week course focuses on the application of sound resource management practices to achieve desired objectives with a minimum of conflict.

The course includes training in conflict resolution.

Audience: Individuals involved in management of natural resources, including planning, conflict resolution, and public involvement. Accredited by the ABCPF.

Instructor: Fred Marshall

Date & Location: Mar. 1-12, 1993, Greenwood, B.C. Fee: \$500

Contact: Fred Marshall, Marshall Forestry Services, Midway, B.C. Phone: (604) 445-6496 Fax: (604) 449-2666

WILDLIFE/DANGER TREE ASSESSMENT

A 1/2-day seminar and a 3-day course are available. The 1/2-day seminar provides information about the wildlife value of tree habitats and the dangers snags pose for workers. The 3-day course is designed to train qualified assessors to evaluate and ensure worker safety by marking danger trees for removal or by locating boundaries of 'no-work' areas prior to workers being on the site.

Audience: forest resource managers, logging personnel, worker safety experts, wildlife habitat specialists. Those requiring qualification to complete field assessments should attend the 3-day course. Others should attend the 1/2-day seminar.

Dates & Locations: TBA beginning Nov. 1992; throughout B.C.

Fee: \$175 (\$210 late)

Contact: B.C. Forestry Continuing Studies Network or the Delivery Centre nearest you.

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