

Research and the Boreal Forest

The boreal forest plays a vital role in sustaining ecological cycles, including wildlife diversity and carbon storage. The boreal forest also provides timber resources from which we derive valuable wood products, and jobs in our communities.

To manage this resource wisely, we depend on 'leading edge' scientific information. In response, forest companies and related organizations in northwest Alberta are sponsoring world-class environmental and wood products research. Many of these research projects are large scale and receive funding from a variety of partners.

Boreal Forest Research Centre

The Boreal Forest Research Centre promotes public awareness, research coordination, technology transfer, and education. The Boreal Forest Research Centre expands upon the previous 5 years work of the Boreal Wood Centre.

The Boreal Forest Research Centre is guided by a program management group representing the 9 funding partners. Fairview College houses and administers the Centre which, in turn, is staffed by a program manager and assistant.

Partners include the forest companies and related organizations that are active in the north central Peace River region. Partners include:

Alberta Conservation Association
Alberta Sustainable Resource Development
Boucher Bros. Lumber Ltd.
Canadian Forest Products Ltd.
Daishowa-Marubeni Ltd.
Fairview College
K P Wood Ltd.
Manning Diversified Forest Products Ltd.
Zavisha Sawmills Ltd.

Goal

The Boreal Forest Research Centre informs the public about the science and complexity of forest management, thus enhancing public awareness and education. The Centre facilitates the development of research priorities within the northwest boreal region. The research topics include natural resources management and value-added wood products.

Through technology transfer and education, the Centre keeps our forest practitioners up-to-date with current practices and issues.

Also, the Centre creates opportunities for high school students to explore education and careers within the boreal forest.



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Forest Explorers gets students and public up close to leading edge forest research



The third biennial Forest Explorers did more than give students and the public a heads-up on what's happening in this growing industry. The forum was also a demonstration of the diversity of the forest sector, and it surpassed the previous two events in student numbers and breadth of participation.

The legacy of Forest Explorers goes back to 1997 with the support of Manning Diversified Forest Products Ltd. Research Trust Fund.



Norm Boucher talking to Les Josza of Forientek

"It succeeded as an event on several levels and is hopefully an inspiration for students who want to pursue a career in forest management or the forest products industry," said Hugh Seaton, Manager of the Boreal Forest Research Centre and organizer of the conference.

Attending Schools

Cadotte Lake
Dr. Mary Jackson
Fairview College
Fairview High School
Fort Vermilion Public School
Glenmary School
High Level Public School
Hines Creek High School
Little Buffalo
Northern Lakes College
Paul Rowe High School
Peace River High School
St. Thomas More School
T.A. Norris Junior High

Norm Brownlee, Information Officer with Alberta Sustainable Resource Development, agrees. "The main intent is to make people realize the research is happening here. We want to make people aware that it's happening in their own back yard," said Brownlee.

Held at the Travellers Motor Hotel in Peace River, starting with a banquet the evening of November 20 and continuing all day November 21, the forum brought the public up close with leading edge research in the boreal forest. From applied forest genetics to the latest in product development, and from the mixed wood stand to the research lab, residents of Peace River got a hands on feel for this diverse and rapidly changing field.

Moreover, students on the verge of choosing career paths got the opportunity to interact with some of the Alberta's top environmental scientists. An estimated 550 students from 14 high schools, from High Level to Hines Creek, attended November 21. A selection of seminars was available, either optional or required by their teachers. The remaining part of their day

was spent in the display room, where over 30 presenters welcomed students' questions and listened attentively to their insights.

"I think it's great for the students. We hope the students will pick up ideas and (help) come up with new engineered wood products. Using forest waste, for instance," said Wayne Clark, executive with Wood Truss Association of Alberta.

On the resource side, forest managers are learning that, far from controlling this complex biological entity, they're having to rethink their past methods and incorporate a broader perspective. There's the ideological way of managing the forest - the traditional European approach to management. It can be expensive and is increasingly the target of environmentalists. Or, there's the common sense way, said Dr. Vic Leiffers, professor at the University of Alberta's Renewable Resources Department during the Tuesday night banquet. ■



T.A. Norris students with seedlings from Corrine Andriuk, of Alberta Tree Improvement and Seed Centre

What the presenters had to say

At the banquet November 20, Hugh Seaton, Manager of the Boreal Forest Research Centre, dedicated Forest Explorers 2001 to the students and the people of the Peace Country who attended. "It's a positive way to promote the forest industry," said Seaton.

Daniel Dunwoody, President of Fairview College, said the College has come on board the Boreal Forest Research Centre with a commitment to bigger and better things in forestry training and research.

Lorne Mann, Mayor of Peace River, commended Forest Explorers as an opportunity to learn about the ecology and management of the boreal forest. "Good research can allow a proactive approach as opposed to a reactive one," he told the gathering.

Tim Vinge, with Canadian Forest Products in Hines Creek, introduced Dr. Vic Leiffers who reviewed the changing front of management policy in boreal mixed wood forests. Dr. Leiffers is chair of the Center for Advanced Forest Management. "The reasons (for traditional management) are entrenched ideology, government policy, industry investors not willing to share the same piece of land, and suspicion between industries. I hope we have overcome some of these and go more into mixed wood management. It's more productive," said Leiffers.

Dr. Garry Scrimgeour, researcher with the Alberta Research Council, gave citizens an update on the Northern Watershed Project, which is establishing some baseline data on the effects of watersheds management on fish communities. "How do we tailor forest practices, and how much tailoring is needed as opposed to single cloth approach," said Scrimgeour. Forest managers and policy makers are recognizing the cumulative effects of development in the boreal forest.

Les Josza, researcher with Forintek Canada Corp., led the gathering through "Wood 101", a crash course on wood quality and how it relates back to management of the resource. He demonstrated qualities such as wood density and tensile strength with the help of his mini classroom display,

complete with models and overhead projector show.

"This kind of forum is very important for the forest products industry, not only in the forest aspect but also in the manufacturing plant. There's a shortage of trained, skilled people, particularly in secondary manufacturing," said Josza. "I think what we're trying to do is show young people that forest products is an exciting industry. There's a whole spectrum of careers in the forest products industry."



Dr. Jim Stewart, Canadian Forest Service

Adam James, biologist with Boreal Caribou Research Program, agrees. "Forest Explorers reminds you there's a whole range of pieces to the forestry puzzle. It's important for students to see that."

He tells students that the Caribou program answers questions industry needs to know in order to conduct business, while preserving this threatened species. "It's good to make them aware; if they want homes out of 2 x 4's, they have to know how it all impacts," said James.

Bob Deacon, chair of Lesser Slave Lake Bird Observatory, thinks this kind of forum is an excellent venue for sharing ideas and interacting with the true owners of the resource. "It's a very good idea, a way to reach the youth and perhaps instill an interest and increased awareness of the natural surrounding," he said.

Presentations

Lesser Slave Lake Bird Observatory
Bob Deacon, Lesser Slave Lake Bird Observatory

Firesmart, Chisholm Fire
Norm Brownlee, Alberta Sustainable Resource Development

Hotchkiss River Mixedwood Management Demonstration
Dan MacIsaac, Canadian Forest Service

Enhanced Forest Management
Vic Lieffers, University of Alberta

Interactions Between Snowshoe Hares and Forestry
Larry Roy, Alberta Research Council

Apprenticeship and Industry Training
Fredrick Hislop, Alberta Human Resources and Employment

Engineered and Structural Wood Building Products
Tammy Day, WoodWORKS!, Canadian Wood Council Forest Wayne Cark, Western Wood Truss Association

White Spruce Regeneration
Jim Stewart, Canadian Forest Service

Genetics & Tree Improvement
Leonard Barnhardt, Alberta Tree Improvement and Seed Centre

Boreal Caribou Research Program
Adam James, Boreal Caribou Committee

Northern Watershed Project
Garry Scrimgeour, Alberta Research Council

Nurient Cycling in Lodgepole Pine
Donald Pluth, University Alberta

Environmentally Smart Buildings Using Wood Products
Dave McRae, Forintek Canada Corp.

Hydrology
Cecilia Feng and Graham Hillman, Canadian Forest Service

continued page 4

The Lesser Slave Lake Bird Observatory is a corporate/public funded program, with contributions from Manning Diversified Forest Products Ltd. and Weyerhaeuser. Its mandate, explains Deacon, is to monitor migration and bird productivity on Lesser Slave Lake, which is a flyway for waterfowl and other birds as well as a breeding area.

Corrine Andriuk, technologist at the Alberta Tree Improvement and Seed Centre in Smoky Lake, says this is her third time at Forest Explorers. They attend because it gives students a hands-on encounter with the foundation of the logging industry and the forest, the trees themselves.

"It makes them aware of different types of cones, the different types of trees," said Andriuk. She notes the public doesn't always understand their work. "It lets them know what we're doing. We're probably the only ones in Alberta doing research on wood specific gravity and wood fibre length."

She understands the importance of how the research can impact the resource, and the importance of having an informed public. "This kind of event makes people aware

that forestry is up and coming, and if we don't look after it, we'll lose the resource." Leonard Barnhardt, Site Manger at the Alberta Tree Improvement and Seed Centre, says one of the things forest geneticists try to optimize is the trade off between greater diversity and genetic gain. "We want to maintain enough diversity so that the forest can regenerate itself. Social issues come into the front and centre in all of this."

Dan MacIsaac, Canadian Forest Service project leader on the Hotchkiss River Mixedwood Demonstration project, is excited about the opportunity to bring the public up to speed on the Hotchkiss Demonstration area. "We're here to explain to the public that what we do is critical, so people understand that we're looking at new methods of harvest in the forest and improving on current methods," he says, noting that research needs to fit the times.

Training and education play a critical role in any industry, and this sector had a strong presence at the forum. Fairview College, Alberta Human Resources and Employment, University of Alberta and the Northern Alberta Institute of Technology, as well as the Mackenzie Forest Education

Society, were there.

Bert Wassing, instructor at N.A.I.T., said forums like this are their bread and butter. "It's nice to be able to talk to that many students in one location. Forestry is part of the livelihood of this area," he asserts.

"They're somewhat familiar with the industry and intrigued by the different aspects of, but they tend to see it as just working on the forklift or logging. We can open their eyes," said Wassing.

David McRae, with Forintek Canada Corp., agrees there's a real-time link amongst all the presenters, and it isn't lost on students. "There's a link between research and industrial progress. The students pick up on that, get a sense of the cohesiveness among all the disciplines of the industry." ■

What the students had to say

Students at Forest Explorers 2001 quickly found out the best way to learn is first to be told, then to see, then to do. While acting on what they learned is up to them, there was a chance to get close to the subject matter.

Cassie Ferguson, a grade 12 Peace River High student, got new insights into woodland caribou. "Before, I saw them as just another animal, something with four legs," said Cassie after taking in the Boreal Caribou Research Program seminar, given by Adam James.

Her first seminar was tree genetics. While interesting, she said the caribou forum was something she 'can relate to.' Caribou are a threatened species, and the decisions Albertans make about the forest will have a big impact, James told students. "Caribou provide an indication of what's happening to the entire forest. We have to answer the question, 'Are we sustaining the whole ecosystem or are we losing species?'"

This was an eye opener for Cassie. "We learned about predation, their goals for protecting caribou and problems regarding their protection, how industry affects the population," said Cassie. "As consumers,

we need to know more about our impacts."

Brandon Noskey, a student from Little Buffalo, liked Firesmart because of its relevance to their lives. "We learned safety of your home, how to protect your home... It's a good thing to know. We learned how to preserve the forest and prevent fires."

As for the Firesmart presenter, Norm Brownlee, he said the intent was to focus on the cost and the waste associated with wildfires. "Kids were quite amazed at how much we spend on fire fighting; we emphasized the cost and energy used to put out fires." ■



Caribou presenter Adam James with Cassie Ferguson, Robyn Desfosses, Jeanne Lawrence, and Stephanie Bacon of Peace River High School