

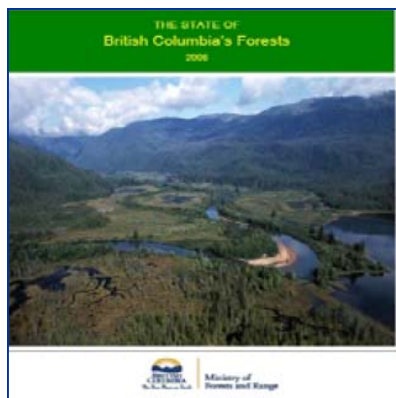


## NRES WEEKLY NEWS

April 14 - 18, 2008

A newsletter for faculty, staff and students  
who participate in the  
Natural Resources & Environmental Studies Institute  
and NRES Graduate Programs

### COMING EVENTS



**Tom Niemann, RPF**  
Forest Practices Branch  
BC Ministry of Forests  
and Range

**DON'T MISS THE LAST  
COLLOQUIUM OF THE SEMESTER**

#### **The State of British Columbia's Forests—2006**

Tom Niemann, Ministry of Forests and Range, will present on the ministry's report *The State of British Columbia's Forests—2006*, for which he was the project manager and author. He will discuss its content and potential uses, along with plans for the next edition, which may include opportunities for UNBC involvement. The report presents information on indicators of sustainable forest management, along with ministry assessments of indicator state, trend and information adequacy. It is a highly accessible online tool for faculty and students that provides concise text, graphics, data tables and many links for environmental, economic, social and governance indicators. Elements of the report have been adopted by Ontario and Quebec for their state of forests reports.

**Friday, April 11, 2008**

**3:30 - 4:30 pm**

**Lecture Theatre, 7-152  
NOTE ROOM CHANGE**

Light refreshments will be served

### The Cellular and Molecular Biology Interest Group presents....

**Dr. Janice Cooke**

Department of Biological Sciences, University of Alberta

#### **“Using Functional Genomics to Study Adaptive Traits in Forest Trees”**

Plants have an exquisite capacity to sense and respond to changes in their environment. These responses are generally mediated at the level of gene expression: in some cases, these responses involve subtle shifts in the expression levels of a few genes, while in others a wholesale reprogramming of gene expression occurs. Responses to environmental cues - such as photoperiod, soil nutrient availability, and pests - can impact plant growth and development, which in turn affects plant productivity. This is particularly evident in perennial plants such as forest trees, where growth and developmental effects are accumulated over many years of growth. We are taking a genomics approach to identify and characterize gene networks that mediate a forest tree's responses to environmental cues, and to connect molecular-scale processes with those that occur at the cellular and whole plant level. Genomic resources are available for a number of forest tree species, including *Populus*, *Picea*, and *Pinus* spp. These resources form the basis for three major projects that are ongoing in my laboratory. I will give an overview of these projects, then describe in more detail one project in which we aim to identify genes that account for phenotypic variation in bud formation in white spruce (*Picea glauca* [Moench] Voss).

If you would like to meet with Dr. Cooke, times are available Friday afternoon. Please contact Brent Murray to schedule. Phone: 960-5638 or email [murrayb@unbc.ca](mailto:murrayb@unbc.ca)

**FRIDAY, APRIL 11, 2008  
10:30AM - 11:30AM  
ROOM 6-307**

Light refreshments will be served

## **THESIS DEFENCES**

Ms. Joanna Kafarowski is a candidate for the degree:  
**Doctor of Philosophy in Natural Resources and Environmental Studies**

Ms. Kafarowski will be defending her dissertation entitled:

"INUIT WOMEN, DECISION-MAKING AND CONTAMINANTS"

Co-Supervisors: Drs. Deborah Poff and Leslie King

**Date:** April 14, 2008

**Time:** 1:00 pm

**Place:** Room 6-205, Conference Centre

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Mr. Dino Gigliotti is a candidate for the degree:  
**Master of Science in Mathematical, Computer, and Physical Sciences (Physics)**

Mr. Gigliotti will be defending his thesis entitled:

"MODELLING HEAT TRANSFER IN THE PRE-CONDITIONING PROCESS USED IN PLYWOOD MANUFACTURING"

Co-Supervisors: Drs. Patrick Montgomery and Patrick Mann

**Date:** April 16, 2008

**Time:** 1:00 pm

**Place:** Room 6-205, Conference Centre

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Mr. Mohammad Rahman is a candidate for the degree:  
**Master of Science in Natural Resources and Environmental Studies (Environmental Science)**

Mr. Rahman will be defending his thesis entitled:

"DEVELOPMENT OF FUZZY MULTI-CRITERIA DECISION ANALYSIS APPROACH FOR CONTAMINATED SITE MANAGEMENT"

Co-Supervisors: Drs. Jianbing Li and Jueyi Sui

**Date:** April 18, 2008

**Time:** 9:00 am

**Place:** Room 6-205, Conference Centre

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Miss Yumiko Miyamoto is a candidate for the degree:  
**Master of Science in Natural Resources and Environmental Studies (Forestry)**

Miss Miyamoto will be defending her thesis entitled:

"GROWTH RESPONSES OF THREE COEXISTING CONIFER SPECIES TO CLIMATE VARIABLES  
ACROSS A RANGE OF CLIMATE CONDITIONS"

Supervisor: Dr. Scott Green

**Date:** April 18, 2008

**Time:** 9:00 am

**Place:** Room 6-307, Conference Centre

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Mr. Doug McMillan is a candidate for the degree:  
**Master of Science in Natural Resources And Environmental Studies (Environmental Science)**

Mr. McMillan will be defending his thesis entitled:

"THE REDUCTION OF PETROLEUM HYDROCARBONS IN SOIL UNDER SALINE CONDITIONS USING ULTRASOUND"

Supervisor: Dr. Jianbing Li

**Date:** April 18, 2008

**Time:** 2:00 pm

**Place:** Room 1079  
Senate Chambers

**REMINDER:** Share your information about recent publications, grants, and/or other honours you may have received with others interested in NRES issues.

**PLEASE EMAIL ALL INFORMATION AND MATERIAL TO ELISSA ZEMLAK: [zemplak@unbc.ca](mailto:zemplak@unbc.ca)**

## TRAVEL

**Keith Egger** is travelling to Ottawa from April 13<sup>th</sup>-16<sup>th</sup> to participate in the annual meeting of the "Climate Change Impacts on Canadian Arctic Tundra Ecosystems" (CiCAT) research group. This project is a multi-disciplinary study funded via the federal government contribution to the International Polar Year.

## CONGRATULATIONS

Greg Smith, MSc Candidate under the co-supervision of **Staffan Lindgren** and adjunct **Allan Carroll**, Pacific Forestry Centre, has been awarded the prestigious Western Forest Insect Work Conference Memorial Scholarship for 2008. The award includes an invitation to make a presentation to the 2009 meeting. Greg studies the role of secondary bark beetles, specifically *Pseudips* (*Orthotomicus*) *mexicanus*, in the switch from endemic to incipient epidemic population phases of the mountain pine beetle. UNBC has links to three of the eight recipients. **Brian Aukema**, now a CFS scientist located at UNBC, won the award in 2003, and Kathy Bleiker (M.Sc. 2001, **Staffan Lindgren** supervisor) in 2004 (see <http://www.fsl.orst.edu/wfiwc/awards/scholar-recipients.htm#scholrecips> for a list of recipients). Greg is the first MSc student to have won this award. Congratulations Greg!

## RESEARCH GRANTS

**Staffan Lindgren** has been awarded two research grants. The first one for \$50,000 is from the BC Ministry of Forests and Range, Coastal Forest Region for a study designed to evaluate the utility of functional groups of arthropods as potential biodiversity indices. Given the endearing acronym CREAP (Coastal Region Experimental Arthropod Project), this study will be conducted in collaboration with Melissa Todd. **Sean Henderson**, who will be starting his MSc graduate program this summer will conduct his research within the framework of the project. The second grant is for \$31,000 from the Forest Genetics Council (Forest Pest Management) to fund mark-release-recapture studies of the western conifer seed bug at Kalamalka, Vernon, in collaboration with Dr. Ward Strong, BC Ministry of Forests and Range, and Dr. Sylvie Desjardins, UBC Okanagan. Part of this project will provide the topic of research for **Tamara Richardson**, a new MSc student

NRES Masters student, **Lesley Dampier**, who is co-supervised by **Paul Sanborn** and **John Clague** (SFU Earth Sciences and UNBC adjunct), received a Geological Society of America graduate student research grant of \$2450. This funding will help support Lesley's research on soil genesis in relation to the glacial history of the central Yukon.

**Matt Beedle** (NRES PhD student) received \$1070 from the Geological Society of America for student grant entitled, "The relation between climate and glacier fluctuations in the northern Rocky Mountains, British Columbia, Canada.

Shawn Marshall (UofC), **Brian Menounos**, Dan Moore (UBC), and Gwenn Flowers (SFU) received an NSERC equipment grant for an ice-penetrating radar system (\$42,434).

## PUBLICATIONS

**Beedle, M.J.**, M. Dyurgeroy, W. Tangborn, S.J.S. Khalsa, C. Helm, B. Raup, R. Armstrong, and R.G. Barry (2008). Improving estimation of glacier volume change: a GLIMS case study of Bering Glacier System, Alaska. *The Cryosphere*, 2, 33-51.

**Menounos, B., J. J. Clague**, G. Osborn, B. H. Luckman, T. R. Lakeman, and R. Minkus (2008), Western Canadian glaciers advance in concert with climate change circa 4.2 ka, *Geophys. Res. Lett.*, 35, L07501, doi:10.1029/2008GL033172.