



NRES WEEKLY NEWS

March 30 - April 3, 2009

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

COMING EVENTS

This FRIDAY

Dr. Gerry Kutney

Chief Operating Officer, Alterna Energy

Biomass → Biocarbon → Bioenergy & Bioproducts



Biomass has been the energy staple of mankind through the ages. Fossil fuels, such as coal and oil, have only superseded biomass for but a brief period. For example, the world did not burn more coal than wood until the beginning of the 20th century. Oil only came into its own later in the century. We are entering an era, where biomass is beginning to resume its traditional position. In the use of biomass as a source of bioenergy, the critical factor is energy density. Wood-based bioenergy was revolutionized through the development of wood pellets. Whereas green wood chips have an energy density of ~9.5 GJ/te, a wood pellet has nearly double this amount. Coal, though, is the standard solid fuel in regard to power production, which has an energy density of ~30 GJ/te. Biocarbon, while produced from the same type of biomass as wood pellets, has an energy density equivalent to that of coal, or over 60% higher than a wood pellet. Biocarbon, also called char or charcoal, is manufactured from any biomass through carbonization. There are many markets for the product including terra preta (agricultural applications), activated biocarbon, and energy pellets. There is especially much interest in the latter application as a renewable energy replacement for fossil fuels, such as coal.

Light Refreshments will be Served

March 27, 2009

3:30 - 4:30 pm

Lecture Theatre 7-238



Dr. Martin-Hugues St-Laurent

Professor in animal ecology
Université du Québec à Rimousi
& Groupe de recherche BioNord

Next FRIDAY

**Of forest, wildlife and men:
anthropogenic disturbances influence wildlife in Quebec's boreal forests**

Understanding the relationships among forest ecosystems, forest management and wildlife conservation is a prime issue all across the Canadian boreal forest. Several species are currently threatened by anthropogenic disturbances, and ecological equilibrium is sometimes destabilized, leading researchers, managers and industry to innovate by creating new sustainable scenarios of timber harvest and land use.

In this talk, I will present recent findings of our research team regarding how several vertebrate species react to persistent anthropogenic disturbances in Quebec's boreal forest. Using results on forest birds and mammals, I will explain how closely forest management is linked to wildlife conservation and research in Quebec, highlighting pros and cons of some of our management strategies. Finally, I will provide comparisons between forest management in Quebec and British Columbia in order to highlight what we can learn from each other.

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April 3, 2009

3:30 - 4:30 pm

Lecture Theatre 7-238

OTHER COMING EVENTS

Global Fridays
Senate Chambers
12:00—1:30 pm

March 27, 2009

Dr. Gordon Laxer, Professor, Department of Sociology, University of Alberta

If the U.S. can have energy independence and security, why can't Canada?

UNBC Fish & Wildlife Student Chapter of TWS — Quiz Bowl

The UNBC Fish and Wildlife Student Chapter of TWS will be holding a Quiz bowl on Friday, March 27th as an end-of-semester event. Student Quiz Bowls are held at all major meetings of The Wildlife Society and the UNBC Student Chapter Executive has decided to host one for Student Chapter members and is working on prizes for the winning team. The Quiz bowl will start at 7:00 pm in the Bentley Centre (7-172). Please consider dropping by the Bentley Centre to watch this event.

PUBLICATIONS

Hooper, J., **Rea, R.V.** (2009) "The use of an orthotic casting foam as a track-plate medium for wildlife research and monitoring". *Wildlife Biology* 15:1-7.

Pickles, B.J., Genney, D., Anderson, I.C., Alexander, I.J. (2009) "Spatial Ecology of Ectomycorrhizas: Analytical Strategies." In: Azcon-Aguilar, C., Barea, J.M., Gianinazzi, S., Gianinazzi-Pearson, V. (eds) *Mycorrhizas. Functional Processes and Ecological Impact*. (Springer: Berlin) pp 155-165.

Smith, G.D., Carroll, A.L., **Lindgren, B.S.** (2009) "The life history of a secondary bark beetle, *Pseudips mexicanus* (Coleoptera: Curculionidae: Scolytinae), in lodgepole pine. *Can. Entomol.* 141: 56-69.

This article was also selected as a feature article by BioOne (see www.bioone.org/page/about/content/featured).

CONFERENCES / TRAVEL

Brian Aukema is off to Toronto March 30-April 1 to provide input on a national Canadian Forest Health Genomics Initiative and enjoy expensive appetizers. Colleagues **Dezene Huber** and **Brent Murray** are similarly involved in a large multidisciplinary project investigating the system genomics of mountain pine beetle, funded by Genome BC and Genome Alberta.

Kevin Hall (Geography) will be undertaking his 14th Antarctica expedition, leaving by sea from Cape Town for a 5-7 day voyage through the Roaring Forties and the Filthy Fifties. Leading a team of geologists, on behalf of the South African Antarctic Programme, he will be reconsidering the glacial sedimentology of an area he first investigated 35 years ago — when there was still an ice cap on the island. With the loss of most of the ice cap so there is access to areas previously unavailable. He will also be studying the weathering of the oceanic basalts and, on behalf of Dr. Arocena, collecting rock samples with lichens in a vertical transect from the newly exposed areas down to the coast — where one of the largest penguin colonies in the world is found.

We're on the web at : www.unbc.ca/nres/newsletter

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 MICHELLE KEEN: keenm@unbc.ca

UPCOMING THESIS / PRACTICUM DEFENCES

Ms. Monika Gorzelak is a candidate for the degree:
Master of Science in Natural Resources and Environmental Studies (Forestry)

Ms. Gorzelak will be defending her thesis entitled:
"Identification and Community Profiling of *Vaccinium membranaceum* Root-associated Fungi
Over an Elevation Gradient in BC's Eastern Rocky Mountains"

Supervisor: **Dr. Hugues Massicotte**

Date: April 14, 2009 Time: 9:00 am Room: Senate Chambers, Room 1079
UNBC Prince George campus

Ms. Nicole Balliet is a candidate for the degree:
Master of Science in Natural Resources and Environmental Studies (Forestry)

Ms. Balliet will be defending her thesis entitled:
"Genecology of 20 Paper Birch (*Betula papyrifera* Marsh.) Sources from British Columbia and Northern Idaho"

Supervisor: **Dr. Chris Hawkins**

Date: April 15, 2009 Time: 9:00 am Room: Senate Chambers, Room 1079
UNBC Prince George campus

Mr. Rey Singh is a candidate for the degree:
Master of Social Work

Mr. Singh will be defending his practicum entitled:
"Cultural Centre Points Community Building: Indigenous Social Work Ontology"

Co-Supervisor: **Dr. Pamela Wright**

Date: April 15, 2009 Time: 1:30 pm Room: 6-305, Conference Centre
UNBC Prince George campus

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

Mr. Phaneuf will be defending his thesis entitled:
"Numerical Modelling of Airflow Within and Above Forests and Forest Clearings Using Computational Fluid Dynamics"

Supervisor: **Dr. Peter Jackson**

Date: April 16, 2009 Time: 10:00 am Room: 6-307, Conference Centre
UNBC Prince George campus

Ms. Crystal Braun is a candidate for the degree:
Master of Science in Natural Resources and Environmental Studies (Biology)

Ms. Braun will be defending her thesis entitled:
"The Role of Weather and Topography in the Development of *Dothistroma septosporum*"

Supervisor: **Dr. Kathy Lewis**

Date: April 21, 2009 Time: 9:00 am Room: Senate Chambers, Room 1079
UNBC Prince George campus



UPCOMING THESIS / PRACTICUM DEFENCES (cont'd)

Ms. Janice Allen is a candidate for the degree:

Master of Science in Natural Resources and Environmental Studies (Environmental Science)

Ms. Allen will be defending her thesis entitled:

“Source Apportionment of Fine and Coarse Fraction Particulate Matter in Prince George and Kelowna, British Columbia”

Supervisor: **Dr. Peter Jackson**

Date: April 21, 2009

Time: 2:00 pm

Room: Senate Chambers, Room 1079
UNBC Prince George campus
