NRES WEEKLY NEWS
March 16 - 20, 2009

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

COMING EVENTS

NRESI RESEARCH COLLOQUIUM SERIES

This FRIDAY

Dr. J. S. Nelson

Professor Emeritus, Dept. of Biological Sciences, University of Alberta

How Fish Get Their Common Name

Dr. Joe Nelson, author of Fishes of the World (4 editions) and Chair of the AFIS/ASIH Committee on Names of Fishes, will discuss how we have been successful in North America in achieving uniformity in common names after going through a period of mass confusion. In a real BC success story with victory and compromise, he will look at how Pacific salmon and other BC fish species got their current names. An exploration will be made into how we decide how many species there are. This will take us into areas studied here in BC and Williston Reservoir—kokanee vs sockeye and suckers and their hybridization in Clucultz Lake. It will also take us into looking at species inflation.

March 13, 2009 **3:30 - 4:30 pm** **Lecture Theatre 7-238**

Meet and Greet with Dr. Nelson
4:30—5:30 pm, Canfor Wintergarden

Refreshments will be Served

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This Colloquium is sponsored by the Peace/Williston Fish and Wildlife Compensation Program

Dr. Lori Daniels

Associate Professor, Dept. of Geography, UBC

Fire History of the Southern Rocky Mountain Trench: 1540-2003

Next FRIDAY

My research group and I have used tree rings to reconstruct the fire history and quantify the climate conditions associated with historic fires in the mountain forests of the Rocky Mountain Forest District. Our goal is to provide baseline data on fire frequency that can be used to guide ecologically-based restoration of the historic fire regime and fuels mitigation.

Historic fires burned during significant droughts and were most common during multi-decadal periods of warm and dry climate driven by changes in the circulation patterns in the Pacific and Atlantic Oceans. Had fires burned and scarred trees as frequently throughout the 20th century as they did over the entire fire record, we would have expected 20 fire years between 1944 and 2004. Our fire scar records included only 6 fires since 1944. The low incidence of fire during the past 65 years suggests fire suppression is having a substantial impact on the fire regime of forests in the southern Rocky Mountain Trench. We have two recommendations for managers:

1. Management decisions based on fire regime attributes must account for the full range of natural variation. In many montane forests, low to moderate severity fires burned on average every 15 to 75 years.
2. Long fire free intervals during the 20th century are the result of climate variation and fire suppression. Where fire suppression has altered the fire regime, fuels likely have accumulated and may result in severe fires. Ongoing research is designed to test for the impacts of fire suppression on forest composition, structure and fuels.

Light Refreshments will be Served

March 20, 2009 **3:30 - 4:30 pm** **Lecture Theatre 7-238**

OTHER COMING EVENTS

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

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March 13, 2009

Boris Kagarlitsky, Director, Institute for the Study of Globalization and Social Movement, Moscow

Empire of the Periphery: Russia and the World System

4th Annual NRESi Annual Poster Presentation and Lecture
Thursday, March 19, 2009
UNBC Atrium

Poster Presentation
5:00—6:00 Atrium Administration Building

Featuring research by NRES graduate students and NRES Institute members. Sign-up sheets will be posted at the Administrative Assistants' stations on each floor of Building 8. Those off campus can email Ken Otter (otterk@unbc.ca) to indicate their intention to present.

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PUBLIC LECTURE

7:00 pm — Canfor Theatre 6-213

Dr. Lori Daniels

Associate Professor, University of British Columbia

Widespread Increases in Tree Mortality Rates in Old Forests

In a recent collaboration with several forest ecologists studying old-growth forests, we determined that tree death rates have more than doubled over the last few decades. Our analyses of longitudinal data from unmanaged old forests in the western United States and southwestern British Columbia showed that background mortality rates have increased rapidly in recent decades, with doubling periods ranging from 17 to 29 years among regions. Increases were also pervasive across elevations, tree sizes, dominant genera, and past fire histories. Forest density and basal area declined slightly, which suggests that increasing mortality was not caused by endogenous increases in competition. Because mortality increased in small trees, the overall increase in mortality cannot be attributed solely to aging of large trees. Regional warming and consequent increases in water deficits are likely contributors to the increases in tree mortality rates.

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

PUBLICATIONS

Burford, J.E., **Déry, S.J**., Holmes, R.D. (2009) "Some aspects of the hydroclimatology of the Quesnel River Basin, British Columbia, Canada". *Hydrol. Proc.* 23, doi: 10.1002/hyp.7253

Einbinder, Nate (MA NRES, supervisor: **Catherine Nolin**) (2009) "Guatemalans Resist Mega-Mines, Hydropower Dams". *Environmental News Service*, http://www.ens-newswire.com/ens/mar2009/2009-03-05-02.asp

Hurley, M.V., **Rapaport, E.K**., **Johnson, C.J**. (2009) "Utility of expert-based knowledge for predicting wildlife-vehicle collisions". *Journal of Wildlife Management*. 73: 278-286.

Tong, J., **Déry, S.J**., Hu, B., Chen, Y., Yang, C., Rong, Z. (2009) "On-board real time absolute radiometric calibration for thermal infrared channels of Chinese geostationary meteorological satellites". *J. Atmos. Oceanic Tech.* 26: 281-289.

CONFERENCES / TRAVEL

Tara Barrier (MSc Biology, supervisor: **Chris Johnson**) is in Yellowknife, NT, this week conducting field work on the winter habitat ecology of barren-ground caribou.

David Connell (planning for local food), Kerry Pateman (homelessness), and Ian Picketts (climate change) each presented results of their research at the **Prince George Smart Growth on the Ground** event on March 5. The event is part of a collaborative visioning exercise. The goal is to create a vision of future growth in downtown Prince George based on Smart Growth Principles and guided by extensive public consultation.

David Connell traveled to Westbank, BC on March 7 to present at the joint meeting of the BC Association of Farmers Markets, Small Scale Food Processors Association, and BC Agri-Tourism Alliance. His presentation, titled "Eco-advantage of Climate Change: An Overview of Issues and Opportunities", focused on climate change and agriculture in BC.

ANNUAL MEETING OF THE WESTERN DIVISION OF THE CANADIAN ASSOCIATION OF GEOGRAPHERS (WDCAG)
Nanaimo, BC
5-7 March 2009

Faculty members from GEOG took a group of about 25 graduate and undergraduate students to participate in Annual Meeting of the Western Division of Canadian Association of Geographers at Vancouver Island University in Nanaimo, BC (March 5-7, 2009).

UNBC undergraduate student, graduate student & faculty (in bold) presenters and titles:

PAPERS

Lila Bonnardel – Chasing Freedom and Self-Reliance: Breaking the Cycle of Dependency amongst Aboriginal Peoples

Melanie Grubb – Kitsumkalum Lake: A History of Sedimentary Variance

Jennifer Herkes – Planning for Resilience: A Case Study of Kitimat, BC

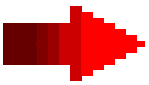
Chelan Hoffman – Governing Rural Regions: A Case Study of the Cariboo-Chilcotin Beetle Action Coalition

Anne Hogan – Housing, Health, and Social Inclusion of Older People on Low Income in Prince George, BC

Eric Kopetski – The Potential of Agro-Forestry to Increase Resilience in Forest Dependent Communities Affected by the Mountain Pine Beetle

Joe LeBourdais and **Neil Hanlon** – Health Services as a Foundation for Community Development in the Peace River Regional District

Joanne Lee, **Philip Owens** & TA Stott – Contemporary Glacial Dynamics as Indicated by Pro-Glacial River Sediments and Volume Change of Castle Glacier, BC



Malyssa Maurer – A 10,000 Year Multi-Proxy Record of Glacial Activity in the Cariboo Mountains, BC

Angela Reid and **Neil Hanlon** – Identifying Geographic Variations in Access to Seniors Care in a Rural and Remote Region

Laura Ryser – Shedding Some Light on Hidden Rural Poverty

Tyler Smith – Impact of Land Use Activities on Fine Sediment-Associated Contaminants, Quesnel River Watershed, BC

Mark Steynen – What's Good For the Mill is Good For the Town: The Consequences of Forest Dependence for the Socio Economic Development of Houston, BC

POSTERS

Sam J. Albers and **Ellen L. Petticrew** - Interactions Between Salmon Spawning and River Biofilms – Biogeomorphic Regulations on Habitat Quality

Katrina Caley and **Philip Owens** – Sediment Storage Capacity of Wetlands in Deforested Catchments

Laura Ryser – Community Development Institute at UNBC

AWARDS

Dr. Catherine Nolin received this year's *J. Alistair McVey Award for Teaching Excellence* from the WDCAG.

UNBC Group in Cache Creek, BC on the journey home from Nanaimo, BC