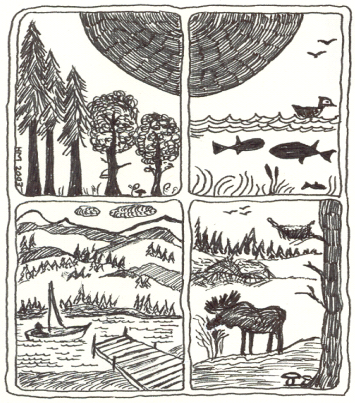

NRES WEEKLY NEWS
Nov. 22 - 26, 2010

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. Paul Sanborn

Environmental Science Program, UNBC

Soil Change and Soil Resilience: Lessons from Natural Experiments on Multiple Time Scales

Using examples of natural experiments in soil formation, I will show how a pedological perspective can inform the way we view soil change and resilience on multiple time scales in our region. The geological youthfulness of our soil landscapes provides a degree of geochemical resilience that we usually take for granted. This youthfulness, characterized by large reserves of unweathered nutrient-bearing minerals, is created and maintained by disturbance events occurring on a range of scales, for example, continental glaciations, volcanic eruptions, landslides and dust deposition. In the absence of these events, in otherwise highly productive environments, subtle initial features of soil parent materials can trigger a downward spiral of ecological decline. In other settings, parent material characteristics can amplify the retarding effect of extreme cold and/or aridity on soil change and ecological succession.

November 19, 2010 **3:30 - 4:30 pm** **Lecture Theatre 7-150**

Next Friday

Dr. Brent Murray

Environmental Science Program, UNBC

Mountain Pine Beetle System Genomics:

Spatial genetic structure of the mountain pine beetle outbreak in western Canada

The mountain pine beetle, (*Dendroctonus ponderosae*), is currently causing an epidemic of record size in Western Canada. Tree mortality, mostly lodgepole pine (*Pinus contorta*), has occurred over 15 million hectares of forest through the com-bined action of the beetle and its fungal associates (primarily, *Grosmannia clavigera*). The Tria Project, Mountain Pine Beetle Systems Genomics, is a multidisciplinary investigation of these three primary organisms in the outbreak – beetle, fungus, and the host pine. A major goal of the project is to develop an integrated landscape map containing information on the genomic variation of each organism. This information can be used to infer current dispersal patterns, long-term phylogeographic processes and to study adaptive changes associated with a shift into new environments. This talk will highlight some of the key research achieve-ments of the Tria project and discuss recent developments in the analysis of the spatial genetic structure of the mountain pine beetle. Information on "neutral" microsatellite variation in beetles from 49 sampling locations throughout BC and AB shows a North-South population structure that is supported by Bayesian structure analysis, North-South genetic relationships and diversity gradients, and the lack of isolation by distance in the northernmost cluster. Our findings are consistent with spatiotemporal analyses of the current epidemic that supports a multi-center hy-pothesis. Northern outbreaks are consistent with an expansion out of the Chilcotin plateau while southern outbreaks are consistent with multiple centers of origin.

November 26, 2010 **3:30 - 4:30 pm** **Lecture Theatre 7-150**

For Elluminate information and link to the webcast: http://www.unbc.ca/nres/nresi_webcast.html
For a list of upcoming seminars: http://www.unbc.ca/nres/seminar/

OTHER COMING EVENTS

GLOBAL FRIDAYS
SENATE CHAMBERS
12:00 - 1:30 pm

November 19, 2010

Dr. Reuben L. Gabriel — "From Most Hated to Most Loved: the Missionary Legacy of John Wilson in Nineteenth Century Bombay (Mumbai)"

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UNBC will be receiving each seminar in high definition video in the Access Grid collaboration node room in Admin 2024.

2010 COAST to COAST Canadian Seminar Series:
The Marine Environment and Climate Change: Problems and Possible Solutions

November 30 — 11:30-12:20
Climate Impacts of Freshwater Forcing of the Ocean General Circulation
Richard Peltier, University of Toronto, Centre for Global Change Science

During the past million years of Earth history, climate variability has been dominated by a 100 kyr cycle of continental scale glaciation and deglaciation. Each of these quasi-periodic events owed its existence to the minute variations in the distribution of solar radiation caused by gravitational n-body effects in the solar system. In each cycle of this process continental glaciation was accompanied by a fall of mean sea level of approximately 120 m. The glaciation phase of each cycle persisted for approximately 90,000 years whereas the deglaciation phase was much more rapid, lasting approximately 10,000 years. During deglaciation, the return of freshwater to the ocean basins was responsible for highly significant disruptions of climate, foremost among which was the so-called "Younger-Dryas" climate reversal during which northern hemisphere surface temperatures were forced to return to near full-glacial cold conditions even as the system was in the process of returning to a state of modern warmth. This phenomenon provides a target for testing the transient response of the global climate models that are employed to make predictions of the influence of global warming due to increasing concentrations of the atmospheric greenhouse gases. This test will be described in detail.

http://c2c.irmacs.sfu.ca/

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2010 Doug Little Memorial Lecture Series
December 2, 2010 7:30 pm
Canfor Theatre (6-213)

Dr. Briony Penn
Journalist and Adjunct Professor
School of Environmental Studies,
Geography Department and Restoration of Natural Systems Program
University of Victoria

The Big Burn

The combination of a gutted Forest Service, vast areas of not sufficiently restocked forestlands, a quirky loophole in the Kyoto Protocol and a provincial government ideologically driven to sell off public assets has created the perfect opportunity to burn down BC's forests in a biofuel boondoggle and the last barriers to privatization of BC's crown forests. Journalist Briony Penn expands on a series of interviews conducted with over a dozen ex-government foresters, industry representatives, contract foresters, silviculturalists, forest sector round table participants and political representatives to provide insight into the direction that government is taking Crown forests — with no public consultation and a media that is failing to serve public interests. The voices of the whistle blowers point to a colossal failure of imagination by government that has implications to forest health, climate change mitigation and adaptation, other public interests in Crown lands from public access to biodiversity and water quality, First Nation interests and international credibility on carbon accounting and standards. The lecture will explore the dystopic picture of what is planned and the alternate vision for Crown forests that has been put forward by the critics as a world leader in ecosystem services and valuation.

OTHER COMING EVENTS (cont'd)

FORREX Webinar:
Taking a Second Look at Biogeoclimatic Ecosystem Classification
Tuesday, December 7, 10:30-11:30 am.

The Biogeoclimatic Ecosystem Classification (BEC) system has underpinned terrestrial ecosystem management and conservation planning in British Columbia since the early 1970s. BEC has served BC well for 40 years, but is now critically challenged because:

- BEC champions in government, academia and the private sector are being laid off or are retiring;
- BEC is based on outdated notions of climax ecosystems in equilibrium with climate;
- The scientific value of the BEC approach is not fully understood by a younger generation of scientists and resource managers, as they grapple with accelerating rates of change.

This webinar addresses ways to ensure that BEC remains robust and useful in an uncertain future.

Teleconference number (toll free): 1 866 596 5278
Conference ID number: 3120346#
Download the presentation to your computer after Dec. 1 from: **http://www.bvcentre.ca/forrex-webinar**

GRADUATE THESIS DEFENCES

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Mr. Samuel Albers is a candidate for the degree:

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

Mr. Albers will be defending his thesis entitled:

"The Salmon Disturbance Regime: Effects on Biofilm, Sediment and Water"

Supervisor: Dr. **Ellen Petticrew**

Date: **December 2, 2010** Time: **1:00 pm** Room: **Senate Chambers**

https://cms.unbc.ca/assets/nres/defences/albers_101202.pdf

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Ms. Young Joo Jenny Lee is a candidate for the degree:

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

Ms. Lee will be defending her thesis entitled:

"Fungal Community Assessment in Canadian Arctic Soils from Alexandra Fiord, Ellesmere Island, Nunavut"

Supervisor: Dr. **Keith Egger**

Date: **December 16, 2010** Time: **9:00 am** Room: **Senate Chambers**

https://cms.unbc.ca/assets/nres/defences/young_101216.pdf

PUBLICATIONS

Heikkilä, Karen and **Gail Fondahl** (2010) "Indigenous toponyms as pedagogical tools: reflections from research with Tl'azt'en Nation, British Columbia". *Fennia* 188(1):105–122. (http://ojs.tsv.fi/index.php/fennia)

CHRIS NEEDS YOUR VOTES!

Chris Opio is among the **TOP 10 Finalists** chosen among 2000 nominations in the **CBC Champions of Change**. Please visit the link below and **VOTE** (10 votes per email address) for Chris to win the Top Volunteer in the International Category. The winner will receive **$25,000** towards his/her charity (clean drinking water for Uganda: **http://nudf.org/**). Please vote for Chris now! **http://www.cbc.ca/change/christopheropio.html**

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