



# NRES WEEKLY NEWS

## March 25 - 28, 2013

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

For the live broadcast of this event (not on Elluminate): <http://www.unbc.ca/livestream>

## NRESi and Community Development Institute (CDI) Panel Discussion Maintaining Environmental, Cultural, & Community Values & Opportunities on a Changing Landscape

Unless we have a proactive vision, and talk about the multiple ways we connect with and have impacts upon the natural landscape, we will not be able to construct or create a future that supports both the landscapes and communities in the ways that we desire and are sustainable.

The NRESi and CDI will host a panel of **Wade Davis** (National Geographic Society), **Paul Michel** (Director UNBC First Nations Centre), and **Gerry Thiessen** (Mayor of Vanderhoof) focussing on the relationship between people/communities and the natural landscape within which they are set. We seek to build conversation around the general question "What do we wish from the relationship between our communities and the natural landscape both now and in the future?" What do we need to do, and to think about, so that we are still discussing the opportunities associated with this relationship 100 years from now? How can we understand and link our values (social, economic, cultural, and environmental) around communities and natural landscapes so that we can take into account sustainability as well as the cumulative impacts of actions and change?

**SPECIAL THANKS TO SPECTRA ENERGY FOR THEIR SUPPORT OF THIS EVENT**

**Friday, April 5, 2013**

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

**CANFOR Theatre (6-213)**

### OTHER EVENTS

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**GLOBAL FRIDAYS**  
ROOM 7-158  
12:00 - 1:30 pm

**April 5**  
**Caroline Calderon, Ministry of Foreign Affairs, El Salvador**  
**"Alternatives to the War on Drugs"**

All Global Friday presentations will be available to remote participants at: <http://bit.ly/unbc-globalfriday>

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**REMINDER:** Share your information about recent publications, grants, and/or other honors you may have received with

**We're on the web at : [www.unbc.ca/nres-institute/newsletter](http://www.unbc.ca/nres-institute/newsletter)**

## OTHER EVENTS (con'td)

### 2013 Undergraduate Thesis and Project Presentations

The Natural Resources and Environmental Studies Institute (with financial support from the College of Science and Management, the Ecosystem Science and Management Program, and the Chemistry, Environmental Science and Environmental Engineering Program) is hosting the 2013 Undergraduate Thesis and Project Presentations. It is remarkable how much undergraduate research is going on at UNBC, and this event will help to celebrate some of that research. All presentations will be held on **Tuesday, April 9th** beginning at 9:00 am in **Room 8-164**. All are welcome.

Start time	Presenter	Thesis Title	Thesis Supervisor	Second Reader
9:00	Matt Dyson	Trends in emergent vegetation biodiversity of a managed wetland	Jane Young	Lisa Poirier
9:15	Quinn Smith	Characterization of the Function of Haloarcula marismortui Hmar 1168 Protein as an Epimerase of Hydrolyzed NAD(P)H	Andrea Gorrell	Sean Maurice
9:30	Umesh Anghnoo	Detecting Signatures of Selection: Analysis of Spatial Genetic Variation in the Mountain Pine Beetle ( <i>Dendroctonus ponderosae</i> ) Outbreak in Western Canada	Brent Murray	Philippe Henry
9:45	Xilin Deng	Single nucleotide polymorphisms shed light on correlations between environmental variables and adaptive genetic divergence among populations in <i>Oncorhynchus keta</i>	Philippe Henry	Brent Murray
10:00	Marli Bodhi	The Staying Power of Cuba's Alternative Agriculture System	David Connell	Mary Beckie (U of A)
10:15	Refreshment Break			
10:30	Kelly Hrywkiw	Construction of the <i>Cyanidioschyzon merolae</i> LSM complex for characterization and crystallization studies	Stephen Rader	Andrea Gorrell
10:45	Matthew Halstead	Construction of the C. merolae LSM Complex for Characterization and Crystallization Studies	Stephen Rader	Andrea Gorrell
11:00	Melissa Morrison	Genetic structure of lodgepole pine populations following a mountain pine beetle outbreak in the British Columbia central interior	Dezene Huber	Staffan Lindgren
11:15	Caitlin Dixon	Bill C-38 and BC Wildlife	Richard Krehbiel	Annie Booth
11:30	Shirley Rudecki	Estrogen Signalling in the Microcirculation	Geoffrey Payne	Sarah Gray
11:45	Alice Lee	The use of DNA barcoding to validate ground beetle (Coleoptera:Carabidae) identification in the Ancient Forest of Central British Columbia	Brent Murray	Danie Erasmus
12:00	Lunch			
12:30	Marta Zmudzinski	Molecular Phylogenetic Analysis of Fungi Native to Northern British Columbia with Potential Anti-tumor Properties	Keith Egger	Brent Murray
12:45	Sara Sparks	Provisioning rates of tree swallows ( <i>Tachycineta bicolor</i> ) breeding on reclaimed tailings at Highland Valley Copper Mine	Russell Dawson	Dezene Huber
13:00	Caleb Lawlor	The application of Cu <sup>2+</sup> resistivity as a selectable marker in <i>Haloarcula marismortui</i>	Andrea Gorrell	Stephen Rader



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## OTHER EVENTS (con'td)

### 2013 Undergraduate Thesis and Project Presentations (cont'd)

13:15	Bethany Wood	Effects of tillage and wood waste amendments on the growth of hybrid white spruce and lodgepole pine on fine textured landings in Northern British Columbia	Paul Sanborn	Chuck Bulmer (MFLNRO)
13:30	Nikolina Nikolic	PACAPS role in energy balance	Sarah Gray	Andrea Gorrell
13:45	Jennifer Salokannel	Sex ratio variation within avian broods and its influence on infestation rates by parasitic blow flies	Russell Dawson	Dezene Huber
14:00	Tanner Dobson	Terahertz in RNA Research	Chow Lee	Matt Reid
14:15	Emily Williamson	Aboriginal Title: Implications on Resource Planning and Development	Richard Krehbiel	Annie Booth
14:30	Refreshment Break			
14:45	Nicola Gilbert	Effects of wood ash on willow and poplar growth in mining and energy crop soils: a greenhouse trial	Hugues Massicotte	Chris Opio
15:00	Scott Matlock	Examination of the <i>trk potassium transport system in Haloarcula marismortui</i> using quantitative Real-Time PCR	Andrea Gorrell	Sarah Gray
15:15	Natalie Saindon	The contribution of glaciers and landslides in Lillooet Lake Sediments, British Columbia	Brian Menounos	Lito Arocena
15:30	Susan Luong	Gene expression and functional characterization of Glutathione S-transferases in Mountain Pine Beetle, <i>Dendroctonus ponderosae</i>	Dezene Huber	Brent Murray
15:45	Cameron Bell	An Evaluation Framework for On-Campus Food Production: A Step Towards Improving Student-Led Campus Sustainability Initiatives	David Connell	Scott Green
16:00	Dayle Ostapiuk	Surface Plasmon Resonance Characterization of the Interaction between Splicing Factor Prp24 and U6 snRNA	Andrea Gorrell	Liz Dunn
16:15	Kevin Mitchel	Site Directed Mutagenesis of <i>Haloarcula Marismortui RNase E Amino Acid Residues</i>	Andrea Gorrell	Danie Erasmus
16:30	Ray Lyle	An Analysis of the Macro-invertebrate Composition of the Willow and Crooked Rivers	Danie Erasmus	Dezene Huber

## PUBLICATIONS

Lehnert, L.W., Bässler, C., Brandl, R., **Burton, P.J.** and J. Müller 2012 Conservation value of forests attacked by bark beetles: highest number of indicator species is found in early successional stages. *Journal for Nature Conservation* 21 (2): 97-104

DeLong, C., **Burton, P.** and M. Geertsema 2013 Natural disturbance processes in *Encyclopedia of Environmetrics* Second Edition (eds) A.-H. El-Shaarawi and W. Piegorsch (Chichester, UK: John Wiley & Sons Ltd.) <http://dx.doi.org/10.1002/9780470057339.vnn147>

**Burton, P.J.** 2013 Exploring complexity in boreal forests in *Managing Forests as Complex Adaptive Systems: Building Resilience to the Challenge of Global Change* (eds) C. Messier, K. Puettmann and K.D. Coates (London, UK: Routledge) 79-109



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## RESEARCH GRANT OPPORTUNITIES

### 2013 Seed Grant Opportunities for Field Research at UNBC Aleza Lake Research Forest

As part of our forest research and education mandate, the not-for-profit Aleza Lake Research Forest Society endeavours to make funds available each year for seed grants to UNBC and allied researchers undertaking new field research (or significant new directions of existing ALRF research) at the Aleza Lake Research Forest (ALRF). The ALRF is 65 km east of the UNBC Prince George campus by paved road. Additional information is available at: <http://alrf.unbc.ca/>.

Annual funds available per researcher are modest, and are intended to foster exploratory field research, trials, and data collection at the Research Forest, and to encourage the establishment of new projects.

The Society is particularly interested in assisting graduate - or undergraduate – student thesis field research under academic supervision, or faculty research with potential future student involvement.

In 2013, the ALRF's goal is to fund 3 to 5 seed grant proposals for new projects, subject to availability of overall funding. Seed grants from \$250 up to a maximum of \$1250 per project will be considered.

Targeted, very specific, and efficient seed grant proposals will be considered favourably, as this will allow the Society to extend available funds to a larger number of ALRF researchers, where appropriate. Generally, only one proposal will be funded for a given individual or research project each year. All funding decisions will be at the sole discretion of the ALRF Society and designated staff. Seed grant funds from the ALRF Society will be issued to, and administered by the University of Northern BC or other recognized research organizations.

To apply for a 2013 ALRF Field Research Seed Grant, please submit a covering letter (or email) and *brief* (maximum 2– to 3-page proposal) in pdf format describing the following information:

1. The purpose and goals of the research that would be undertaken using this grant.
2. The scientific value of this research and data collection;
3. Individuals on the research team (including academic supervision, where applicable).
4. A description of your proposed sampling methodology and approximate schedule;
5. A general location and/or characteristics of ALRF sites to be used.
6. A budget for how you will expend the seed grant.

Completed seed grants must be submitted by email attachment in pdf file format to the ALRF Manager (Mike Jull RPF) at [jullm@unbc.ca](mailto:jullm@unbc.ca) . The proponent is solely responsible for ensuring successful receipt of the proposal by the ALRF. The deadline for completed seed grant proposals is: **4:30 pm PST, Monday, April 8th, 2013.**

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