



## NRES WEEKLY NEWS

January 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

### NRESI RESEARCH COLLOQUIUM SERIES

#### Darren Janzen

Forestry Geomatician  
GIS Lab / Aleza Lake Research Forest  
UNBC

**Tomorrow**

#### Light Detection and Ranging Data in Forested Environments

Airborne Light Detection and Ranging (LiDAR) surveys use light energy to produce extremely accurate 3D measurements of ground and vegetation. A survey was performed on three study areas: Crooked River, Kennedy Siding, and the Aleza Lake Research Forest. High-resolution data detailing digital-elevation models, canopy structural models, and tree-stem locations were developed. Methods employed in the development of these models will be presented.

In a previous study, Landsat data was employed to predict carbon and was able to identify large tree carbon stocks with an  $r^2$  value of 0.62. However, it was not possible to develop any models that could describe sub-canopy vegetation components. By comparison, LiDAR methods yielded improved estimations of large tree biomass with an  $r^2$  value of 0.79. The LiDAR data was also able to describe herbaceous ( $r^2=0.62$ ) and secondary canopy structure ( $r^2=0.36$ ) biomass with a reasonable precision, remarkable as no other airborne surveying technology has shown this capability. There is much untapped potential in these datasets including hydrological modelling, analyses of secondary structure underneath MPB attacked stands, and analyses of tree morphology.

**We are currently looking for students/professors interested in working on these or other aspects of the LiDAR dataset in the spring or summer of 2008.**

Friday, January 11, 2008

3:30 - 4:30 pm

Lecture Theatre 7-150

*Light Refreshments will be Served*

**Steve MacDonald**  
Fisheries and Oceans Canada

**Next Friday**

Examination of Factors influencing Nechako River Discharge,  
Temperature and Aquatic Habitats:  
Assessing water release strategies from the Nechako Reservoir

Friday, January 18, 2008

3:30 - 4:30 pm

Lecture Theatre 7-150

*Light Refreshments will be Served*

## COMING EVENTS

### GLOBAL FRIDAYS

January 18  
Room 6-306  
12:00 - 1:30 pm

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Laurie Chan  
Community Health Sciences, UNBC

*“Living on Top of the World”*  
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### NRESI Annual Lecture

Mark your calendars for the **3rd Annual NRESI Annual Lecture and Poster Presentation**, which will be held on Thursday February 28th (starting at 5:30). The poster session will feature research by NRES graduate students and NRES Institute members. Following the poster presentation, **Dr. Daivd Hik (University of Alberta)** will deliver the NRESI Annual Lecture.

### \*\*\*\*NEW GROUP\*\*\*

A new literature discussion group is being formed to focus on wildlife and you are cordially invited to attend. The premise of the group will be for profs and grad students to meet for an hour every two weeks to discuss a peer-reviewed publication on current wildlife research and management.

The first meeting will be a brown-bag gathering (bring your lunches) **Monday January 14th at 12:00 in 6-311.**

This is a tentative time slot and we will try to cater to as many schedules as possible; so let us know if it will not work for you on a regular basis. This first meeting will also allow for those interested to voice their opinions on the direction and content of such a discussion group. If you are interested but cannot attend this first meeting, please email your future availability to [robinsteenweg@hotmail.com](mailto:robinsteenweg@hotmail.com) and a new time slot will be decided upon following next week's rendez-vous.

Considering the Giant Panda is probably the most charismatic endangered species alive today, we thought it rather appropriate to make Pandas the subject of our inaugural discussion. Contact Robin for a copy of the article on panda den selection for next week (Journal of Wildlife Management 71:2694-2698).

Enjoy!

Robin Steenweg, MSc candidate, Gillingham Lab  
Sean Haughian, MSc candidate, Burton Lab

## WELCOME

Dr. Chris Wallis, formerly at Ohio State University has arrived with his family (wife Michelle and three children) to Prince George to start his post-doctoral fellowship in quantitative genetics funded by the BC Ministry of Forests and Range. Chris is interested in effects of various stressors on trees, including the use of modeling approaches. He will be working under the supervision of one or several faculty members for the next three years. He has been (at least for the time being) assigned to share 4-247 with Quanji Wu, one of the CEL technicians. Chris' e-mail is [wallis@unbc.ca](mailto:wallis@unbc.ca). Please welcome Chris to ESM.

## PUBLICATIONS

Fujimura K.E., **K.N. Egger** & G.H.R. Henry. 2008. The effect of experimental warming on the root-associated fungal community of *Salix arctica* The International Society for Microbial Ecology Journal 2: 105-114.

**Owens, P.N.** 2008. Sediment behaviour, functions and management. In: *Sustainable Management of Sediment Resources: Sediment Management at the River Basin Scale* edited by **P.N. Owens**. Elsevier, Amsterdam, 1-29.

Taylor, K.G., **P.N. Owens**, R.J. Batalla, and C. Garcia. 2008. Sediment and contaminant sources and transfers in river basins. In: *Sustainable Management of Sediment Resources: Sediment Management at the River Basin Scale* edited by **P.N. Owens**. Elsevier, Amsterdam, 83-135.

**Owens, P.N.**, A.F.L. Slob, I. Liska, and J. Brils. 2008. Towards sustainable sediment management at the river basin scale. In: *Sustainable Management of Sediment Resources: Sediment Management at the River Basin Scale* edited by **P.N. Owens**. Elsevier, Amsterdam, 217-259.

## TRAVEL

**Brian Aukema, Dezene Huber** and four graduate student chaperones (Erin Clark, Honey Giroday, Matthew Klingenberg, and Daniel Ott) travelled to San Diego for the Entomological Society of America annual meeting December 9-12, where they presented six papers, moderated sessions, and commiserated with the locals over the unseasonably frigid temperatures (16 C).



**Oscar Garcia** travelled to Edmonton to participate as External Examiner in a PhD defense at the Department of Renewable Resources, U. of Alberta on January 8. He also gave a seminar on "Limits to predictability in modelling and simulation".

## ANNOUNCEMENTS

**Stephen Dery** recently participated as a panel member on an NSERC major resources support (MRS) program application led by Jim Drummond at the University of Toronto (UofT). The site review of the Polar Environment Atmospheric Research Laboratory was held at the UofT campus on Dec. 18, 2007.

**We're on the web at**  
**[www.unbc.ca/nres/newsletter](http://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 ELISSA ZEMLAK: [zemplak@unbc.ca](mailto:zemplak@unbc.ca)**