NRES WEEKLY NEWS
October 1-5, 2007

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

Dr. Keith Egger
Professor, Ecosystem Science and Management (Biology)

Microbial Communities and Climate Change:
Lessons from the International Tundra Experiment

The International Tundra Experiment (ITEX) is nearing completion of its 2nd decade of monitoring the effects of passive warming on tundra communities. Small open-topped chambers (OTCs) placed over tundra vegetation in arctic, antarctic, and alpine ecosystems in more than a dozen countries are designed to simulate the effects of climate warming on tundra communities. By trapping solar radiation and blocking wind, they raise the temperature in the enclosure by 1-3 C. Impacts upon plant communities are rapid, within 2 years changes are observed in productivity, growth and phenology. Longer term changes include a shift from herbaceous to shrubby growth forms, and an increase in belowground biomass. In an effort to understand how aboveground changes were affecting belowground microbial processes, I started working at the Alexandra Fiord ITEX site on Ellesmere Island, Nunavut (78°53' N, 75°55' W) in 2000. Graduate students who worked at the site include: Kei Fujimura (PhD 2005) studying root-associated fungal communities; Julie Deslippe (MSc 2004) studying nitrogen-fixing bacterial communities; and Jennifer Walker (MSc 2006) studying denitrifying and nitrogen-fixing bacterial communities. In this colloquium I will summarize our finding on how warming has impacted these microbial communities. Briefly, we have found an increase in the density of fungal genotypes on roots which mirrors the increased C allocation belowground, altered structure of N-fixing communities especially late in the growing season, and a reduction in genotype richness of both denitrifying and N-fixing communities due to loss of rare genotypes.

Friday, September 28, 2007
3:30—4:30 pm
Canfor Theatre, 6-213 ***Light Refreshments served at* 3:20 pm**

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THE NEXT COLLOQUIUM LECTURE IS OCTOBER 12 with

Dr. Kathy Parker, Professor - ESM

'Predator-Prey Interactions in the Muskwa-Kechika"

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: zemlak@unbc.ca

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

ANNOUNCEMENTS

Three NRES Grad students have received Pacific Leaders Graduate Student Fellowships. These graduate fellowships honour top master's and PhD students who will spend up to two years researching key issues affecting the province and upon graduation join the public service.

Congratulations:

- Hardy Griesbauer, supervised by **Scott Green,** who is examining the influence of climate change on Douglas fir growth, productivity and survival across the species range in the BC Interior;
- Kara Przeczek, supervised by **Brian Menounos** and **Stephen Dery**, whose research seeks to improve snowmelt modelling in complex terrain such as found in the Cariboo Mountains;
- Marc Steynen, supervised by **Ian Hartley**, who is in the second year of his master's program. He has over 10 years' experience in the BC forest industry.

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John Rex (PhD candidate) organized the annual BC Friends of Forest Hydrology meeting which was held in Prince George Sept 18-19. **Ellen Petticrew** and Phillip Krauskopf (MSc Geography) attended the meeting and field trip to the Bowron watershed.

TRAVEL

Andy Clifton, Kara Przeczek and **Stephen Dery** from the northern hydrometeorology group are attending the WC2N workshop in Banff, Alberta, from Sept. 28th to the 30th.

Sept. 24-27, **Kathy Lewis** attended the Sustainable Forestry Initiative AGM in Salt Lake City, Utah as a member of the External Review Panel.

PUBLICATIONS

Rasmussen, J.G., J. Møller, **B.H. Aukema**, K.F. Raffa and J. Zhu. 2007. Bayesian inference for multivariate point processes observed at sparsely distributed times. Journal of Royal Statistical Society Ser. B. 69: 701 - 713.