



NRES WEEKLY NEWS

November 12 - 16, 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. Marten Geertsema

*Research Geomorphologist,
Ministry of Forests & Range*



ECOLOGICAL ROLE OF LANDSLIDES IN MAINTAINING BIOLOGICAL DIVERSITY

Landslides have long been overlooked or underestimated as important natural disturbance agents. In particular the ecological role of landslides in maintaining biological diversity has been largely ignored. Here we provide a western Canadian (BC) perspective on the influences of landslides on biophysical diversity, which is related in several ways to biological diversity. We recognize several types of biophysical/ecological diversity: site diversity, soil diversity, and the derivative habitat or ecosystem (including aquatic ecosystems) diversity. There are also a variety of landslide types, depending on materials and on the rate and style of movement. We discuss the roles of different landslide types on various aspects of terrestrial diversity. Landslides are simultaneously depositional and erosional processes that influence sites by redistributing materials and changing surface expression - usually creating a complex microtopography that can include very dry ridges and hummocks, and sometimes depressions with standing water. Landslide impacts to site also influence soil and soil development. Portions of landslides with exposed parent material are set back to the initial stages of soil development and ecological succession. Landslides can also change soil density, structure, porosity, surface texture, chemistry and microclimate. By changing site and soil, landslides also influence habitat. Landslides influence habitat diversity by engendering a mosaic of seral stages (often both primary and secondary), and in overwhelmingly forested landscapes often create nodes or hotspots of non-forested habitat and biota. In some areas, like the boreal forest, there is an important interplay between landslides and fire, while on the coast of BC debris and snow avalanches can be the dominant disturbance agent. Low-gradient and deep-seated landslides are often opportunistically colonized by beaver and other water and shrub-loving fauna. Sag ponds and impounded streams provide aquatic habitat - often with standing dead trees. Landslide rubble and scarps provide denning/nesting habitat, escape terrain, and cliff habitat for vertebrates.

FRIDAY, NOVEMBER 16, 2007

3:30 - 4:30 PM

ROOM 7-150

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

COMING EVENTS

THE DOUG LITTLE MEMORIAL PUBLIC LECTURE

“The Decline of the Forestry Profession: Causes and Solutions?”

Dr. Christian Messier

Professor of Forest Ecology, Université du Québec à Montréal
Director, Centre of Forest Research (CEF/CFR)

DATE:	Thursday, November 8, 2007
TIME:	7:30 pm
PLACE:	Room 6-213 Canfor Theatre, UNBC Campus

Sponsored by the ESM Program
College of Science and Management

Supported by an endowment from the former
Northwood Pulp and Timber Limited now Canfor

SPEAKERS SERIES ON CONTEMPORARY GUATEMALA:

KILLING & COFFEE

This is an open invitation to all interested students, faculty members, staff, and community members to join us for the next two presentations in our exciting speakers series this semester focusing on the contemporary struggles of the post-conflict country of Guatemala. Issues of political violence & impunity shape much of the country's reality but many individuals and organizations are working for positive social change.

The Geography Program is partnering with Amnesty International Prince George for the next two presentations:

Thursday, November 8 @ 7:00pm, Room 7-150

Screening and discussion of the new documentary film “Killer’s Paradise” which focuses on the growing & high rate of murder of women (femicide) & broken judicial system which lets it happen.

Thursday, November 15th @ 7:00pm, Room 7-150

Public presentation by Leocadio Juracan - a Cakchiquel Maya from Sololá (near Lake Atitlan), Guatemala, and is national president of the Campesino Committee of the Highlands (CCDA) - an indigenous farmers' organization working on fair trade and organic coffee production. He is also a member of the executive of CNOC (Coordinadora Nacional Obrero Campesina) - the Guatemalan umbrella campesino coalition. Although Leocadio lives in a small Maya community, he has participated in a number of international activities and is well-versed in the plight of farmers around the world. He is a dynamic speaker and has attended both international conferences on the Plan Puebla Panama, so can speak with some authority on the threat that trade initiative poses to the environment and indigenous and campesino rights.

For more details on "Killer's Paradise" - visit the NFB site at:

<http://www.nfb.ca/webextension/killersparadise/index.php> and the BBC site at:

http://news.bbc.co.uk/1/hi/programmes/this_world/4965786.stm

CONGRATULATIONS

"Radiometric Correction Techniques and Accuracy Assessment for Lands at TM Data in Remote Forested Regions", authored by Darren Janzen, **Art Fredeen** and **Roger Wheate**, published in the Canadian Journal of Remote Sensing, published in Volume 32, Number 5, October, 2006, has been selected as the "CJRS Best Paper of the Year - 2006".

Certificates were presented acknowledging this achievement at the CRSS Gold Medal Dinner, held in Ottawa on October 30, 2007. Congratulations!

TRAVEL

Kathy Parker will attend the National Council for Air and Stream Improvement (NCASI) Canadian Meeting in Vancouver on 13-14 Nov. She will present a paper entitled "Using Nutritional Ecology to Understand Habitat Value to Wildlife".

Oscar Garcia is travelling to Quebec on 11-13 November, as an external examiner for a PhD defense at the Faculté de Foresterie et Géomatique, Université Laval.

On November 12, 2007, **Stephen Dery** will be presenting an invited talk on arctic rivers at the Eurasian Hydroclimatology workshop hosted by the International Arctic Research Center in Fairbanks, Alaska.

PUBLICATIONS

Clarke, A.D., A. Lewis, K.H. Telmer and **J.M. Shrimpton**. 2007. Life history and age at maturity of an anadromous smelt, the eulachon *Thaleichthys pacificus*. *Journal of Fish Biology* **71**, 1479-1493.

Clarke, A.D., K.H. Telmer and **J.M. Shrimpton**. 2007. Using natural elemental signatures to determine habitat use and population structure for a fluvial species, the Arctic grayling, in a watershed impacted by a large reservoir. *Journal of Applied Ecology* **44**, 1156-1165.

Clarke, A.D., K.H. Telmer and **J.M. Shrimpton**. 2007. Elemental analysis of otoliths, fin rays, and scales: a comparison of bony structures to provide population and life-history information for the Arctic grayling (*Thymallus arcticus*). *Ecology of Freshwater Fish* **16**, 354-361.

Crossin, G.T., S.G. Hinch, S.J. Cooke, D.W. Welch, S.D. Batten, D.A. Patterson, G. Van Der Kraak, **J.M. Shrimpton**, and A.P. Farrell. 2007. Behaviour and physiology of sockeye homing through coastal waters to a natal stream. *Marine Biology* **152**, 905-918.

Johnson, R.M., **J.M. Shrimpton**, G.K. Cho, and D.D. Heath. 2007. Dosage effects on heritability and maternal effects in diploid and triploid Chinook salmon (*Oncorhynchus tshawytscha*). *Heredity* **98**, 303-310.

Shrimpton, J.M., A.M.C. Sentlinger, J.W. Heath, R.H. Devlin, and D.D. Heath. 2007. Biochemical and molecular differences in diploid and triploid ocean-type chinook salmon (*Oncorhynchus tshawytscha*) smolts. *Fish Physiology and Biochemistry* **33**, 259-268.

Stephen J. Dery and M. K. Yau. 2007. Chapter 14. Recent Studies on the Climatology and Modeling of Blowing Snow in the Mackenzie River Basin, in Woo, M.-K. (ed.), Cold Region Atmospheric and Hydrologic Studies. The Mackenzie GEWEX Experience, Volume 1: Atmospheric Dynamics, Springer.

Rennermalm, A., E.F. Wood, A.J. Weaver, M. Eby and **S.J. Dery**. 2007: Relative sensitivity of the Atlantic Meridional Overturning Circulation to river discharge into Hudson Bay and the Arctic Ocean, *J. Geophys. Res.*, 112, G04S48, doi: 10.1029/2006JG000330.