

NRES WEEKLY NEWS

February 8 - 12, 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. Mark Shrimpton, Ecosystem Science & Mgmt. Program, UNBC

Should I stray or should I go home?



Selection of suitable sites for spawning is critical because the highest rates of mortality in salmonids generally occur during the incubation period and mortality is closely related to features of the spawning/incubation site. For Pacific salmon, the downstream migration to exploit the nutrient rich resources of the ocean favours the development of large body size, but necessitates a return migration and the ability to find suitable habitat for spawning. Our understanding has been that Pacific salmon “home” to the location where they were spawned. There is considerable support for this paradigm as reproductive isolation due to homing behaviour and spawning site fidelity creates genetic divergence and we can identify genetically distinct populations. Recent studies, however, have demonstrated that the proportion of fish that do not return to their natal streams is appreciable and fish may stray long distances to spawn in locations that differ from their parents. A number of factors may contribute to higher rates of long-distance dispersal; availability of new habitat, disturbance, and population size. The use of genetic markers and elemental signatures in bone has provided us with clear evidence that straying from natal streams occurs. Such low levels of gene flow may be particularly important for small populations as they can elevate effective population size and preserve genetic variability. So how do Pacific salmon know where to spawn if they do not go home?

Feb. 5, 2010

3:30 - 4:30 pm

Lecture Theatre 7-152



Roy V. Rea, Ecosystem Science & Mgmt. Program, UNBC

YouTube™ Insights into Moose-Train Interactions

Next Friday

To gain a better understanding of the behavioral aspects of moose-train encounters, we reviewed videos of ungulate-train interactions available on YouTube™ and from train operators. Video footage viewed included: moose (47.4%), cattle (15.8%), deer (10.5%), elk (10.5%), camels (10.5%) and sheep (5.3%), 46% of which were adults. Although footage of ungulates in general was recorded predominantly in snow-free conditions, most of the recorded moose-train interactions were taken in winter when moose appeared to be “trapped” by deep snow on either side of the rail bed. In fact, when under chase by trains, moose, elk and deer all ran within ~50-60 cm of track center and ran less than ~30 cm outside of the steel rails where snow was restricting mobility. Escapes from train chases in winter occurred where a discontinuity in the habitat/setting was encountered by moose and where the speed of train enabled them time to escape. Ungulates in groups displayed social behaviors in response to group leadership that generally elicited escapes; although one cow-calf moose pair was struck as was a domestic livestock calf when attempting to follow the herd across the track in front of an on-coming train. Most ungulates were killed on straight stretches of track. We determined that videos are a valuable resource for trying to understand reactions of ungulates to trains. We suggest that videos continue to be filmed and be posted on open source databases such as YouTube™ for use by biologists attempting to understand the dynamics of collisions for mitigation.

Feb. 12, 2010

3:30 - 4:30 pm

Lecture Theatre 7-152

NO SEMINAR FEBRUARY 19 — READING WEEK BREAK

Unable to make it in person? Watch the colloquium at your desk!

For Elluminate information and link to the webcast: http://www.unbc.ca/nres/nresi_webcast.html

Log in as “Guest”

Global Fridays

Senate Chambers

12:00 - 1:30 pm

February 5, 2010

Dr. Benjamin Isset, Dept. of History, University of Victoria

From Victoria to Vladivostok: Canada's Siberian Expedition, 1917 - 1919

PUBLICATIONS

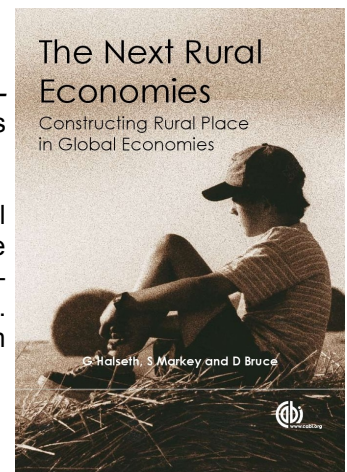
Granger, S.J., Bol, R., Anthony, S., **Owens, P.N.**, White, S.M., and P.M. Haygarth (2010) "Towards a holistic classification of diffuse water pollution from intensively managed grasslands on heavy soils." *Advances in Agronomy* 105: 83-115

P. Sanborn (2010) "Topographically controlled grassland soils in the Boreal Cordillera ecozone, northwestern Canada." *Canadian Journal of Soil Science* 90: 89-101

G. Halseth, S. Markey, and D. Bruce (editors) (2009) *The Next Rural Economies: Constructing Rural Place in Global Economies* (CABI International: Oxfordshire, UK) 304 pgs ISBN: 9781845935818

The book developed from presentations at the workshop: "Space to Place: the Next Rural Economies", held May, 2008 at UNBC hosted by the Community Development Institute (CDI). 23 rural and small town scholars from 8 OECD countries participated in the workshop, which discussed possibilities regarding what our next rural economies might look like. The workshop was attended by more than 50 government and community participants from across northern BC.

More information about the book can be found at: <http://www.unbc.ca/cdi/nrebook.html> .



CALL FOR PAPERS

Ron Thring is the Conference Chair (and **Lito Arcena** and **Jianbing Li** members of the Organizing committee) of the 2nd IASTED International Conference on Environmental Management and Engineering to be held in Banff, AB on July 15 - 17, 2010. Abstract submissions are due 15 February 2010. More information can be found at: <http://www.iasted.org/conferences/home-699.html> .

NEWS

Dezene Huber and **Brent Murray** have been awarded \$103,775 from the Canada Foundation for Innovation for the purchase of a new DNA sequencer. The title of the proposal was "An Automated DNA Sequencer for Use in Mountain Pine Beetle Genomics Research." There were two other successful proposals at UNBC. See: http://www.innovation.ca/en/news?news_id=214#unbc .

We're on the web at : 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 MICHELLE KEEN: keenm@unbc.ca