



# NRES WEEKLY NEWS

## April 12 - 16, 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

**Next Friday**

**Eddy Carmack**

Institute of Ocean Sciences, Department of Fisheries and Ocean

**Quesnel, Queen of Lakes: Climate, Mixing and Fish**



Two aspects of lake physics affect fish and their habitat in Quesnel Lake: (1) the underwater temperature climate and (2) circulation and mixing processes that control nutrient budgets. Annual patterns of thermal stratification determine, for example, the length of the growing season, the depth of critical isotherms, habitat 'fronts' and internal thermal 'shocks', vertical (nutrient) exchange and the temperature of out-flowing river water. Nutrient supply to the euphotic zone to support photosynthesis can come externally (e.g. from rivers, migrating fish, anthropogenic inputs) or internally (e.g. from the re-cycling of nutrients within a given lake). For simplicity, internal supply can be further divided into the re-supply during fall and spring 'overturn' (a process through which the surface and bottom waters of a lake are mixed) and additional vertical fluxes associated with diffusion and upwelling during the growing season.

While Quesnel Lake fits the classic definition of a temperate or 'dimictic' lake, in that its surface water cool and warm through 4 °C (the temperature of maximum density at surface pressure) twice yearly, in fall and spring, respectively, data show the lake to be anything but classic; instead, the combined effects of its depth (greater than 500 m) and strong, intermontane wind events point toward a complex partitioning of mixing processes throughout the overturn period.

It is suggested that Quesnel Lake could become the centrepiece study site of a lake climate observation network spanning British Columbia, Yukon and Northwest Territories.

**April 16, 2010**

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

**Lecture Theatre 7-150**

**Dr. Douw G. Steyn**

Professor, Department of Earth & Ocean, UBC

**Globalization of Smog**



The prevailing conception of photochemical smog has been one of an urban based problem that is expressed at a regional scale. I will outline the ideas that lead to this conception, and then will show evidence that photochemical smog has a hemispheric (if not global) expression. I will examine the links between northern hemisphere development, and the global distribution of ozone, and will show how regional smog management initiatives have reduced peak (episode) values, while increasing lower concentrations, thus contributing to an increase in the hemispheric background ozone pollution levels. I will examine environmental, health and management consequences of these changes.

**April 22, 2010**

**4:00 - 5:00 pm**

**Lecture Theatre 7-150**

**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](http://www.unbc.ca/nres/nresi_webcast.html)

Log in as "Guest"

**HOSTED BY THE CONSULATE GENERAL UNITED STATES OF AMERICA IN VANCOUVER:  
Interactive Audioconference with**

**Dr. Gary Langham**  
Director of Bird Conservation, Audubon California

**Shared responsibility for birds journeying the continental Flyways**

Dr. Langham will be speaking on our shared conservation history and mutual responsibilities to protect the millions of waterfowl, seabirds, shorebirds and songbirds which move across our continent.

Dr. Langham will tell the story in four parts (for each continental flyway) and will illustrate the range of birds that migrate and the ways they navigate.

The format of the videoconference will be the talk by Dr. Langham followed by a generous opportunity for questions and answers from participants in Vancouver, Prince George, Ottawa, Calgary and Winnipeg. These formats allow members of the audience to share observations with others in Canada and provide an opportunity for participants to connect with others with shared interests throughout the country.

Dr. Langham earned his doctorate degree in ecology and evolutionary biology from Cornell University in New York. After a teaching assistantship at Cornell in Ornithology, Evolution and Introductory Biology, he became a lecturer in ornithology at University of California at Berkeley.

The program should last about 90 minutes.

April 22, 2010 **Earth Day**

11:00 am

Room: **TBA**

**TRAVEL / CONFERENCES / FIELD WORK**

**Annual Meeting of the Western Division, Canadian Association of Geographers**

A posse of 22 UNBC geographers travelled to WDCAG: 2010 A Spatial Odyssey, hosted by the Department of Earth and Atmospheric Sciences at the University of Alberta, March 25-27. This included five faculty members, ten graduate students, six undergraduates and one research associate, plus the bus driver 'Captain'. Half the group (11 not counting the driver) presented their research work in applied human and physical geography.

**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 MICHELLE KEEN: [keenm@unbc.ca](mailto:keenm@unbc.ca)**

