



# NRESi Bi-WEEKLY NEWS

## March 14 - March 25, 2016

**A newsletter for faculty, staff, students and the community  
who participate in the  
Natural Resources & Environmental Studies Institute  
and NRES Graduate Programs**

### NRESi NOTES

### FROM THE RESEARCH MANAGER

Hello folks

The winter semester will soon be coming to an end. There are only 3 more 'Friday' colloquium presentations left plus a couple of special presentations. This Friday's colloquium speaker (March 18th) is Dr Anne Salomon from Simon Fraser University. This is a joint colloquium event sponsored by the UNBC Fish and Wildlife student chapter of the Wildlife Society. Dr. Salomon is going to be talking about the resilience of human-ocean systems. The following **Thursday**, NRESi in partnership with the History Department and the Dean of CASHS are presenting Dr. Andrew Watson from the University of Saskatchewan. Dr Watson is going to talk about sustainable farm systems from a historical perspective.

We also have two upcoming special presentations, both on Monday, March 21st. At 12:30 pm Dr. Ronald Stewart from the University of Manitoba will be talking about hazardous near 0°C precipitation as part of a cross-Canada speaker tour sponsored by the Canadian Meteorological and Oceanographic Society. At 7:30 pm, Dr. Karen Kidd from the University of New Brunswick is going to be presenting the third in our series of three Fish and Wildlife Compensation Program (FWCP)-funded colloquium presentations. Dr. Kidd is going to be talking about mercury in fish.

Al Wiensczyk, RPF  
Research Manager, NRESi

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### UPCOMING EVENTS

### NRESi COLLOQUIUM

The winter colloquium session continues with a presentation by Dr. Anne Salomon on the 18th of March followed on March 24th with a presentation by Dr Andrew Watson. Watch for announcements closer to the lectures confirming the presenter and topic. Lectures for the winter semester will be held in room 7-212.

### TENTATIVE WINTER COLLOQUIUM SCHEDULE

Presentation Date	Tentative Presenter and/or Topic
Mar 18, 2016	<b>Dr. Anne Salomon, Associate Professor and Hakai Professor, School of Resource and Environment Management, Simon Fraser University.</b> Tipping Points, Adaptation and Transformation in Coupled Human-Ocean Systems.
Thursday, Mar 24, 2016	<b>Dr. Andrew Watson, Post-doctoral fellow, Department of History, University of Saskatchewan.</b> Sustainable Farms Systems in Historical Perspective: The Energy Returned on Investment in Western Agriculture during the 19th and 20th Centuries.
Apr 1, 2016	<b>Dr. Francesco Berna, Geoarchaeologist, Simon Fraser University.</b> Archaeological research at Wonderwerk Cave, South Africa.

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## UPCOMING EVENTS

## TWS/NRESi JOINT COLLOQUIUM

**Dr Anne Salomon**

**Associate Professor and Hakai Professor,  
Faculty of Environment, Simon Fraser University**



### [Tipping Points, Adaptation and Transformation in Coupled Human-Ocean Systems](#)

Ecological surprises challenge science and society. While the nature and timing of abrupt changes in ecological organization and function remain poorly understood, emerging evidence points to the existence of regime shifts across a variety of ecosystems worldwide. By drawing on examples from kelp forests, ancient clam gardens and the Pacific herring fishery in British Columbia, Canada, I will discuss key characteristics of coupled human-ocean systems and factors that confer their resilience, that is, their ability to learn, re-organize and adapt in the face of sudden change.

**Friday, Mar 18<sup>th</sup>, 2016**

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

**Room: 7-212**

To participate remotely: <http://www.unbc.ca/nres-institute/colloquium-webcasts>

## UPCOMING EVENTS

## NRESi COLLOQUIUM

**Dr. Andrew Watson**

**Postdoctoral Fellow, Historical GIS Laboratory/Department of History,  
University of Saskatchewan**



### [Sustainable Farms Systems in Historical Perspective: The Energy Returned on Investment in Western Agriculture during the 19th and 20th Centuries](#)

Agriculture involves humanity's most important flows of energy. Responsible for feeding the vast majority of the world's population, human-managed agro-ecosystems experienced dramatic changes during the transition from traditional organic practices in the 19th century to highly industrialized processes during the late 20th century. The Sustainable Farm Systems project uses social metabolism methodology to understand how changing energy inputs shaped the productivity of specific agro-ecosystems in the past. This energy returned on investment (EROI) analysis provides important insights for contemporary concerns about sustainable agriculture.

**NRESi acknowledges the generous support of the History Department and the Dean of CASHS.**

**Thursday, Mar 24<sup>th</sup>,  
2016**

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

**Room: 7-212**

To participate remotely: <http://www.unbc.ca/nres-institute/colloquium-webcasts>

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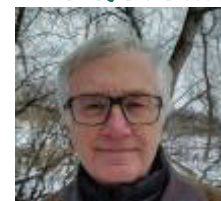
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## UPCOMING EVENTS

## CMOS\*/NRESi COLLOQUIUM

**Dr. Ronald Stewart**

**Professor-Department of Environment and Geography  
University of Manitoba**



### Hazardous near 0°C precipitation

Winter precipitation affects all of us in Canada and it often leads to hazardous conditions. This certainly applies to the precipitation falling near 0°C (including freezing rain, ice pellets and wet snow) but there is still considerable uncertainty regarding its characteristics, formation, detection and simulation. This limits our monitoring efforts as well as our predictive capability at all time scales. Such issues will be reviewed in this presentation.

\*CMOS is the Canadian Meteorological and Oceanographic Society; this presentation is part of a cross-Canada speaker's tour by Dr. Stewart.

**Monday, Mar 21, 2016**

**12:30 pm - 1:30 pm**

**The Gathering Place**

To participate remotely: <http://www.unbc.ca/nres-institute/colloquium-webcasts>

## UPCOMING EVENTS

## NRESi/FWCP COLLOQUIUM

### Fish and Wildlife Compensation Program Colloquium Series

Below is the schedule for the Fish and Wildlife Compensation Program-sponsored Colloquium series.

Presentation Date	Location	Tentative Speaker/Topic
Monday, Mar 21, 2016	Room 7-212, UNBC, Prince George, BC	<b>Local through global influences on mercury in fish.</b> Dr. Karen Kidd, University of New Brunswick



This project is funded by the **Fish and Wildlife Compensation Program** on behalf of its program partners **BC Hydro**, the **Province of BC**, **First Nations** and the **public**, who work together to conserve and enhance fish and wildlife impacted by existing BC Hydro dams.

**Dr. Karen Kidd**

**Biology Department & Canadian Rivers Institute  
University of New Brunswick, Saint John, NB**



### **Local through global influences on mercury in fish**

Freshwater fishes are highly variable in their concentrations of mercury, even within a region. Some of the among-system differences can be explained by the biological traits of the fish (growth, diet, life-span), and the chemical, geological, and physical characteristics of the systems. However, human activities such as reservoir creation, electricity generation, and gold mining also result in both locally contaminated areas and increases in the global cycling of mercury to remote locations. High dietary exposure to the organic form of mercury, methylmercury, is known to affect the nervous system and reproduction in fish-eating wildlife and humans, and the fish themselves. As the Minamata Convention to reduce the global trade, use and emissions of mercury comes into force, we should see declines in mercury in fish and reductions in risks to fish consumers but the rate of this decline is unclear. This presentation will describe the local through global processes that drive mercury in fish, how this contaminant may respond to climate change, and what we still do not understand about its fate in freshwaters. I will describe our comparisons of lake ecosystems from the Arctic and temperate regions of Canada and put this research into a global context.

**Monday, Mar 21, 2016**

**7:30 pm - 9:00 pm**

**Room 7-212, UNBC**

To participate remotely: <http://www.unbc.ca/nres-institute/colloquium-webcasts>

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## UPCOMING EVENTS

Canadian Institute of Forestry: Electronic Lecture Series:

*Current Issues and Emerging Technologies in Canada's forests*

Date/Time	Title	Presenter(s)
March 23, 2016 10:30 am PST	<b>Pucks and sticks score more goals in oil sands reclamation</b>	<b>Richard Krygier</b> - Research Project leader, CFS-CWFC
March 30, 2016 10:30 am PST	<b>Cruising &amp; surfing through the forest: Developing innovative technologies &amp; virtual tours to promote forestry research</b>	<b>Brent Joss</b> - GIS Analyst, FCS-CWFC

All electronic lectures are free. Your consideration of CIF/IFC membership would be appreciated. To become a CIF/IFC member: [www.cif-ifc.org/membership-content/become-a-member/](http://www.cif-ifc.org/membership-content/become-a-member/)  
[www.cif-ifc.org/e-lectures/](http://www.cif-ifc.org/e-lectures/)

For additional information or to register, contact:

Svetlana Zeran (CIF/IFC) E-mail: [electures@cif-ifc.org](mailto:electures@cif-ifc.org) Tel: 705-744-1715 ext. 530

## UPCOMING EVENTS

## Thesis Defense

NRES MA. thesis defence:

**Carling Matthews**

**Exploring the Connections between Outdoor Activities, Nature Connectedness, & Well-Being in the Rural Community of Vanderhoof, BC.**

**Thursday, March 31, 2016, 1:00 – 3:00 pm**

Conference Centre, **Room 6-205/211**

Chair: Dr. Gail Fondahl, UNBC

External Examiner: Dr. Henry Harder, UNBC

Supervisor: Dr. Pamela Wright, UNBC

Committee Members: Drs. Phil Mullins and Margot Parkes

NRES M.Sc. thesis defence:

**Wyatt Klopp - Pacific Institute for Climate Solutions** Forest Carbon Management grant research

**Carbon budget of forest products harvested from mountain pine beetle-attacked forests in the Prince George Region.**

**Thursday, April 7, 2016, 2:00 – 4:00 pm**

Conference Centre, **Room 6-205/211**

Chair: Dr. Si Transken, UNBC

External Examiner: John Pousette, MSc, RPF. Ministry of Forests, Lands and Natural Resource Operations

Supervisor: Dr. Art Fredeen, UNBC

Committee Members: Drs. Phil Burton, Ian Hartley and Steve Helle, UNBC

**Undergraduate Student Presentations—Tuesday, April 12 and Thursday, April 21, 2016—UNBC Prince George**

Undergraduate students from NRESi/Ecosystem Science and Management (ESM) program, and Biochemistry and Molecular Biology (BCMB) will be presenting the results of their research projects on one of these two days. Stay tuned to future newsletters for event details.

**Registered Professional Forester Information Session for Forest Ecology and Management Students and Natural Resources Professional update for ORTM and Wildlife and Fisheries students**

**March 31, 2016—11:30-1:00 pm—Room 6-305 (Conference Centre)**

Brian Robinson, Director of Professional Development, Association of BC Forest Professionals will be on campus and will update us on the Natural Resources Professional (NRP) program for UNBC's ORTM BSc students, Wildlife and Fisheries students, and Forest Ecology and Management students.

All Natural Resource Management students are invited to attend—Free Lunch!!

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## UPCOMING EVENTS

### Avoiding catastrophe: Linking armed conflict, harm to ecosystems, and public health.

May 4-6, 2016

Concordia University, Montreal, Quebec

Gathering experts from the medical, epidemiological, veterinary, conflict management, biodiversity conservation, climate change and political science communities, this conference will pursue an integrated understanding of the catastrophic combination of prolonged armed conflict, environmental alterations such as biodiversity loss, and challenges to the provision of public health, including emergent infectious diseases, nutrition, and mental health issues.

This event is hosted by the LOYOLA SUSTAINABILITY RESEARCH CENTRE, and is funded by the Canadian Social Sciences and Humanities Research Council Connections Program. Partners include: Montreal Institute for Genocide and Human Rights Studies, Doctors Without Borders, EcoHealth Alliance, Future Earth, the Human Security Institute, and the United Nations Secretariat for the Convention on Biological Diversity.

To register, follow this link: <http://bit.ly/1nF888V>

For more information, please contact Dr. Peter Stoett at [Peter.Stoett@concordia.ca](mailto:Peter.Stoett@concordia.ca)

## IN THE NEWS

A 2011 publication by Annie Booth and Greg Halseth, titled "[Why the public thinks natural resource public participation processes fail](#)" was one of 5 finalists for the 2016 [Jim Pojar Award](#) offered by the Bulkley Valley Research Centre in Smithers for outstanding publications that advance public understanding or scientific knowledge regarding sustainable management of natural resources in northwest British Columbia. Paul Sanborn was one of the judges for the awards. This year's award went to Leslie Main Johnson's 2010 book "Trail of Story, Traveller's Path: Reflections on Ethnoecology and Landscape".

Stay up-to-date with the latest NRESi and member news by following us on Twitter: [@UNBC\\_NRESi](#)

## Cumulative Impacts Research Consortium (CIRC) news

Chris Buse from the CIRC presented the CIRC's work "Toward a holistic, integrated approach – Update from the Cumulative Impacts Research Consortium" and chaired a session of thought leaders at a conference in Vancouver BC on Cumulative Effects and the Future of Resource Management on March 2-3, 2015.

**Event:** The CIRC will be hosting a free community event at the Vanderhoof Seniors Friendship Centre on **April 6, 2016** from **6:00—8:00 pm**. This event will be an opportunity to learn, share, and promote a common agenda for positive action to address the cumulative environmental, community and health impacts of resource development.

For more information or to RSVP, please contact Rebecca Delorey at [circ@unbc.ca](mailto:circ@unbc.ca).

## Pacific Institute for Climate Solutions (PICS) news

### BC's future Climate Leadership Plan: What YOU can do

Get informed and give your feedback!

This January the B.C. government launched a 60-day consultation period - ending on **March 25th** - on its forthcoming Climate Leadership Plan and is inviting all British Columbians to give their [feedback](#) on the most important actions BC can take to lower our greenhouse gas emissions and take advantage of the low carbon economy of the future.

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## IN THE NEWS

### First hurdle in designation of the Ancient Forest as a UNESCO World Heritage site crossed



BC Premier Christy Clark along with valued partners in the project including the Lheidli T'enneh First Nation, Caledonia Ramblers Hiking Society, local MLAs, and UNBC.

The first hurdle in the designation of the Ancient Forest east of Prince George as a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage site has been crossed with the announcement by B.C. Premier Christy Clark on Tuesday, March 15th at the Wood Innovation and Design Centre in Prince George, of the creation of B.C.'s newest Class A Provincial Park in the area.

Chief Dominick Frederick, from the Lheidli T'enneh First Nations, and Nowell Senior, on behalf of the Caledonia Ramblers Hiking Society, were key proponents of the 11,190 ha park, which protects a unique area of inland temperate rainforest, 120 km east of Prince George.

Also instrumental in the creation of the park have been the efforts over the past two decades of local community members from Dome

Creek and Crescent Spur who have long recognized the specialness of this area, as well as many Provincial government employees, and other volunteers and supporters.

One of the major values considered in making the decision on park designation were the unique ecological and social attributes of the area. NRESi researchers including **Drs. David Connell, Darwyn Coxson, Stephen Dery, Art Fredeen, and Kathy Lewis** along with many graduate and under-graduate students, have conducted research studying the area's climate, insects, lichens and mosses, tree growth, carbon sequestration, and recreation use. Former UNBC graduate students David Radies, Jonathan Hall, and Jessica Shapiro have played especially critical roles in gathering information in support of the park designation.

Further efforts are underway by NRESi researchers to conduct detailed biodiversity assessments in the park area in support of World Heritage site designation.

For an additional stories and more photos from Tuesday's announcement see:

UNBC release: <http://www.unbc.ca/newsroom/unbc-stories/ancient-forest-named-provincial-park-thanks-part-unbc-research> and,

BC Government releases: <https://news.gov.bc.ca/releases/2016PREM0024-000400> and <https://news.gov.bc.ca/releases/2016ENV0013-000412>



NRESi Director **Dr Darwyn Coxson** speaks at the Provincial park announcement.

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## IN THE NEWS

## (Government press releases)

### **BC Parks and Protected areas continues to grow**

**Mar 16, 2016—Prince George.** Environment Minister Mary Polak introduced new legislation today that, if passed, will add more than 11,700 hectares to B.C.'s protected areas system, including the establishment of a new Class A provincial park.

[For more details...](#)

### **Ecosystem restoration burn planned for Churn Creek area.**

**Mar 16, 2016—100 Mile House.** The Ministry of Environment and the Ministry of Forests, Lands and Natural Resource Operations are planning to conduct an ecosystem restoration burn in the Churn Creek Protected Area between March 15 and April 29, weather permitting.

[For more details...](#)

### **Report increases British Columbia's natural gas supply**

**Mar 16, 2016—Victoria.** A new assessment released today indicates British Columbia's natural gas resources are larger than previously estimated.

[For more details...](#)

### **New community forest issued in the Robson Valley**

**Mar 16, 2016—Prince George.** The creation of the Valemount Community Forest, represented by Valemount Community Forest Company, will help promote economic stability and employment opportunities, while enhancing the ability for local forest stewardship.

[For more details...](#)

### **New provincial park protects majestic Ancient forest**

**Mar 15, 2016—Prince George.** Premier Christy Clark announced the creation of B.C.'s newest Class A provincial park in the northern region of the province, which makes up part of the only known inland temperate rainforest in the world.

[For more details...](#)

### **Prescribed burns scheduled for Chimney Lake area.**

**Mar 15, 2016—Williams Lake.** The Ministry of Forests, Lands and Natural Resource Operations is planning a series of controlled burns near Chimney Lake and Felker Lake between March 16 and April 31, 2016, weather conditions permitting.

[For more details...](#)

### **BC welcomes new doctors to practice in the North.**

**Mar 15, 2016—Victoria.** As part of the Province's work to make sure British Columbians have access to high-quality primary care, 11 internationally-trained physicians will begin practicing in rural and remote communities in B.C., including six family doctors in the North.

[For more details...](#)

### **Co-op funding supports northern B.C. students**

**Mar 14, 2016—Prince George.** Co-op students at the University of Northern British Columbia will benefit from \$75,000 in one-time funding, part of a \$1.3-million announcement to 16 public post-secondary institutions following the launch of Co-op Week celebrations today.

[For more details...](#)

### **Metlakatla signs LNG benefits agreement**

**Mar 14, 2016—Victoria.** Metlakatla First Nation has signed two pipeline benefits agreements with the provincial government that will provide direct benefits to the community as a result of B.C.'s developing liquefied natural gas (LNG) industry.

[For more details...](#)

### **British Columbia government acting on spruce beetle**

**Mar 11, 2016—Prince George.** In response to recent increases in the spruce beetle population, the Ministry of Forests, Lands and Natural Resource Operations is committing \$1 million and has designated a spruce beetle manager to work with First Nations, local communities and stakeholders to develop a regional spruce beetle management plan.

[For more details...](#)

### **Factsheet: Spruce beetles in British Columbia**

**Mar 11, 2016—Victoria.** The spruce beetle (*Dendroctonus rufipennis*) is a forest pest that is native to spruce forests of western North America. In British Columbia, the spruce beetle typically has a two-year life cycle. Beetles exhibiting a one year life cycle can also be found after early, warm spring weather.

[For more details...](#)

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## IN THE NEWS

(Government press releases)

### Province increasing fibre supply security, streamlining wildlife licensing

**Mar 10, 2016—Victoria.** Legislative amendments introduced today will increase fibre supply for forest product manufacturers and enable wildlife-related licensing and permitting activities to be moved online. [For more details...](#)

### Amendments strengthen oil and gas safety oversight

**Mar 9, 2016—Victoria.** The Minister of Natural Gas Development Rich Coleman, today introduced amendments that will streamline safety oversight over oil and gas facilities, including liquefied natural gas facilities. [For more details...](#)

### Provincial funding for Tsimshian Roundtable

**Mar 8, 2016—Victoria.** The Tsimshian Roundtable, a unique partnership of the six Tsimshian First Nations and LNG proponents in northwest B.C., is getting provincial government support to develop solutions to historic employment barriers for First Nations. [For more details...](#)

### Moose enhancement first step in modernizing wildlife management

**Mar 8, 2016—Victoria.** The Province will strengthen its current moose management strategy as the initial phase in examining how to modernize aspects of wildlife management, such as licensing, inventory, research and increased engagement in wildlife management decisions. [For more details...](#)

## PUBLICATIONS

Sharma, A. R. and **Déry, S. J.**, 2016: Elevational dependence of air temperature variability and trends in British Columbia's Cariboo Mountains, 1950-2010, *Atmosphere-Ocean*, **54**, doi: 10.1080/07055900.2016.1146571.

Forest Practices Board. 2016. [Board Bulletin, Volume 17. Stewardship—A Forest Practices Board Perspective](#). Forest Practices Board, Victoria, BC. 4 pp.

## TRAVEL & CONFERENCES

**Gail Fondahl** attended the 2016 Arctic Science Summit Week in Fairbanks, Alaska, to chair meetings of the International Arctic Science Committee's (IASC) Social and Human Sciences Working Group (<http://iasc.info/working-groups/social-human>). She also served as acting Canadian representative to the annual IASC Council Meeting. Sadly, this meant missing the Western Division of Canadian Association of Geographers, which she hears was very successful! Congrats to Geography colleagues!

**Stephen Dery** participated as the external examiner in Oleksandr Huziy's PhD thesis defense on 10 March 2016 at UQAM in Montreal. Congratulations to Oleksandr on his successful defense!

**Staffan Lindgren** will attend the symposium "Pollination: Science and Stewardship" held at Okanagan College in Penticton on March 17, 2016. Staffan will travel to Penticton with Dr. Robb Bennett, Claudia and Darren Copley (RBCM) and Syd Cannings. Weather permitting, we will collect high elevation stone flies and specimens of the spider genus *Pholcophora americanum*, a member of the cellar spider family (Pholcidae), for Jiri Kral, a Czech molecular scientist.

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## Western Division of the Canadian Association of Geographers conference a huge success

The UNBC Geography program recently hosted a successful meeting of the **Western Division of the Canadian Association of Geographers**, at UNBC (**WDCAG. March 11-12, 2016**). Geography program members would particularly like to thank Neil Hanlon, Sinead Earley, Alex Koiter, and Stephanie Powell-Hellyer for their work. Attendees were wowed by an excellent opening presentation about Tumbler Ridge's Global Geopark, given by Dr. Charles Helm. In total, the conference drew 220 registrants, 54 oral presentations, and 33 posters. NRES students and NRESi members participated, and UNBC-based volunteers ensured its success. Several NRES-based presentations won student awards. **Thank you to all who attended and contributed.** See the UNBC Geography homepage for conference details, and a WDCAG 2016 video: <http://www.unbc.ca/geography>. Please keep in mind that this is a diverse and accessible regional conference that occurs annually, usually in March. Other NRESi members are encouraged to attend and to extend the opportunity to colleagues and students.



Conference organizer Dr. Neil Hanlon (R) and banquet key-note speaker Dr. Sarah de Leeuw.

### WDCAG 2016 presentations by NRES students:

Duros, Jacob (MSc student) & Petticrew, Ellen. *Mapping the movements of aquatic particulates in 3D using a CTD Profiler in Quesnel Lake, BC.*

**Pelto, Ben M** (PhD student) & Menounos, Brian. *An evaluation of different mass balance methodologies for glaciers in the Columbia Basin, Canada.* [**Honourable Mention, PhD Oral Presentation Competition**]

**Reiffarth, Dominic** (PhD student), Petticrew, Ellen, Owens, Philip & Lobb, David. *Soil and sediment tracing using compound-specific stable isotopes in Manitoba, Canada.* [**Best Oral Presentation, PhD Competition**].

Rasmus, Kristy (MSc student), Petticrew, Ellen & Rex, John. *The hydrological regime and the seasonal retention of marine derived nutrients in the Horsefly River.*



Student award winners who attended the banquet.

**Sussbauer, Richelle** (MSc student) & Owens, Philip. *Sediment-associated contaminant dynamics in the Quesnel River from the Mount Polley Mine disaster.* [**Best Oral Presentation, MSc Competition**].

Kieta, Kristen (MSc student) & Owens, Philip. *Effects of freeze-thaw cycles on phosphorous release from grass buffer strips after multiple cuttings.*

Huneault, Genevieve (MA student) & Mullins, Philip. *Developing a relational model of recreation specialization among fly anglers in Prince George, BC.*

Peetom, Kai (MA student). *The Alaskan Highway Gas Pipeline easement: A Klane First Nation case study.*

### Poster presentation at the WDCAG by NRES students:

Zwiebel, A (MSc student), Petticrew, E, and Owens, P. *Biofilm as an indicator of trace metals contamination from the Mt. Polley mine tailings spill.*

### WDCAG Oral Presentation by NRESi affiliates:

Buse, Chris (University of Northern British Columbia), Connolly, Michelle, Fredeen, Art, Halseth, Greg, Harder, Henry, Parkes, Margot, Wiensczyk, Alan & Wells, Rachael. *Addressing an 'integration imperative': Merging environmental, community and health perspectives to develop an understanding of the cumulative impacts of resource development for northern BC.*

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## Spring Field School Announcement



The Biology Field School (BIOL 333-3) will be offered on B.C.'s North Coast this spring, from April 25<sup>th</sup> to May 6<sup>th</sup>.

As a complement to recent versions of this course that focused on tropical rain forest ecology in trips to Panama, the 2016 course will address temperate rain forest ecology here in British Columbia.

We will be based in the village of Oona River on Porcher Island, reachable by boat from Prince Rupert. The course will provide an immersive experience in the ecology, dynamics, and management of North American coastal rain forests. Exercises will include sampling for forest composition, structure and history. Students will be introduced to interactions between plants and animals and between forested, aquatic and marine environments. Each student will undertake a small independent research project.

This course will be of interest to students in Forestry, Wildlife & Fisheries, Biology, Outdoor Recreation, Environmental Studies, and Geography. As a pre-requisite for enrollment, students must have taken a university-level course in ecology, such as UNBC's BIOL 104 or BIOL 110/111, though BIOL 201 is preferred. Interested students should contact the instructor, Dr. Phil Burton – [phil.burton@unbc.ca](mailto:phil.burton@unbc.ca), 250-615-3333 -- for a course outline, additional instructions and pre-reading assignments as soon as possible. Registration is limited to 18 students.



With assistance from UNBC's Undergraduate Experiential Learning Fund, the Terrace Community Forest, and McElhanney Consulting Services Ltd., and in partnership with the Oona River Resources Association, we can deliver this course with an additional course fee of only \$400 per student (to be confirmed). This fee includes accommodation and meals for all 11 days, as well as boat transportation and miscellaneous supplies.

## EXPERIENTIAL COURSE OFFERING

### First Nations Cultural Heritage through Moose-hide tanning—FNST 444-3

May 2-20, 2016, Monday—Friday, 9:00 am to 3:30 pm

This intensive hands-on experiential-learning course will introduce students to concepts, case studies and perspectives on issues relating to Indigenous cultural heritage through the process of tanning a moose-hide. Co-facilitated with two Nak'azli Dakelh knowledge-holders, Yvonne Pierrero and Mildred Martin, this course will engage students in the process of preparing hides while simultaneously exploring Indigenous voices and diverse themes in cultural heritage, including recovery, protection and revitalization. This class will include travel to UNBC as well as to the home of the knowledge-holders, in Prince George. **This seminar-based class is founded on discussions of the readings, lectures and participation in the moose-hide tanning, thus attendance and active engagement of students in the class is highly expected.** Through the tanning process, students will have hands-on experience while developing an understanding of Indigenous history and cultural heritage as well as appreciation for Dakelh traditions and skills in their traditional and contemporary contexts.

For more information please contact Agnes Pawlowska-Mainville at: [agnes.pawlowska-mainville@unbc.ca](mailto:agnes.pawlowska-mainville@unbc.ca) or visit the FNST website at <http://www.unbc.ca/first-nations-studies>

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**PLEASE EMAIL ALL INFORMATION AND MATERIAL TO: [al.wienczyk@unbc.ca](mailto:al.wienczyk@unbc.ca)**

## COURSE OFFERING

**PhD summer course:** Climate Change Adaptation and Transformations towards Sustainability.

**When:** August 1-5, 2016

**Where:** University of Oslo, Oslo, Norway.

This PhD course explores the relationship between adaptation and transformation, two concepts that are key to understanding societal responses to climate change. The objective of the course is to engage students with the latest theories, frameworks, approaches and methods for addressing two critical questions in solutions-oriented global change research: What does it mean to successfully adapt to climate change? How can deliberate transformations to sustainability be carried out rapidly, yet in ways that ethical and equitable?

**Organizers:** Oslo Summer School in Comparative Social Science Studies at the University of Oslo, in collaboration with the Future Earth Norway Secretariat.

**Lecturer:** Professor Karen O'Brien, Department of Sociology and Human Geography, University of Oslo, Norway

Rolling admission, applications are now being accepted

**Course Credits:** 10 pts (ECTS)

Max. 25 participants

[Read more about the course and apply here.](#)

If you have any questions please get in touch with Linda Sygna at the Future Earth Norway Secretariat:

[linda.sygna@sosgeo.uio.no](mailto:linda.sygna@sosgeo.uio.no)

## SUSAN STEVENSON MEMORIAL AWARD

As its first project of this kind, the Natural Resources and Environmental Studies Institute (NRESi) has established the Susan Stevenson Scholarship Fund, in memory of wildlife ecologist and NRESi member Susan Stevenson. During a 35-year career built primarily in the BC central interior, Susan designed and implemented important research and inventory projects related to mountain caribou habitat, lichen biology, and silvicultural systems, collaborating with a diverse range of researchers, and gave generously of her expertise to the next generation of scientists. Susan exemplified the Institute's values of interdisciplinary curiosity and unselfish collaboration, and enriched the lives of all those who worked and studied with her.

Efforts have succeeded in reaching the goal of \$15,000 that will be matched by UNBC to allow for an annual award. The inaugural award is hoped to be presented in the 2016-2017 academic year. NRESi would like to thank everyone who contributed to the scholarship!

The following award criteria for the **Susan Stevenson Memorial Award** have been developed:

**Value:** \$1,000

**Eligibility:** Available to a full or part time female graduate student enrolled in either the Masters (NRES) or PhD (NRES) degree programs with a research emphasis in one or more of: wildlife ecology, plant biology, forest ecology, or innovative silvicultural systems and practices that emphasize wildlife management and biodiversity objectives.

**Criteria:** Satisfactory Academic Standing (3.0 GPA)

**Conditions:** Student is unable to receive this award more than once.

**Recipient Selection:** Senate Committee on Scholarships and Bursaries on recommendation of the NRESi Steering Committee. Applicants will provide a statement, not exceeding 500 words in length, explaining how their intended research fits within the areas specified for his award.

**Application deadline for the 2016/17 academic year:** August 1, 2016

## COLLOQUIUM ARCHIVE

Did you miss a colloquium or special lecture this semester? Visit NRESi's webcast archive to catch up! They can be found on the [NRESi Youtube channel](#).

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