

Joint Research Colloquium with the University of Washington on trans-boundary issues

Held at UBC on Saturday, September 23, 2006

**Introduction General:** There are 11 UW graduate students participating in a week long course examining trans-boundary environmental issues in the eastern Cascades and Columbia Highlands of northern Washington state and southern British Columbia this coming September, 2006. One of our goals for this course is to use the sense of place to convey and place into context the issues on which we will focus. Nine of the students are newly incoming Ph.D. students to a special NSF – Integrative Graduate Education and Research Training program entitled “Multinational Collaborations on Challenges to the Environment.” These students participate in the trans-boundary course as well as a year-long series of courses exploring the following questions:

- "What are the most significant environmental problems we face today?"
- "What kinds of boundaries do we face in addressing environmental problems?"
- "What kinds of research questions do environmental problems generate?"
- "What constitutes effective and ethical environmental research?"
- "What constitutes effective and ethical environmental education?"
- "How do our responses to these questions vary depending on social context?"

These students will be given an option of either going to New Zealand or China during spring break to participate directly in examining environmental issues.

**Introduction Trans-boundary Course:** In early July, students were first introduced to some of the broader goals of the year via a scheduled tour of the Maya Lin exhibit at the Henry Art Gallery on the University of Washington campus. The Trans-boundary course begins with a potluck on Saturday, September 16. Sunday is at the North Cascades Institute on Ross Lake with an introduction to the course, field journaling and environmental issues facing the North Cascades. Monday focuses on National Park issues including trans-boundary ecosystem management and large carnivore recovery, as well as Seattle City Light issues of energy production and climate change. Tuesday is spent with members of the Colville Confederated Tribes and the Okanagan Nation Alliance on salmon recovery in the Okanagan River. On Wednesday, we hear from board members of the community-based forestry group Northeast Washington Forestry Coalition at Colville Conservation District, tour the Vaagen Brothers Mill, and go for a hike in the proposed Columbia Highlands Wilderness area. We learn on Thursday about the mountain pine beetle outbreak in British Columbia from Ministry of the Environment officials, and visit with the South Okanagan-Similkimeen Conservation Program to learn of their efforts to protect the endangered grassland ecosystems. Friday is a hike in Manning Provincial Park and the drive to Vancouver. Saturday is the proposed Colloquium on the University of British Columbia campus. During each of these presentations, we are emphasizing a dialogue that covers information needs and challenges facing various stakeholders. We return to Seattle late Saturday. Monday late afternoon, we have a group meeting to discuss outcomes and next steps.

There are two appendices: one contains the proposed readings for the course and the other is a copy of the poster illustrating last year’s trans-boundary course.

## University of Washington Faculty and Students

Name	Department	Research Area
Tom Hinckley hinckley@u.washington.edu	Forest Resources	Physiological ecology, evaluation of ecosystems, sustainable practices: buildings to globe
Regan Smith	Forest Resources	Conservation Planning; Landscape Ecology; Local land-use decision making; landscape ecological planning
Sara Jo Breslow	Anthropology	Ethnographic research on the social dimensions of salmon habitat restoration in the Skagit Valley of Western Washington.
Emma Flores	Education	Incorporation of interdisciplinary research techniques in graduate-level education
Julie Combs	Forest Resources	Insect predation and invasive species impacts on <i>Astragalus sinuatus</i> (endangered plant species); rare plant biology; herbivory, plant community ecology and conservation.
Adam Freeburg	Archaeology	Prehistory of the Arctic and Sub-Arctic; human subsistence and adaptation through time; GIS analysis; agent-based computer modeling
Joanne Ho	Forest Resources	The interaction of economic, social and ecosystem constraints on shaping the responses of small rural or mountainous communities.
Joyce LeCompte-Mastenbrook	Anthropology	Collective action problems related to common resources; ethnobiology; ethnoecology
Frederic Lott	Civil & Environmental Eng.	Stream flow cycles and snow melt; interested in (1) shared water resources & (2) international water policy and law
Eric Nassau	Civil & Environmental Eng.	Lead release in drinking water systems; trans-boundary water policy; meeting water needs for multiple consumers
Alicia Robbins	Forest Resources	Economics of conservation; incentive programs; innovative markets;
Haldre Rogers	Biology	Invasive species and their impacts on ecosystem processes and forest structure; Guam forest ecology
Patrick Shamberger	Material Sciences & Eng.	Energy efficiency and alternative energy technologies; anthropogenic impacts on global scales (climate change, CFC's); shared water resources
Karen Terwilleger	Forest Resources	Social sciences; perceptions and

		engagement of stakeholders on trans-boundary environmental issues. Environmental attorney for the Democratic Caucus.
Lauren Urgenson	Forest Resources	Non-native plant invasions; stakeholder involvement and participation in ecosystem management;

### University of British Columbia – Vancouver

Name	Department	Research Area
Hans Schreier 604-822-4401 Star@interchange.ubc.ca	Institute for Resources, Environment & Sustainability	Land use effects on water resources watershed management, soil and water pollution, non-point sources of pollution.
Coll Thrush 604 827-3623 cthrush@interchange.ubc.ca	History	Place-based research and teaching; the Northwest Coast and the American West; aboriginal history and the cultures of colonialism; environmental history; history of food.
Richard Paisley paisley@law.ubc.ca	Law	National and international natural resources law and policy, including national and international water law and policy, international environmental law, negotiation and environmental conflict resolution. Program for Natural Resources Law and Policy: <a href="http://faculty.law.ubc.ca/enlaw/#Recognition">http://faculty.law.ubc.ca/enlaw/#Recognition</a>
Eugene (Bo) Brickleyer, Jr. Visiting Professor	Law	Comparative law of coastal resource management in North America; president of the Aquatic Resources Conservation (ARC) Group in Seattle.
Laurie Ricou <a href="mailto:lricou@interchange.ubc.ca">lricou@interchange.ubc.ca</a> (604) 822-4079	English	NW Regional Literature including environmental literature (e.g., natural & cultural history of salal; invader species)
Emma Norman <a href="mailto:enorman@interchange.ubc.ca">enorman@interchange.ubc.ca</a>	Geography	Trans-boundary Water Governance - how governance mechanisms change with time and scale and how bioregions are socially constructed.
Karen Bakker <a href="mailto:bakker@geog.ubc.ca">bakker@geog.ubc.ca</a>	Geography	Trans-boundary water governance
Colin Campbell <a href="mailto:colincampbell@politics.ubc.ca">colincampbell@politics.ubc.ca</a>	Political Science	Canada Research Chair in U.S. Government and Politics

**University of British Columbia - Okanagan**

<b>Name</b>	<b>Department</b>	<b>Research Area</b>
Melanie Jones <a href="mailto:Melanie.Jones@ubc.ca">Melanie.Jones@ubc.ca</a> (250) 807-9553	Biology & Physical Geography	The influence of ectomycorrhizae on nutrient uptake and carbon allocation by woody plants.
Karen Hodges <a href="mailto:karen.hodges@ubc.ca">karen.hodges@ubc.ca</a>	Biology & Physical Geography	As a conservation biologist, my primary activities are focused on the management of habitats to protect species from going extinct.
John Wagner <a href="mailto:john.wagner@ubc.ca">john.wagner@ubc.ca</a>	Community, Culture & Global Studies	The Political Ecology of Water Use in the Okanagan Valley
Jeff Curtis <a href="mailto:jeff.curtis@ubc.ca">jeff.curtis@ubc.ca</a>	Chemistry, Earth and Environmental Sciences	Biogeoclimatic control of water quality in streams and rivers in British Columbia. Role of natural disturbances (e.g., fire) on hydrology.

Simon Fraser University

<b>Name</b>	<b>Department</b>	<b>Research Area</b>
Joseph (Jay) E. Taylor III <a href="mailto:taylorj@sfu.ca">taylorj@sfu.ca</a>	History & Geography	History of Pacific coast fisheries especially salmon from aboriginal, commercial and sport fisheries perspectives. Interest in the person and the Taylor Grazing Act. Also the parallels between climbers and environmentalists.
Andrea Geiger-Adams <a href="mailto:aageiger@sfu.ca">aageiger@sfu.ca</a>	History	Research interests focus on Canadian history, particularly Canadian immigration and First Nations history. Was a reservation attorney for the Confederated Tribes of Colville Reservation
Ken Lertzman <a href="mailto:kenneth_lertzman@sfu.ca">kenneth_lertzman@sfu.ca</a>	Resource and Environmental Management	Interested in a broad range of topics related to forest ecosystem dynamics, conservation, and management. Member of the Scientific Panel on Sustainable Forest Practices in Clayoquot Sound.

**Joint Workshop between SFU, UBC-Okanagan, UBC-Vancouver and UW-Seattle  
Vancouver, British Columbia**

**Time:** Saturday, September 23 at 9:00 am

**Location:** Seminar Room for the Institute for Resources, Environment and Sustainability

**Goals:** To have a discussion about environmental issues facing both BC and Washington and how different disciplines frame and approach such issues, successes and failures from disciplinary approaches, and what makes successful interdisciplinary and multi-national approaches.

**Pragmatic Goal:** It is our intent to have faculty and students participate for the full time period (vs. the present and disappear option).

**Proposed Agenda:**

- 9:00 – 9:05: Welcome (Hans Schreier/ Coll Thrush)
- 9:05 – 9:15: Introduction of participants and IGERT Program (Participants and Hinckley)
- 9:15 – 9:30: Review of goals and format (Coll Thrush)
- 9:30 – 9:45: Presentation of Sara Breslow’s research on the Skagit, Questions
- 9:45 – 10:15: Panel 1 and associated presentations (2 minutes per member) and group discussion. Panel composition will depend upon two things: (1) who is present and (2) the opportunity to create groupings that are non-traditional, but highly informative and thought provoking.
- 10:15 – 10:25: Break
- 10:25 – 10:45: Presentation by three to five participants in the IGERT Trans-boundary Course on their impressions.
- 10:45 – 11:15: Panel 2
- 11:15 – 11:35: Presentation by three to five participants in the IGERT Trans-boundary Course
- 11:35 – 12:00: Discussion and feedback on previous presentations
- 12:00 – 1:00: Lunch
- 1:00 – 1:20: Final presentation by three to five participants in the IGERT Trans-boundary Course
- 1:20 – 2:00: Panel 3
- 2:00 – 2:30: Broader Discussion
- 2:30 – 2:45: Closure: Summary points, next steps (Hinckley, Thrush, others)

## Appendix 1: Trans-boundary Course Reading list

### IGERT 2006 Transboundary Field Trip Readings

*In addition to providing some hopefully interesting background information on the places and issues we will be visiting during the fieldtrip, the following readings will introduce themes we will continue to explore for the remainder of the year, such as: how to deal with the range, sometimes disparate, of types and sources of knowledge and ideas about the environment; our relationship to the environment and to research as scientists and as people; our understanding of the nature and roles of “science”; the agencies of people and nature; questions re: choice of scale in research and application, etc.*

*Consider alternative approaches to research represented by these readings and by fieldtrip experiences: what counts as research questions, data, analysis, and interpretation in unfamiliar fields? Notice different academic writing styles.*

*Consider alternative ways of engaging the environment, and in particular the landscape you will be visiting on the fieldtrip, from art, to history, to engineering, to anthropology. How do these readings suggest synergistic combinations of these and other approaches to studying – and solving - environmental problems?*

#### REQUIRED

##### **1. Interdisciplinary Collaboration**

*[Designing Interdisciplinary Courses](#). William H. Newell, from *Interdisciplinary Studies Today*, 1994, Jossey-Bass.*

*As a group, IGERT students and faculty compose an interdisciplinary team. This is essential reading for preparing for the challenges of interdisciplinary teamwork.*

##### **2. Art/Science/History**

Maya Lin newspaper articles

*On Lin’s current Lewis and Clark Confluence project, working with local tribal leaders in the Columbia River Valley. Skim.*

Maya Lin excerpts from [Boundaries](#)

*On the philosophy behind her work as artist/scientist/environmentalist. Skim.  
Don’t forget to revisit the Maya Lin exhibit before it closes Sept. 3<sup>rd</sup>!*

##### **3. History/Engineering**

Nash, L. (2000). "The changing experience of nature: Historical encounters with a northwest river." *Journal of American History* **86**(4): 1600-1629.

*A fascinating history of representations of the Skagit River, from early Indian maps to hydroelectric engineering data. Introduces some of the major philosophical and epistemological questions about science and environmental research and application that we will be discussing first quarter.*

##### **4. Geography/Ecosystem Management**

Pedynowski, D. (2003). *Prospects for Ecosystem Management in the Crown of the Continent Ecosystem, Canada-United States: Survey and Recommendations*. Conservation Biology, Vol. 17(5): 1261-1269

*Although focusing on the watershed to the East of where we will be visiting, this is a nice example of interview/survey methods and focus on social/political information and questions of scale re: transboundary ecosystem management.*

## **5. Biology/Climate Change**

Logan, J.A. and J.A. Powell. 2001. Ghost forests, global warming and the mountain pine beetle (Coleoptera: Scolytidae). American Entomologist 147: 160 – 172.

*This is a nice summary and integration of the potential interactions between global warming, the mountain pine beetle and susceptible tree species and the ecological consequences of this interaction. MPB damage in BC has reached a critical level where trees normally not susceptible are being killed. The following web site should be examined: <http://www.for.gov.bc.ca/hre/bcnpb/>. What is particularly worrisome is the latitudinal, longitudinal and elevation expansion of this beetle – it is truly a trans-boundary problem.*

Running, S.W. 2006. Is global warming causing more, larger wildfires. Science 313: 927 – 928.

*Steve Running, probably one of the world's top forest scientist, who has become an ecosystem to global modeler of climate change. In this summary piece for Science, he places recent articles on wildfires in the west into context.*

## **RECOMMENDED**

White, R. (1995). The organic machine: the remaking of the Columbia River. New York, Hill and Wang.

*An excellent, short, very readable environmental history of the Columbia River.*

Williams, D.W. and A.M. Liebhold. 2002. Climate change and the outbreak ranges of two North American bark beetles. Agricultural and Forest Entomology 4: 87 – 99.

*Provides a broader context to climate change and potential impacts on two very destructive bark beetles and their associated forest hosts.*

Appendix 2: 2005 Autumn Trans-boundary Course

# Transboundary Study of Farms, Salmon and Water (CFR 590E, Sept. 22 - 27, 2005)

### Course Summary

We used readings, discussions, & a mood frequently, on-site visits with experts to address five topics in the course:

1. Transboundary issues concerning water & watersheds, habitat restoration, endangered species (ESA vs. SARA), farmed, salmon recovery, siting/landfills, jarroviolen, etc.
2. Salmon culture, economics, profiles.
3. Elements of multi-stakeholder that apply to both the IBERT & the Transboundary Course

- Goals of water & the environment as they apply to the IBERT
- Interdisciplinary nature of IBERTs in general & this IBERT in particular.

### Study Area: Georgia Basin and the Puget Sound

### Course Readings

1. Population growth
2. Endangered species
3. Water and water resources
4. Indigenous people & rights
5. Farming
6. Fishing

### Course Readings (continued)

1. Salmon and Endorse Recovery
2. Interdisciplinary
3. Waters of Nature
4. Climate Change
5. Multidisciplinary Studies

**The Environmental Science-Policy Interface: Crossing Disciplinary Boundaries with a Team-Teaching Approach**  
*Annabeth K. Stok, University of British Columbia*

**The PACIFIC SALMON WARS: What Science Helps to the Challenge of Recovering Species**  
*Mary B. Ruckelshaus, Phil Lester, Judith Johnson, and Peter M. Swanson*

**Beried Epistemologies: The Politics of Nature in (Post)colonial British Columbia**  
*Kevin Wilson, UBC*

### Beginnings

Course originated from 3 principal sources:

1. Work by three students from Cabinet of the HSF-IBERT - MCOE (Grove, Okuda, Okuda)
2. HSF-IBERT - MCOE in transboundary issues with Canada.
3. The UW - Center for Canadian Studies.

### Course Schedule

Topic	Instructor	Location
Sept 22 - 9:00am - 12:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 22 - 1:00pm - 4:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 23 - 9:00am - 12:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 23 - 1:00pm - 4:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 24 - 9:00am - 12:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 24 - 1:00pm - 4:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 25 - 9:00am - 12:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 25 - 1:00pm - 4:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 26 - 9:00am - 12:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 26 - 1:00pm - 4:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 27 - 9:00am - 12:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver
Sept 27 - 1:00pm - 4:00pm	Dr. John Wainwright (UBC) & Dr. David Ruckelshaus (UBC)	UBC Vancouver

### Policy Forum

**Indicating Future Scientists**

**Puget Sound Salmon Recovery Plan**

**Skills and benefits of an interdisciplinary research path**

**Natural Climate Insurance for Pacific Northwest Salmon and Salmon Fisheries: Finding Our Way Through the Unraveled Bank**

**Fishermen's Terminal is losing its fishermen**

**Indigenous Team: Breaker, Harmer, Hamley, Ingator Professor James Schmeier**

**IBERT Coastal E: Nagas, Hattori, Loh, Nagas, Poph, Ruckelshaus, Taylor (Photos, not shown)**

### ORGANIC VALLEY

Powered by Harver, Richard & Taylor