

Jane Hoek, Tyee Photo

Newsletter #9

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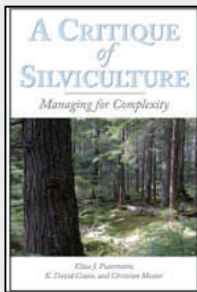
MARK YOUR CALENDARS!

The Bulkley Valley Research Centre
Happy Holidays Open House

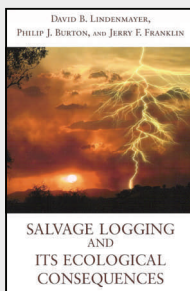
1188 Main Street, Smithers
Friday, December 19th
4:00 - 6:00 pm

This year we are combining the occasion with the launching of two books co-authored by Centre members.

A Critique of Silviculture - Managing for Complexity, co-authored by David Coates



Salvage Logging and Its Ecological Consequences, co-authored by Philip Burton



In this issue, we ask for members' input on a number of things. First, in our lead article on reducing our carbon footprint, we alert you to our plan shortly to ask you to fill in a form on-line that will inform us of your transportation on Centre business, to help us develop a carbon-offset program. Second, at the end of our article on Erin Rechsteiner, our impressive 2008 scholarship winner, we ask you to consider nominating candidates for next year's scholarship. Third, we ask you to nominate worthy candidates for the Centre's 2009 awards. Lastly, we invite you to put your name forward to speak at one of our seminars in the New Year. As a society, it is important to us to involve our members in our activities wherever possible!

REDUCING OUR CARBON FOOTPRINT

The board has decided that, as an organisation that emphasizes sustainability, we should be addressing our carbon footprint. While looking for opportunities to reduce the carbon footprint of Centre activities, we also want to develop a carbon offset program. We have been investigating various ways of measuring CO₂ production that might be useful for a research organisation like ours, and have developed a simple template for recording our carbon footprint. The next step is to determine what type of offset program to focus on. Since our vision is to establish northwest B.C. as an internationally recognized centre for excellence in natural resources research, we would like to participate in a program with activities in this region rather than signing on to an existing program in another part of the world. This may mean developing our own program, possibly in partnership or collaboration with other northern organisations. As a first step, we need a preliminary idea of the magnitude of the carbon footprint of the Bulkley Valley Research Centre (including the activities of both the research program and of staff and board members while conducting Centre business). So, once we have a link to the template on our website we will be asking our members to fill out a quick summary of their transportation on Bulkley Valley Research Centre projects. We hope to get our offset program up and running by next year.



FROM: DAILY MITZVAH

2008 SCHOLARSHIP AWARDED

NSERC ELIGIBILITY

The Bulkley Valley Research Centre is now eligible for NSERC (Natural Sciences and Engineering Research Council of Canada) funding. The Centre qualified under the 'Industrial Research and Development' category. A master's level student is already in place under this program: Alana Clason plans to work on overstory-understory interactions in complex, mixed stands of northwestern B.C. under the supervision of Dr. Ellen MacDonald of the University of Alberta and Sybille Haeussler of the University of Northern British Columbia. Thanks and congratulations to Rick Budhwa for successfully steering the Centre through a long and complex process.

BULKLEY VALLEY RESEARCH CENTRE AWARDS 2009

It is time to start thinking of deserving candidates for the Centre's 2009 Awards.

The **Irving Fox Award** and the **Jim Pojar Award** recognize researchers, writers, activists, or organizations that have made an outstanding contribution to sustainability in northwest B.C. Anyone can nominate candidates.

Nominations must be received by: **January 25th, 2009**

For more information visit the [Awards](#) page of the Centre's website www.bvcentre.ca, under the tab "Be Involved".

Erin Rechsteiner is the 2008 recipient of the **Bulkley Valley Research Centre's Irving Fox Memorial Scholarship for Natural Resources Research and Management**. The fourth-year Bachelor of Science student, who is specializing in aquatic biology and geography at Vancouver Island University, has worked for several years in the natural resource management sector.



ERIN RECHSTEINER

Erin's experience includes working as the natural resource management summer student project coordinator with the Ministry of Forests and Range in Queen Charlotte City in 2007. She worked as a park warden in Robson Bight Ecological Reserve near Alert Bay, B.C. this past summer, recording orca behaviour and educating boaters about marine mammal safety. She has also worked as an ecological monitoring technician for the Nature Conservancy of Canada, where she monitored protected areas on Vancouver Island and the Squamish Valley, and has been an instructor for Malaspina College and Outward Bound in a wide variety of outdoor activities, including mountaineering and sea and river kayaking. She is currently studying at Bamfield Marine Sciences Centre collecting data for her undergraduate research project, which studies *Astraea gibberosa* (red turban snail) and *Orthasterias koehleri* (painted sea star) interactions in kelp forest ecosystems.

Erin's goal is to continue in the natural resource sector as a wildlife biologist, and she hopes to return to northern B.C. to work in the ecosystem management field.

Please consider nominating a deserving candidate that you know for next year's scholarship. Applications for nominating candidates must be received by May 31 of each year. For information on eligibility and how to make an application visit the [Scholarship](#) page of the Centre's website www.bvcentre.ca, under the tab "Be Involved".

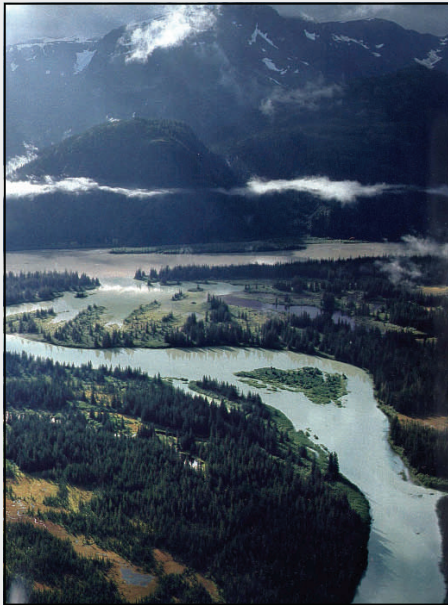
SEMINAR SERIES

Wednesday, December 17th
12:00 - 1:00 pm

Room 110,
Main Campus Building,
Northwest Community College,
Smithers, B.C.

Sybille Haeussler, Research Associate, Forest Sciences Department, University of British Columbia, and President, Bulkley Valley Research Centre, Smithers, B.C. will be speaking on

Diminishing Biocomplexity of Northwest BC Landscapes and Ecosystems?



STIKINE-ISKUT CONFLUENCE (NATIONAL GEOGRAPHIC)

There are still dates available for seminars in the New Year. If you would like to present one, or know of someone who would be interested, please let Kerrith Mackay, the Seminar Series Coordinator, know at Kerrith.McKay@gov.bc.ca

Our seminar series is an important component of our outreach program, to inform the public as well as fellow researchers what research is happening in the Valley.

EFFECTS OF HABITAT COMPOSITION ON THE FITNESS OF A MATURE FOREST INDICATOR - DO THRESHOLDS EXIST?

In each newsletter we highlight one or more Centre projects that we feel will be of interest to readers. Described below is a study by Todd Mahon, a former resident and significant contributor to the scientific community of the Bulkley Valley, and now a PhD candidate at the University of Alberta.

Industrial forest development can profoundly change the composition and spatial pattern of habitats across landscapes relative to historic ranges of natural disturbances. In an attempt to maintain biodiversity and wildlife habitat, forest managers often use a variety of practices that attempt to mimic natural process and conditions. Minimum thresholds or desired ranges for landscape composition (e.g. seral stages) and landscape pattern (e.g. patch size distribution) are often key components of such 'coarse-filter' management strategies within Sustainable Forest Management (SFM) plans. However, although the rationale for landscape targets in SFM plans are generally based on principles of landscape ecology, there is little empirical evidence to support much of the theory upon which these strategies are based. Mahon's research addresses this knowledge gap, using long-term data sets from his work on forest ecology in central B.C.

The goal of this research is to quantify relationships between habitat loss and fitness in the Northern Goshawk (*Accipiter gentilis*), a wide-ranging, mature forest-dependent species, by testing the prediction that goshawks will exhibit a threshold response by either not breeding or, in some cases, expanding their territories and squeezing out neighbours as the amount of mature forest within territories decreases. The study will describe the relationship between the amount of mature forest and Northern Goshawk reproduction by quantifying the relationship between habitat composition (at multiple scales within territories) and breeding success for 80 known goshawk territories in west-central B.C. with long-term breeding histories. In order to determine the functional mechanism driving the relationship, the project will quantify habitat selection and home range size for a subsample of territories with a gradient of mature forest within them and quantify relative prey abundance among broad habitat types.

...cont'd

AARON TROWBRIDGE MOVES ON



The Bulkley Valley Research Centre recently bid a fond farewell to former Junior Researcher Aaron Trowbridge, who left the organization this summer to pursue a position as Resource Coordination Officer with the First Nations Initiatives of the province's Integrated Land Management Bureau, Skeena Region.

Aaron came to the Bulkley Valley Research Centre two years ago at a time of unprecedented growth and staff soon realized that the new Junior Researcher's abilities went far beyond research. Arriving at the newly rented Main Street office, Aaron set to work with hammer and screwdriver to repair donated desks, hang bulletin boards and connect light fixtures. During the two years he worked with the Centre, Aaron also became the go-to guy for computer difficulties, software issues and technical meltdowns in the office. Aaron's primary research project was in crown shyness and he often spent long hours, sometimes into the evening, in front of a computer screen analyzing aerial photographs.

"Aaron is a good example of what Bulkley Valley Research Centre's intentions are — taking a young person and exposing them to research, preparing them for a new career," says Centre Research Program Manager Rick Budhwa. "That's exactly what Aaron did."

Aaron also displayed an aptitude for working with statistics and modelling, an ability to focus and attention to detail, and a willingness to step up to the plate, Rick says. Aaron completed his work with enthusiasm, while also helping with his now one-year-old son Koen and completing a bachelor's degree from Royal Roads University in Victoria, which he graduated from in May. His contribution to the Centre will be greatly missed.

This research is well positioned to overcome some of the primary limitations of previous landscape studies, such as the difficulty of differentiating between habitat loss and fragmentation effects, by:

1. examining a system undergoing profound landscape habitat changes resulting from epidemic mountain pine beetle attack and salvage logging (in the context of a natural landscape experiment),
2. studying a species that is a habitat specialist but that is relatively insensitive to habitat configuration, and
3. quantifying habitat use and prey availability to explain relationships observed between habitat composition and fitness.



A JUVENILE NORTHERN GOSHAWK STANDING ON PREY (JOE MILNER)

The results can be used to assess landscape ecology theory and to verify and refine SFM targets, such as seral stage distribution, within regional SFM plans (eg. Morice and Lakes SFM Plans). The work is of great importance in central British Columbia where landscape pattern is departing from the historic range of variability, and, in the longer term, seral stage composition is also predicted to depart significantly from historic means. This study builds on an existing research program being undertaken by the federal Sustainable Forest Management Network, the University of Alberta and the Morice and Lakes IFPA. Forest Science Program (FSP) funding in 2007/08 allowed the scientists to extend field research by an additional year to obtain optimal sample sizes. Additional FSP support in 2008/09 provided funds to analyze the results and to develop management guidelines in collaboration with regional partners in government and industry.

BULKLEY VALLEY RESEARCH CENTRE CURRENT PROJECTS

BOARD MEMBERS (2008-2009)

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Past President

For more on our Board and Staff
visit *Our People*
on the Centre's website
www.bvcentre.ca

No.	Project Title (visit our website - Research/Research Projects)
2004-08	Forest Ecosystem Recovery Following Disturbance
2005-04	Date Creek Silviculture Remeasurement
2005-11	Strategic Harvest Strategies in Mitigating MPB Impact in Vanderhoof Forest District
2006-05	Adult Survival of Leach's Storm Petrels nesting in Distinct Oceanographic Domains of BC
2006-12	Grizzly Bear Habitat Supply Extension Activities
2006-14	Remeasure Western Balsam Bark Beetle Inventory Plots
2006-18	Quantify Selected Second Growth Northern Interior Forest Ecosystem Attributes
2006-19	Using SELES to Examine Some Stewardship Implications of the MPB Outbreak
2006-20	SORTIE as a Timber Analysis Tool
2006-21	SORTIE for use in Forest Management
2007-02	Assessment of Rare Plant Communities in the Atlin Taku Area
2007-03	Wildlife Status and Trends in the Northern Nations Alliance Area
2007-17	TEM Mapping in the Coastal Douglas-Fir Biogeoclimatic Zone
2007-21	To Expand the Functionality of SORTIE-ND for use in Forest Management
2007-26	Uncha Mountain Red Hills Park Grasslands Restoration Implementation
2008-01	Babine Watershed Monitoring Trust Administration and Monitoring
2008-02	Ruby Creek Special Management Area Terrestrial Ecosystem Mapping and Logistical Support for Concurrent Research Projects
2008-03	Statistical Methods for Non-Detects - Guidance Document
2008-04	First Nations Liaison
2008-05	Biogeoclimatic Ecosystem Classification (BEC) Sampling in the Nelson Portion of the Southern Interior Forest Region
2008-06	Valley Vision #2
2008-07	Effects of Habitat Composition on the Fitness of a Mature Forest Indicator; Do Thresholds Exist? Year 2
2008-08	Developing Indicators of Soil Productivity, Function and Biodiversity Through Soil Biotic Communities. Year 3
2008-09	The Effect of Site Type and Stand Structure on the Relationship Between Growth and Light Availability for Understory Trees. Year 2
2008-10	Development of a Spatially-Explicit Crown Allometry Model. Year 2
2008-11	Evaluation of the Complex Stand Simulation Model SORTIE-ND for Sub-Boreal Forests of Northern BC. Year 2
2008-12	Assessing Ecosystem Vulnerability to Climate Change from the Tree- to Stand- to Landscape Level. Year 2
2008-14	Growth and Release of Understory Trees in Partially-Cut Pine Stands. Year 2
2008-15	Effects of a MPB Epidemic on Northern Caribou Habitat Use, Migration and Population Status. (Continuation)
2008-16	Effects of a Mountain Pine Beetle Epidemic on Tweedsmuir-Entiako Caribou Habitat Use. Year 2
2008-17	Conservation & Restoration of Northern BC Grasslands - HCTF. Year 2
2008-18	Testing SORTIE-ND Parameter Files
2008-19	Taxonomic Resolution of Soil Meso and Macro Fauna (Soil Fauna Taxonomy)
2008-20	Secondary Structure
2008-21	Regeneration Vulnerability Assessment for Dominant Tree Species throughout the Central Interior of British Columbia
2008-22	Ground Based LIDAR (Light Detecting and Ranging)
2008-23	Wildlife Habitat Research and Development and Capacity Building
2008-24	Ecosystems of Central and North Coast BC

Bulkley Valley Centre for Natural Resources Research & Management

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