



CMI Members' Bulletins

For January 2008 – August 2009

Update for January 22, 2008

1. CMI News

This week I will be sending out announcements for our spring 2008 events. As a member you will receive the announcements directly. Our spring events are:

- Soil Bio-engineering, taught by David Polster, in Revelstoke April 29-30
- CMI Annual Researchers' Meeting and Annual General Meeting, in Revelstoke, May 1
- Introduction to R software, taught by Joe Thorley, in Revelstoke, May 28-29.

The CMI Directors have been looking at options for our next conferences and it looks like our fall conference will be about Wildland Urban Interface Fires, and in spring 2009 we will host an event on the Value of Ecosystem Services. Both events will be in Nelson.

2. Job Posting

BC Hydro, Senior Environmental Coordinator (Water License Program) in Burnaby

The duties for this position are: Provides project management support for the Water License Requirements (WLR) program and to the individual watershed project teams; Facilitates program and project planning, forecasting, risk analysis, reporting and financial risk analysis and reporting ; Coordinates formal communication with the controller of water rights and other agencies to ensure BC Hydro meets its regulatory requirements; Leads the development of appropriate project management tools and a data and documentation management system; Prepares technical and status reports, administers budgets, controls schedules and reviews reports prepared by others for technical content and appropriateness; Provides project management over subordinate and assigned study/project staff. For complete details visit: www.bchydro.com/careers (Job ID: 558429) and note that there are two pages of listings. Application is on-line at the above web site, due February 11, 2008.

3. Cariboo Badgers on Knowledge Network Television

January 28 at 7:00 p.m.

The Knowledge Network's new program "The Leading Edge" premieres next week, and the show includes a feature on CMI member Richard Klafki's work on badgers in the

Cariboo. With Roger Packham, MOE Senior Ecosystem Biologist from 100 Mile House, Richard has been using DNA hair snagging techniques to learn more about the badgers. Richard's current research focuses on ways to reduce road mortality. Richard led the film crew around and says they took some really good footage of the badgers.

4. "Mitigating and Adapting to Climate Change through the Conservation of Nature"

The Land Trust Alliance of British Columbia has just released this report, authored by economic and climate change experts, Sara Wilson and Dr. Richard Hebda. Sara Wilson is a leading Canadian researcher on Ecological Economics, which is an emerging field that values nature's services. Dr. Richard Hebda is an adjunct associate professor, Biology, Schools of Earth and Ocean Sciences and Environmental Studies at the University of Victoria and a respected, published author and presenter on climate change. This report provides an overview of:

“the role that natural ecosystems play to mitigate and adapt to climate change; the projected impacts of climate change on ecosystems in British Columbia; and, strategies to reduce impacts, focusing on conservation and ecosystem protection.”

The report highlights the wisdom of investing in intact ecosystems as a means of both adapting to and mitigating the significant effects of climate change. The most effective way to benefit from the carbon storage values of natural ecosystems is to prevent or mitigate their conversion to other uses and keep them healthy. For more information and to view the report: <http://www.landtrustalliance.bc.ca/research.html>

5. Green Bylaws Toolkit

<http://www.greenbylaws.ca>

257 page PDF document

The Environmental Law Clinic released the Green Bylaws Toolkit in November 2007, This is a comprehensive resource that will help local governments protect threatened ecosystems. The Toolkit explains how to use a myriad of tools—from planning to regulatory bylaws—to protect wetlands, grasslands and other important ecosystems. The Toolkit includes an integrated set of bylaw provisions that can protect sensitive areas and maintain green infrastructure. There are model provisions for: Regional Growth Strategies, Official Community Plans, Development Permit Areas, Zoning, Tax Exemptions, Environmental Assessment, Stormwater Management and other regulatory tools.

6. Environmental Trends in British Columbia 2007

<http://www.env.gov.bc.ca/soe/et07>

Now available on the internet, the fourth Environmental Trends in British Columbia report includes 44 indicators and over 25 supplementary measures divided into seven topics: Population and Economic Activity, Air Quality, Fresh Water, Climate Change, Contaminants, Ecosystems, and Species Conservation. As with previous reports, Environmental Trends in British Columbia 2007 consists of summarized information on

the web pages and links to what is being done about the issues. The information is backed up by a set of technical papers that provide background information on the issues, describe methods and data sources, and provide supplementary indicators. The technical papers are available on the website (see "in-depth reports" under each topic area). Previous BC state of environment reports are also available at <http://www.env.gov.bc.ca/soe/>

7. Preparing for the Field Season

While browsing the interesting information at the UBC Tree Ring Laboratory www.geog.ubc.ca/~ldaniels

I came across this humorous but useful short article about preparing for the field season. Carmen Wong is a grad student of Dr. Daniels, who runs the Tree Ring lab.

Wong, (2007), Preparing for the field season. Bulletin of the Ecological Society of America. 88:95-97, 0, 88 Available at:

http://www.geog.ubc.ca/~ldaniels/getpdf.php?dir=1&org=Wong_ecol_8801.pdf

8. Targeted Invasive Plant Solutions (TIPS)

The Invasive Plant Council of BC is producing a publication series entitled Targeted Invasive Plant Solutions. Each publication describes best management practices, following Integrated Pest Management (IPM) principles, for either an operational activity or a specific invasive plant species. The Council has partnered with the BC Ministry of Environment to produce the first six TIPS publications, which are now available for download as PDF documents. They cover forestry operations and five invasive plant species: spotted knapweed, orange hawkweed, blueweed, marsh plume thistle, and Scotch broom.

<http://www.invasiveplantcouncilbc.ca/publications/TIPS/>

9. Conferences

Canadian Parks for Tomorrow

May 9-11, 2008

University of Calgary

This international conference brings scholars, policy makers and the interested public together to describe, analyze and assess the history, current status and future directions of protected areas, landscapes and heritage resources and their role in our society. For more information visit:

<http://www.parks4tomorrow.ucalgary.ca>

Alien Invasive Species Management Symposium - Call for Abstracts

May 22- 23, 2008

University of Victoria

The School of Environmental Studies at the University of Victoria invites you to participate in the 2008 Restoration Institute at UVIC. This year's theme is on Alien Invasive Species Management. In addition to workshops and courses, the Institute will feature a 1-day symposium on Alien Invasive Species Management on May 23, 2008. The symposium will include invited speakers, panel discussions, contributed oral and poster presentations, professional development workshops, and restoration courses. A tentative program is available at the 2008 Restoration Institute website at www.uvcs.uvic.ca/eco

Weeds Across Borders - Call for Papers open until January 25

May 27 – 30, 2008

Banff, Alberta

The goal of the conference is to provide a forum for educating, sharing and disseminating knowledge about weed management, regulatory issues and concerns about weed dispersal across and between all jurisdictional boundaries in Mexico, Canada and the United States.

For more information visit: <http://www.invasiveplants.ab.ca/WAB2008Review.htm>

Update for February 14, 2008

1. CMI News

Nominations are now open for new CMI Directors. For information on how to nominate someone, please refer to the email I sent out yesterday.

Our **Annual General Meeting** is scheduled for May 1, 2008 in Revelstoke. You'll hear about the revised goals and objectives for the CMI, hear a review of the past year, and learn what's coming up for 2008/09. Plus, as usual, various members will be telling us about their current research projects and initiatives. We are looking for presenters, so if you would like to speak to the group please send me your abstract. We expect 30-40 members to attend. This is a casual meeting, and it's a great opportunity for students to practice their presentation skills. **NON-CMI MEMBERS ARE WELCOME.**

Our **Soil Bioengineering course** scheduled for April 29-30 has filled and I have started a wait list. We will be running this course again in the fall, along with another of Dave Polster's courses, on Invasive Plants Management. It's another two day course with one day of classroom instruction and one day of field work. Registrations for these two events will open in May.

The **Introduction to R Software** course has 5 of the 8 spots taken. It runs at the end of May, in Revelstoke. Details are on our web site.

Did you know – **These email updates are archived on our web site.** If you are trying to remember the details about a conference so you can track down the proceedings, or want to check on a resource that was recommended, this archive will help you. Go to our web site at <http://www.cmiaa.org/resource-toc.htm> and look for the link to archives.

The 2007 emails were just added to the archive.

2. Funding Reminder: Columbia Basin Trust's Environmental Initiatives Program

www.cbt.org

The Environmental Initiatives Program provides support to community-initiated and supported environmental projects that aim to reduce the impacts humans have on local and regional ecosystems. The program provides funding for aquatic, terrestrial and education projects that lead to a healthier environment for Basin residents. There are two types of funding available through the Environmental Initiatives Program – small grants for non-technical projects up to \$5,000 and large grants to a maximum of \$20,000.

Deadline is March 7.

3. Environment Canada's "Weather One-on-One" service

http://www.msc-smc.ec.gc.ca/weather/oneONone_e.html

"Weather One-on-One" is a telephone consultation service that allows Canadians to consult Environment Canada weather professionals over the phone by dialling 1-900-565-5555. Weather One-on-One is a "pay per use" service and is available from 5AM to 9PM on weekdays and from 6AM to 6PM on week-ends and holidays. Fees of \$2.99 per minute plus taxes apply, and will be included in your next telephone bill. If you need service outside of these hours, you may want to consult a private meteorological firm. A listing of these firms is available at: http://www.msc-smc.ec.gc.ca/commercial/index_e.cfm If your business phone does not allow 1-900 calls they have another number for you to call, using your credit card to pay.

4. Breeding Bird Atlas of British Columbia 2008-2012

www.birdatlas.bc.ca/

Over the next 5 years BC is mobilizing its team of dedicated birdwatchers to literally put birds on the map. The Atlas has identified 41 regions in BC—each with its own coordinator. There are six regions in the south-east corner of the province: Southern Trench, Radium-Invermere, Creston, West Kootenay, North Columbia, and Golden. A 10 x 10 km grid will be used to identify sampling squares of 100 km² each within each region. The goal is to establish the status of breeding birds in the province by surveying as many squares as possible over the next 5 years. Atlas volunteers are asked to commit to spending at total of 20 hours or more in a square over the next 5 years to document breeding birds. Once you've adequately surveyed one block, you will be encouraged to work on another the next year to get as wide a geographic coverage as possible.

The Atlas will evolve on the internet using survey forms and maps supplied by the project. Some of these tools are still under development but it is worthwhile to visit the Atlas website now for more background. The exact field methods for the Atlassing

project are still being finalized by the Delta “head office”. They will let everyone know more details as soon as they are ready. In the meantime, you can visit the website and register if you are interested becoming part of this landmark project. You can select as many regions as you like. The appropriate coordinators will get an email from the Delta office telling them of your interest.

Several other areas of Canada already have Atlases including Alberta, Ontario, Quebec and the Maritimes. Links to these projects are available on the BC Atlas website.

5. Bird Studies Canada’s “Avibase” resource

<http://www.bsc-eoc.org/avibase/>

Avibase is an extensive database information system about all birds of the world, containing over 3.5 million records about 10,000 species and 22,000 subspecies of birds, including distribution information, taxonomy, synonyms in several languages and more. This site is managed by Denis Lepage and hosted by Bird Studies Canada, the Canadian co-partner of Birdlife International.

6. UBC Botanical Garden’s downloadable list of plant names for your spellchecker

<http://www.ubcbotanicalgarden.org/>

No more squiggly red lines under Latin plant names! The UBC Botanical Garden web site has a section called “Resources and Writings”. One of their offerings is a botanical dictionary to add to your computer, so Latin names of BC plants are accepted by your spellchecker. Click on the link and a “.dic file” appears. Use Microsoft Word help to “add an existing custom dictionary”. Or, do what I did – copy all the 7,300 words in the file and paste them into your current file called “custom.dic” .

Does anyone know where a similar list is available for other organisms?

7. New BC framework for Environmental Education in schools

www.bced.gov.bc.ca/environment_ed/welcome.htm

The BC Ministry of Education, together with the association for BC teachers that specialize in environmental education, has produced an updated province-wide framework for environmental education. This guide promotes an integrated approach towards environmental learning because so many school subject areas touch on environmental topics or experiences in some way. By emphasizing that the study of environment is not a unique subject area, it is hoped that students will come to understand how their actions affect both local and global environments. Visit the above web site to download the document, or you can view it on-screen.

8. Conferences and Courses

Alternative Futures for Canada’s Forests and Forest Sector
Coast Canadian Inn, Kamloops, BC

March 13, 2008

Hosted by the Sustainable Forest Management Network and FORREX, the Forest Futures Project is based on creation and analysis of alternative scenarios for Canada's forests and the forest sector to 2050. The scenarios are intended to help people think more clearly about the kinds of policies needed in the near term to secure a more sustainable long-term future for the forests and forest sector. At the workshop, participants will first discuss key drivers of change, and then the four scenarios and their local/regional implications. There is no cost to attend the workshop, but you must register. Background materials are available on the SFM Network website. Participants should read these materials prior to the workshop.

Details are at: www.sfmnetwork.ca/html/forest_futures_e.html

Botany BC 2008

May 15-18, 2008

Powell River BC

BOTANY BC is a casual group of intense botanists and plant enthusiasts that gather annually in a different part of BC. The emphasis for the meeting is field trips. This year's field trips will visit sites around Powell River including Texada Island and possibly Savary Island. Botany BC registration information and a detailed program are expected to be posted to the Botany BC website by February 29:

<http://members.shaw.ca/dmeidinger/botanybc/>

To be added to the email list for more information, please contact Elizabeth Easton 250 953-3488 elizabeth.easton@gov.bc.ca

Update for March 5, 2008

1. CMI News

Offers to present at the **Annual Researchers' Meeting** (May 1 in Revelstoke) are starting to come in. If you would like to tell us about your research projects or initiatives, please use the new [CMI Submission Guidelines](#) and send in an abstract, by April 1.

I have also posted our [Information for Presenters](#). This page provides answers the most common questions about making a presentation at a CMI event. It also contains some good general advice; you might want to check it out. Additional advice is welcome.

Nominations for CMI Directors close Friday, March 7.

The Conference Summary is now available for our "Ecosystem Restoration in Southeastern BC—Grasslands to Mountaintops" event as a free download.

http://www.cmiae.org/PDF/Ecosystem_restoration_2007_conf_summary.pdf

It is about 1.5 MB in size and prints out at 104 pages.

2. Funding Opportunities

Columbia Basin Trust Environmental Initiatives Program
www.cbt.org

Deadline for large and small grants program is March 7.

Y2Y Partner Grants Program

www.y2y.net

Deadline for applications is March 14

The Yellowstone to Yukon Conservation Initiative's 2008 Partner Grants Program is a funding opportunity for grassroots organizations that belong to the Y2Y Network. The purpose of the Partner Grants program is to provide funding to small projects and organizations that support the Y2Y mission and vision. The request for proposals is available from the front page of their web site. The map of the region they encompass is at: <http://www.y2y.net/action/ccc-map.asp> This year, the sponsoring society does not have to have charitable status. For more information, contact:

Wendy Francis, Senior Conservation Program Manager, wendy@y2y.net .

Wildlife Habitat Canada Grants

www.whc.org

In partnership with the Canadian Wildlife Service of Environment Canada, Wildlife Habitat Canada allocates funds toward wildlife habitat conservation programs across Canada. Acting through partnerships with landowners, communities, government, non-government organizations, and industry, WHC seeks to identify habitat issues and find means for enhancing opportunities and developing practical solutions to problems facing wildlife habitats. Projects should focus on

- direct (on the ground) interventions related to habitat conservation, restoration or enhancement for waterfowl, in wetlands, or in areas of importance for wetlands-associated species,
- or deal with (wetland) habitat acquisition/securement for waterfowl or wetlands-associated species (where applicable, such projects should allow continued access for migratory game bird hunting),
- or are research proposals that are supported by the scientific or technical committees associated with one of the North American Waterfowl Management Plan Habitat Joint Ventures in Canada,
- or promote the contribution of hunters to habitat conservation,
- or support habitat conservation networking activities and events, including national or regional stewardship activities.

Grant applications are due April 1 and again in September 15, and you should call ahead to pre-screen your project.

3. Job Postings

Manager, Environmental Programs

Columbia Power Corporation, Castlegar

Closing date March 31

Duties include: meeting project environmental reporting requirements by conducting environmental effects monitoring programs; meeting project environmental compensation requirements by conducting environmental compensation programs; reviewing river operations, and conducting programs as required, to achieve compliance with project approvals and environmental legislation; and managing project lands to achieve an appropriate level of land stewardship.

For complete details go to:

<http://www.columbiapower.org/files/0710%20Manager%20Environmental%20Programs.pdf>

Environmental Technological Specialist (8 months)

BC Hydro, Revelstoke

Closing date March 17

Duties include “Under direction of more senior staff, plans, organizes and undertakes a variety of technical field and office investigations related to construction, operations, maintenance and waste management/ pollution prevention; Conducts field reviews and inspections, gathers data and information, recommends study approach and provides input into the identification of methodologies required to deal with the associated environmental issues; Researches, assesses and documents background data on environmental issues and problems for use in the assessment of a variety of sites;” and more.

Read the details at <http://www.bchydro.com/careers/>

And search the Current Opportunities for Job Number 563711

4. Dan Murphy is new Coordinator for the Trench Society

The Rocky Mountain Trench Natural Resources Society has appointed Cranbrook forester Dan Murphy to replace retiring coordinator Maurice Hansen. Incoming coordinator Dan Murphy is well known in the East Kootenay forest industry. Most recently, he was general manager of the Creston Valley Forest Corporation. He has also worked for the Ministry of Forests, Crestbrook Forest Industries, Tembec, the BC Forestry Association, and as a consulting forester. The Trench Society is an alliance of hunting, ranching, environmental and wildlife organizations working to restore the grassland and open forest ecosystems of the East Kootenay and Upper Columbia Valley. Learn more about the Trench Society at www.trenchsociety.com

5. Nominations for Kootenay Association for Science & Technology Spirit of Innovation Awards

Are you "innovative"? These awards recognize individuals and organizations in the West Kootenay-Boundary region that have demonstrated innovative excellence in the research, development and/or application of science or technology. You do not have to be a science or technology company to qualify for these awards as long as you or your organization are using some form of technology to be innovative. Nomination deadline

is March 14 at 3 p.m. For additional information visit www.kast.com

6. CivicInfo BC

www.civicinfo.bc.ca

CivicInfo BC is an information service for those who work, or have an interest in, British Columbia's local government sector. The main goal of CivicInfo BC is to facilitate the free and open exchange of local government information, which is done primarily through their web site. You can list your name as a supplier, consultant, or professional advisor; access bids and tenders, view the document library, and review their grants database. The grants database list sources that local governments can apply to – but if you have a project in mind, the database may help you find a way help your local government fund it.

7. Range Vegetation Data Project in the Rocky Mountain Trench

The Range Vegetation Data Project was sponsored by the Rocky Mountain Forest District. The result has been to identify, locate, catalogue, and digitize about 30 publications, mostly "grey" literature, about range vegetation management in the Rocky Mountain Trench. The earliest publication dates to 1949, and the list includes a 1971 study by Ray Demarchi, which contains the only Trench-wide survey of range condition ever completed. FORREX's recent issue of *Link* included an article describing this project. Read it at http://www.forrex.org/publications/link/ISS50/vol9_no3_art9.pdf . To visit the on-line library created as a result of this project, visit: <http://www.for.gov.bc.ca/drm/vegetation-library/index.htm>

Update for April 4, 2008

1. CMI News

Our **Annual General Meeting** will be held at 1:00 p.m. on May 1 in Revelstoke, at the United Church Hall on Mackenzie Avenue. All members are welcome to attend the AGM. If you are planning to be part of the Annual Researchers' Meeting held the same day, there is a fee.

Spaces are still available for presentations at our **Annual Researchers' Meeting**, May 1 in Revelstoke. We ask that abstracts be sent by closing time today – but we will still accept offers to present until the twelve time slots are used up. I will be posting the abstracts on our web site later next week. You can register anytime on our web site; the members' cost is \$60 which includes two coffee breaks with goodies, and a hot lunch prepared by the stellar cooks of the United Church Ladies.

Planning is underway for our **fall CMI events**. I'll keep you up-to-date with details as they become available.

- We will be hosting a conference on "Wildland/Urban Interface Fires and the Environment" and expect to have a call for papers out in May. The conference will be in Cranbrook on November 5 & 6.

- David Polster will be teaching his 2-day courses on “Managing Invasive Plants” and “Soil Bioengineering.”
- We will run the “Introduction to R Software” course again if demand warrants.
- We are still hoping to have Carl Schwarz teach his Mark-Recapture course this year but the timing is uncertain.

Conference summaries for our fall 2007 events are now available as free PDF downloads:

Ecological Restoration in Southeastern BC: Grasslands to Mountaintops
http://www.cmiae.org/pdf/Ecosystem_restoration_2007_conf_summary.pdf

Managing Environmental Impacts of Linear Corridors and Infrastructure
<http://www.cmiae.org/pdf/Linear-corridors-2007-summary.pdf>

2. Forest Science Program Style Guide and Author’s Manual

<http://www.for.gov.bc.ca/hfd/pubs/docs/mr/Mr041.htm>

Replacing the 1995 version, this reference explains everything you need to know about style and editing of science documents. How do you cite a web-based source? Which species have their common names capitalized? Are you confused about the use of hyphens, en dashes, and em dashes? If you are working at a professional level this document is for you. View it on-line for now; hard copies will be available soon (the MOFR web site says it is available as a hard copy but when I tried to order yesterday it I found it’s not quite ready yet).

3. BC Birding Atlas is gearing up

<http://www.birdatlas.bc.ca>

Regional coordinators are actively seeking volunteer birders to participate in this project. For a list of the coordinators and their contact information, please visit:

<http://www.birdatlas.bc.ca/bcdata/coordinators.jsp>

The British Columbia Breeding Bird Atlas is the province’s most extensive and important bird monitoring project and one of the largest volunteer based initiatives in British Columbia. Between 2008 and 2012 more than one million bird records will be submitted by thousands of citizen scientists from every part of the province. The province is divided into 41 regions to manage coverage of the 10,000 10-km squares. Volunteers survey and count birds in their assigned square. Some volunteers will single-handedly cover more than 20 squares during the course of the five breeding seasons. The data will appear online in real time complete with mapping and graphing tools.

4. Efficacy of Bear Deterrent Spray in Alaska

By Tom Smith, Stephen Herrero, Terry Debruyne, James Wilder, 2008 in *Journal of Wildlife Management* 72(3):640–645

This paper presents a comprehensive look at a sample of 83 bear spray incidents that occurred in Alaska, USA, from 1985 to 2006, involving black bears, grizzly bears, and polar bears. Their conclusion was that bear spray represents an effective alternative to lethal force and should be considered as an option for personal safety for those recreating and working in bear country. This paper is circulating widely on the Yellowstone to Yukon network, which CMI is a part of, and I can forward the PDF to you if you like.

5. MP3 files of interest to CMI members

The web site of the BC Ministry of Environment's library has a list of recommended podcasts, such as half hour reviews from Science and Nature journals, key talks on climate change, seminars from universities, and more. See the list at:

http://www.for.gov.bc.ca/hfd/library/lib_podcasts.htm

If you aren't a Pod-Person you can go the source web site and download the MP3 files to play on your computer.

6. Parks Canada paper on outdoor lighting specifications (Dark Sky)

On March 26 Parks Canada released the document "Best Practices and Specifications for Outdoor Lighting at Parks Canada". The report was developed collaboratively by the Ecological Integrity Branch and the Real Property Branch. It promotes the need to protect the night-time environment from the excessive use of artificial lighting and provides technical information to help minimize unnecessary lighting. It serves as a reference tool for parks or sites that are seeking a Dark Sky Preserve designation. For further information on the best practices document, please contact Guylaine Barnes 613-938-5758 guylaine.barnes@pc.gc.ca . For more information on light pollution abatement, go to www.rasc.ca and follow the link to light pollution.

7. Workshops and Conferences

Land Trust and Stewardship Seminar Series 2008

Manning Park

April 11 - 13, 2008

Hear about stewardship, land acquisition and protection, conservation planning and climate change, funding, and more. Details and registration are at:

<http://www.landtrustalliance.bc.ca/seminarseries.html>

Grassland Ecology and Grass Identification Workshop

Wasa Lake

June 27 and 28, 2008

This workshop is co-hosted by the Native Plant Society of BC and FORREX, and will be instructed by Don Gayton of FORREX. The objective is to gain familiarity with native grassland ecosystems, grass taxonomy, and grass plant identification. It will provide an

introduction for beginners and a refresher for those with some grassland experience. The workshop will be valuable for naturalists, students, environmentalists, agriculturists, and all those interested in BC's complex and fragile grasslands. Includes a day of classroom instruction and a day in the field. Details and registration are at: <http://www.npsbc.org> and scroll down the page to the listing for this workshop.

Update for May 14, 2008

1. CMI News

Our **Annual Researchers Meeting and AGM** in Revelstoke was attended by 28 people. In addition to the usual assortment of talks by members and others, the Fish and Wildlife Compensation Program brought David Green and Jason Emery to the meeting to talk about riparian issues. The abstracts for presentations are on our web site, and I will be compiling them into a meeting summary in the near future. Thanks go out to our presenters for taking the time to share their work with us!

Our **Annual Report for 2007-2008** is now posted at:
<http://www.cmiae.org/pdf/AnnualReport2007-2008.pdf>

At our AGM we welcomed our **new Directors**: Dr. Paul Sneed of the Selkirk Geospatial Research Centre, Kevin Bollefer of Revelstoke Forest Corporation, and Marc-André Beaucher from the Creston Valley Wildlife Management Area. We also said a few words of thanks to retiring directors Ian Adams, who has served as both President and Vice-President, and Ian Parfitt, who has served as Vice-President.

Our thirteen directors for 2008-2009 are:

- Doug Adama, Golden
- Marc-André Beaucher, Creston
- Kevin Bollefer, Revelstoke
- Martin Carver, Victoria
- Patrick Daigle, Victoria
- Jenny Feick, Victoria
- Susan Hall, Revelstoke
- Rachel Holt, Nelson
- Mike Miller, Revelstoke
- Paul Sneed, Castlegar
- Chris Steeger, Nelson
- Del Williams, Revelstoke
- Brendan Wilson, Shoreacres

“Last Call” for membership renewals

Many thanks to those of you who have already renewed. For those who haven't, your membership has now expired and this is the last email update you will receive. If you have decided not to renew, please stay in touch by checking our web site occasionally.

2. Project Management for Biologists

At our AGM we always canvas for suggestions for upcoming CMI events. One suggestion that came up, and it's come up before, is a course on how to manage biological research projects. This would be oriented to the needs of biologists; not your average business-oriented project management course. If any of our members has taken such a course, would you please contact me with the instructors' name?

Meanwhile, CMI Director Marc-André Beaucher recommends this book, which I see is available on-line at Chapters-Indigo. Cost is \$19.00 if you buy it on-line.

The Conservation Professional's Guide to Working with People – by Scott A. Bonar (2007). Island Press. 224 pages. ISBN 1-59726-148-3.

From the publisher... "Written in an entertaining, easy-to-read style, *The Conservation Professional's Guide to Working with People* fills a gap in conservation education by offering a practical, how-to guide for working effectively with colleagues, funders, supervisors, and the public. The book explores how natural resource professionals can develop skills and increase their effectiveness using strategies and techniques grounded in social psychology, negotiation, influence, conflict resolution, time management, and a wide range of other fields. Examples from history and current events, as well as real-life scenarios that resource professionals are likely to face, provide context and demonstrate how to apply the skills described."

3. FORREX's *Streamline Watershed Management Bulletin*

The spring 2008 issue is out and includes a two part special on Climate Change and Watershed Hydrology; managing BC's groundwater for fish and people; and more. Download it at:

http://www.forrex.org/publications/streamline/ISS37/streamline_vol11_no2.pdf

FORREX's BC Journal of Ecosystems and Management Spring 2008

Download it at:

<http://www.forrex.org/publications/jem/jem.asp?issue=47>

Includes this article and others...

Little known and little understood: Development of a small wetland assessment field card to identify potential breeding habitat for amphibians *Elke Wind and Bill Beese* This Popular Summary discusses the results of a study of three forested sites containing 70+ small wetlands in the Nanaimo Lakes area on Vancouver Island to investigate the use of these sites by amphibians before and after harvesting. Based on their research, the authors developed and tested a wetland field card that forestry personnel in SOUTH COASTAL areas can use to identify small wetlands used by breeding amphibians.

4. Workshops and Conferences

Call for Papers, Posters, and Field Trip Leaders: *Restoration in the Boreal Forest*
October 1-3, 2008
Prince George, BC

The BC Chapter of the Society for Ecological Restoration (SER-BC) and the Continuing Studies Department at the University of Northern BC (UNBC) have teamed up to host this important regional conference on ecological restoration. Themes to be covered at this conference include, but are not limited to: boreal forest restoration; ungulate population/habitat restoration; pine beetle impact restoration; and aquatic restoration. Details are at: <http://www.unbc.ca:80/continuingstudies/events/serbc.html>

Biodiversity in Forest Ecosystems and Landscapes

International Union of Forest Research Organizations Conference August 5-8, 2008
Thompson Rivers University, Kamloops BC

The conference will allow participants to share knowledge, discuss new trends, reflect on future directions in biodiversity management for sustainable forestry, and provide a stronger scientific basis for biodiversity management in forest landscapes in the light of climate change. The conference is open to all scientists interested in Forest Biodiversity and its many facets. IUFRO membership is not a requirement for attendance at the conference. Details are at: <http://www.tru.ca/iufro.html>

Update for June 27, 2008

1. CMI News

We've been working on putting together some good courses and conferences, and here's the schedule so far. Details on our web site www.cmiae.org

- *Wildland Urban Interface Fires, Fuel Management, and Ecosystems* conference, November 5-6 2008 in Cranbrook. **Call for Papers open until August 31.**
- *Soil Bioengineering course*, with David Polster, in Revelstoke, September 22-23, 2008
- *Ecological Approach to Invasive Plant Management*, with David Polster, in Revelstoke. September 25-26, 2008.
- *Introduction to R Software*, with Joe Thorley, in Revelstoke, November 25-26, 2008.
- *Importance of Wetlands in Southeastern BC* conference, May 28-29, 2009, in Revelstoke. Details and call for papers will be on our web site in early September but call me any time if you are curious.
- *Ecosystem Goods and Services* conference, fall 2009, no details yet.

The meeting summary from our **Annual Researchers' meeting** is available on our web

site in the Past Events section.

We would like to host courses on the following topics. If you know of possible instructors, please contact me.

- Population modelling (I may have a lead on an instructor but would like more suggestions)
- Project management for Biologists (not a business course)
- Resource Selection Function Analysis

2. Wildlife and Landscape Science News: Environment Canada's E-Newsletter

<http://www.ec.gc.ca/scitech/default.asp?lang=En&n=D8041705-1#four>

You can sign up to receive this by email. Here are a couple of highlights from the spring 2008 edition:

Reptile Ecology and Conservation Overview for Canada

A new volume describes the ecology and conservation issues for the 46 species of reptiles in Canada. *Ecology, Conservation, and Status of Reptiles in Canada*, edited by Carolyn Seburn and Christine Bishop of Environment Canada, depicts the current view of reptiles that occur in Canada and Canadian marine waters, and the difficulties faced in their conservation. The 11 chapters are contributed by prominent Canadian herpetologists and include overviews of the major groups (i.e., turtles, marine turtles, lizards and snakes) and discussions of issues and conservation tools. This is the second in the Herpetological Conservation series published by The Canadian Amphibian and Reptile Conservation Network and the Society for the Study of Amphibians and Reptiles. *(For details on ordering and author contact information go to the newsletter's web site as above, and click on the link to this item in the table of contents)*

State of the Science Explored: Wildlife Exposure to Mercury

Three times more mercury falls from the atmosphere on average today than before the Industrial Revolution despite the steep reduction in industrial use of mercury in North America. In recent years, ecological risk assessment associated with elevated exposure to methylmercury has revealed increasingly subtle yet biologically important effects in fish and wildlife, including behavioural, neurochemical, hormonal and reproductive changes. The potential for population-level impacts are also being assessed for some species. Leading mercury scientists collaborated as part of the Eighth International Conference on Mercury as a Global Pollutant (August 2006). The results were published in a special issue of the journal, *Ambio*, including a conference declaration and synthesis papers on mercury pollution. A special issue of the journal, *Ecotoxicology*, presents the state of the science specifically for toxicology of methylmercury in wildlife. *(To view links to abstracts, go to the newsletter's web site as above, and click on the link to this item in the table of contents.)*

3. Rossland Bear Aware Radio

You can catch Marty Cancilla's "Circumpolar Bear Aware Cult" radio program on Rossland Radio, every Wednesday at 2:00 p.m. Go online to www.rosslandradio.com and "Listen Live" or download past shows from the archive. Upcoming shows include:

July 2, Sylvia Dolson: Whistler's 'Get Bear Smart' program founder and outspoken bear conservationist.

July 16, Lori Homstol: wildlife biologist, Karelian bear dog handler and aversive conditioning expert; and Gerald Shaeffer, from Gibsons (Sunshine Coast).

July 30, Andrew Wetzler: Polar bear expert with the Natural Resource Defence Council.

4. Human Activity and the Environment: Annual Statistics 2007-2008

Statistics Canada Report

Human Activity and the Environment: Annual Statistics is Statistics Canada's flagship publication for environmental statistics. With emphasis on human activity and its relationship to natural systems-air, water, soil, plants and animals, HAE presents a compendium of maps, tables, and figures punctuated with simple analysis and interpretation, which together paint a statistical portrait of Canada's environment. In addition, each issue of HAE includes a feature article covering a current environmental issue of concern to Canadians. This year's feature is climate change. View as HTML, PDF or purchase it. "Free HTML version can be used to boost the power of your reports and presentations with ready-to-use spreadsheets of tables, and direct links to source data". Teachers' kit available.

<http://www.statcan.ca/english/ads/16-201-XPE/index.htm>

5. MOFR 2008 style guide now available in print form

The first half of this document is about preparing papers for the MOFR Forest Science Program. The second half is why I bought the print copy. The guide answers all those pesky punctuation and style questions so your reports will look more professional, such as: correct use of hyphen, en dash, and em dash; is it PhD's or PhD; citations, end notes, and in-text referencing, and much, much, more.

Download it as a 132 page PDF file at

<http://www.for.gov.bc.ca/hfd/pubs/Docs/Mr/Mr041.pdf>

Or, buy a spiral bound copy, definitely worth the price at \$21, from

<http://www.publications.gov.bc.ca/pubdetail.aspx?nato=7680002853>

6. Conferences

Biodiversity in Forest Ecosystems and Landscapes

International Union of Forest Research Organizations Conference

August 5-8, 2008-06-27

Thompson Rivers University, Kamloops BC

The conference will allow participants to share knowledge, discuss new trends, reflect

on future directions in biodiversity management for sustainable forestry, and provide a stronger scientific basis for biodiversity management in forest landscapes in the light of climate change.

Details are at: <http://www.tru.ca/iufro.html>

Lake Management in a Changing Environment

International Symposium for the North American Lake Management Society (NALMS)
November 11-14, 2008

The conference will address management of lakes when faced with unprecedented developmental pressures, climate change and water scarcity. For more information, visit: www.nalms.org and look in the Conferences and Symposia section.

Update for July 22, 2008

1. CMI News

We are now taking registrations on our web site for the following courses:

- Soil Bioengineering, September 22-23, in Revelstoke, 21 spots left
- Ecological Approach to Invasive Plant Management, September 25-26, in Revelstoke, 14 spots left
- Design and Analysis of Mark-Recapture Studies, October 7-9 in Revelstoke, filling fast, 5 spots left after one week's promotion
- Design and Analysis of Mark-Recapture Studies, October 21-23 in Revelstoke, filling fast, 10 spots left after one week's promotion
- Introduction to R Software, November 25-26 in Revelstoke, 7 spots left.

CMI Call for papers

"Wildland Urban Interface Fires, Fuel Management, and Ecosystems. "

The call for papers for our November conference in Cranbrook closes August 31.

Details and submission guidelines are on our web site.

We are planning an event on the **Importance of Wetlands in Southeastern BC** for the spring of 2009, and a call for papers will be circulated in the fall.

CMI Member input is requested:

Dr. Carl Schwarz from SFU, who teaches most of our stats courses, is putting together a course on Bayesian Methods in Ecology. He wants to know if CMI members would be interested in such a course in 2009, and if there is particular content you would like to see included. Please send me your thoughts and I will pass them onward to Carl.

2. Employment Opportunity

Assistant Deputy Minister, Environmental Stewardship
Ministry of Environment, Victoria

Reporting to the Deputy Minister, the Assistant Deputy Minister is accountable for the delivery of biodiversity and ecosystem programs for the Ministry; the recreational use of

the province's fish and wildlife populations programs; and for the balancing of protection with creating economic viability within the province. This person is responsible for a staff of 453 people and an operating budget of \$69 million.

Closing date is July 29, 2008.

3. Basin Business Consulting Program

Are you operating as a small business in the Columbia Basin, and finding yourself in need of better business skills? This program can help. The Basin Business Advocates Program is funded by the Columbia Basin Trust and was created "to build economic capacity in Basin communities by strengthening and supporting existing businesses". The program is managed by Steele O'Neil and Associates, a Cranbrook-based firm that specializes in employment services, business consulting, and program development and management.

They can provide free one-on-one confidential business counselling. For more information and some downloadable resources, visit:

<http://steeleoneil.com/>

Also, your local Community Futures office provides advice and coaching for businesses:

<http://www.communityfutures.ca/provincial/bc/>

4. Of special interest to huckleberry pickers

So I am in the CMI office today but I would rather be outside picking huckleberries from one of the best crops we've had in years. For those of you who are also sitting in front of your computer, perhaps you would at least like to be reading about our friends the *Vacciniums*, even if you can't be out among them. Go to the USDA Forest Service web site's "Fire Effects Information System" at <http://www.fs.fed.us/database/feis/> and type in the name of your favourite *Vaccinium*. There is lots to learn about berry nomenclature, ecology, etc. I just read that the Oval-Leafed Blueberry readily hybridizes with Black Huckleberry. Hey, I've seen some berries that could be hybrids. They look like large black huckleberries with the huckleberry leaf and have a bloom like the blueberries and... yes, they are delicious.

5. BC Protected Areas Research Forum – Researchers & Needs and Priorities

<http://www.unbc.ca/bcparf/index.html>

BCPARF is based at UNBC in Prince George. They have completed their first task of creating a Research Needs and Priorities database. Regional BC Parks districts from across the province and the Yukon sent in their priorities for research. Topics covered everything from creating an inventory of species at risk to determining impacts on wildlife from snowmobiles and everything in between. It is available at:

http://www.unbc.ca/assets/bcparf/research_tools/researchneeds_jan_10_08.pdf

They have also begun Researchers Database, so that those who need research done

can connect with those who do research. If you would like to be added to this database or wish to change your contact information please contact Pam Wright, pwright@unbc.ca . You can view the current database here: http://www.unbc.ca/assets/bcparf/research_tools/researchers.xls

6. Call for Papers

BC Protected Areas Research Forum Conference
December 1-3, 2008
University of Northern British Columbia, Prince George

The conference theme is “Closing the Loop: Putting research into action”. Researchers and managers from NGO’s, First Nations, regional, provincial, territorial and federal park systems, universities and colleges in BC, Alberta and Yukon will convene for three days of workshops, conferences, posters and sharing. The BCPARF is a forum to facilitate and promote parks and protected areas research in British Columbia. They are a cooperative partnership between the research community, and provincial and federal governing agencies, hosted by the University of Northern British Columbia in Prince George.

Details are at: <http://www.unbc.ca/bcparf/>

Update for August 13, 2008

1. CMI News

The closing date for the Call for Papers for our fall conference is August 31. “Wildland / Urban Interface Fires, Fuel Management, and Ecosystems” will be held in Cranbrook. If you or someone you know would like to make a presentation or host a field trip, please be sure the abstract is submitted by the end of the month.

There are still spaces in our fall courses – although the Mark-Recapture course has only one spot left as of today. It’s still worth sending in a registration if you would like to attend it, as there are usually one or two cancellations and I have no wait list at present. Details for events are on our web site.

2. Job Postings

BC Hydro

To view the details for these positions, go to: <http://www.bchydro.com/careers/> and then choose “Current opportunities”. Scroll down the list to find the position you are interested in. Applications are due September 2.

- Natural Resources Specialist 3 (Revelstoke)
- Natural Resources Specialist 3 (Burnaby)
- Senior Natural Resource Specialist (Williston)
- Senior Natural Resource Specialist (Edmonds)

Invasive Alien Plant Inventory contract opportunity

Call for Expressions of Interest

The Slocan Integral Forestry Cooperative (SIFCo) holds a Probationary Community Forest Agreement over lands in the Slocan Valley. SIFCo has applied for Forest Investment Account funding to conduct an Invasive Alien Plants inventory along existing forest roads in the PCFA landbase. The Inventory will use the MoFR Invasive Plant Standards - Inventory Interim Standards viewable at http://www.for.gov.bc.ca/hcp/fia/landbase/approved_treatments.htm (page no longer accessible). While funding approval has not yet been granted, they are confident it will be. They wish to compile a list of qualified, interested parties to contact for bids once the funding is in place. If you are interested in doing this project on a contract basis, please send your contact information, a brief summary of your qualifications, and a list of any related previous experience to tom@sifco.ca. Once the FIA funding is finalized, they will provide interested parties with an information package to enable them to prepare a bid.

3. Taking Nature's Pulse – The status of biodiversity in British Columbia, 2008

<http://www.biodiversitybc.org>

This new document provides a comprehensive, science-based assessment of the current condition of biodiversity in British Columbia. The 268 page report was prepared by Biodiversity BC, a partnership of governments and non-government conservation organizations. It concludes with 23 major findings grouped into six themes. The report is available on their web site along with two companion documents, "The Biodiversity Atlas of British Columbia" and "Ecological Concepts, Principles and Applications to Conservation".

4. Ed2Go on-line courses

Further to the request of a CMI member, I have been looking around for a course we can offer on project management. I haven't been able to find anything that would particularly suit the needs of CMI people. But you may be interested in the courses offered by the Ed2Go group. They are six week courses, two lessons per week, all on-line, done in your own time frame, and not expensive. Go to their home page at: <http://www.ed2go.com/index.html> and type in the keyword for a course you want, e.g. project management. I have signed up for a course on Dreamweaver, since we are switching computer programs for CMI's web site. I don't expect to be an expert but I want a basic grounding in how the program works.

5. Workshops and conferences

Mosses and Liverworts Workshop

September 12 - 14, 2008

Camosun College, Victoria BC

Limited to 20 people

A weekend workshop on mosses and liverworts is being offered by Dr. Wilf Schofield, Professor Emeritus in the Botany department at the University of British Columbia. Dr.

Schofield joined the Botany Department at UBC in 1960, as the first Bryologist hired by a Canadian university. He is the author of "Introduction to Bryology" a text/reference book, as well as "Some Common Mosses of BC", and the "Field Guide to Liverwort Genera of Pacific North America". The workshop will offer an introduction to the biology, morphology and identification of mosses and liverworts. Includes classroom, lab, and outdoor sessions. Cost is \$100.00, students \$60.00. For details contact Wynne Miles, wynnemiles@shaw.ca or 250-595-4058.

Integrating Human Dimensions into Fisheries and Wildlife Management

September 28, 2008 - October 2, 2008

Estes Park, Colorado

This conference and training program is designed to address the myriad issues that arise as people and wildlife struggle to coexist in a sustainable and healthy manner. Their mission is to increase professionalism and effectiveness in the human dimensions of fisheries and wildlife management. Details are at:

<http://welcome.warnercnr.colostate.edu/nrrt/hdfw/index.html>

Update for November 24, 2008

1. CMI News

Our "Wildland / Urban Interface Fires, Fuel Management, and Ecosystems" conference was attended by over 145 people. Clearly this is a timely topic and worthy of another conference on a similar theme in the future. Conference evaluation forms provided lots of suggestions for future speakers.

The Call for Papers for our May 28-29, 2009 conference will be out later today. Titled "Conserving Wetlands in British Columbia", we hope to attract speakers on past and present extent of the different types of wetlands; wetland services such as water retention, carbon sequestration, and water purification; reservoir management; conservation measures including the role of stewardship and conservation groups; and more – you can read the Call for the details.

Well, it's with regret that I announce the departure of another CMI Director. Susan Hall of Parks Canada has retired and is in the process of moving to Kingsburg, Nova Scotia. After more than ten years on our Board she has resigned. We certainly wish her all the best in whatever projects she takes on next!

Our CMI web site is being redesigned and the new version will be live in January. Perimeter Design in Salmon Arm did the re-build and I'm transferring over most of the pages.

2. Work opportunities

Parks Canada

Gregg Walker with Parks Canada in Revelstoke is looking for a contractor to do a

landscape change and fragmentation monitoring project. The work would involve satellite imagery processing and analysis, the generation of landscape statistics, and in the end he is looking for a report on the work. If anyone knows of someone with these skills, or has these skills themselves, he would like to talk with them. Here's Gregg's contact information: Gregg Walker, Fire & Vegetation Specialist, Mount Revelstoke & Glacier National Parks, 250-837-7556, gregg.walker@pc.gc.ca

BC Hydro

For information job descriptions for both of these positions, please go to www.bchydro.com/careers and click on "Current Opportunities" on the left menu.

Senior Environmental Coordinator, Castlegar (Job Number 588676) Deadline **December 1, 2008**

Natural Resources Specialist, Burnaby (Job Number:579765) Deadline is **December 2, 2008**.

3. Funding Opportunities

Trees for Tomorrow

<http://www.treesfortomorrow.gov.bc.ca/>

Are you involved in restoration work? Replacing rogue fruit trees? Perhaps you can find a way to use these funds or work with others in your community for a joint application. Trees for Tomorrow offers up to \$50,000.00 to support urban and rural communities in the planting of millions of trees in schoolyards, hospital grounds, civic parks, campuses, parking lots and other public spaces throughout British Columbia over the next five years. This initiative is part of the Province's strategy to reduce greenhouse gases in the atmosphere by at least 33 per cent below current levels by 2020. Projects selected for funding must meet the following criteria: ecologically sound project and site plan; volunteer and community engagement; partnered funding; linkages with other provincial government initiatives; and stewardship, monitoring and long-term sustainability plans.

Habitat Stewardship Program for Species at Risk

<http://www.recovery.gc.ca/HSP-PIH/>

HSP provides funding for activities that support the conservation and recovery of species at risk and their habitats. These activities must take place on private lands, provincial Crown lands, Aboriginal lands, or in aquatic and marine areas across Canada. The program also fosters partnerships among organizations interested in the recovery of species at risk. As such, it supports many organizations and individuals in their efforts to meet the requirements of the National Recovery Program and the new Species at Risk Act. Matching funds required. Deadline for application is **December 12, 2008**.

Canadian Bird Research and Conservation Projects

<http://www.bsc-eoc.org:80/about/jlbmf/>

Bird Studies Canada is now accepting applications to the James L. Baillie Memorial Fund for Bird Research and Preservation (the Baillie Fund) for the 2009 grant cycle. Since 1978, the Baillie Fund has provided grants totalling \$577,000 to 506 bird research and conservation projects across Canada. In reviewing grant applications, the Baillie Fund Trustees give priority to well-designed projects that engage the skills and enthusiasm of amateur naturalists and volunteers to help us understand, appreciate, and conserve Canadian birds in their natural environments. There are three granting programs, each with a different application and review process. Applications for Regular Grants are due by **December 15, 2008**; applications for Small Grants are due by **January 15, 2009**; and applications for the James L. Baillie Student Award for Field Research, administered by the Society of Canadian Ornithologists, are due by **February 15, 2009**. Visit their website or contact the Baillie Fund Secretary at: ahagy@birdscanada.org or 1-888-448-2473 ext. 166.

4. Wild Voices for Kids seeks more presenters

The Columbia Basin Environmental Education Network is expanding the Wild Voices for Kids (WVFK) program which has run to great acclaim for 11 years in the Rocky Mountain School District #6. (Description of the current program is at: <http://www.sd6.bc.ca/wildvoices/index.php>) WVFK is looking for additional presenters, who would be willing to come into classrooms or lead a field trip in the following school districts: Revelstoke , Golden - Kimberley, or Cranbrook - Fernie. If you can make a presentation about your work, please call or email for details about the program. Honorariums are available to presenters. Please contact the program's new coordinator, Susie MacDonald, at 250-427-7800 or soomac@shaw.ca

5. Reports on Lake Windermere

The East Kootenay Integrated Lake Management Partnership was formed in 2006 in response to concerns about the fast pace of shoreline development in the East Kootenays. The partnership has recently completed two projects for Lake Windermere: **Foreshore Inventory and Mapping Report** and a **Fish and Wildlife Habitat Assessment Report**, which are available on-line at http://www.rdek.bc.ca/east_kootenay_integrated_lake_ma.htm.

6. Report on wildland fire and non-native invasive plants

<http://treesearch.fs.fed.us:80/pubs/viewpub.jsp?index=30622>

(14.4 MB download, 355 p.)

Title: Wildland fire in ecosystems: fire and nonnative invasive plants

Authors; Zouhar, Kristin; Smith, Jane Kapler; Sutherland, Steve; Brooks, Matthew L.

Date: 2008

Source: Gen. Tech. Rep. RMRS-GTR-42-vol. 6. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

This state-of-knowledge review of information on relationships between wildland fire and non-native invasive plants can assist fire managers and other land managers concerned

with prevention, detection, and eradication or control of non-native invasive plants. The 16 chapters in this volume synthesize ecological and botanical principles regarding relationships between wildland fire and non-native invasive plants, identify the non-native invasive species currently of greatest concern in major bioregions of the **United States**, and describe emerging fire-invasive issues in each bioregion and throughout the nation.

7. Rob Butler's Bird Blog

<http://communities.canada.com/vancouver/blogs/birdwatch/default.aspx>

Dr. Rob Butler, scientist, author, naturalist, and coordinator of the British Columbia Breeding Bird Atlas, has begun a birding blog on the website of the *Vancouver Sun* newspaper. The column covers current birding events, phenomena, and conservation issues.

Update for January 6, 2009

1. CMI News

Woohoo! Check out the new look of our web site! Same address www.cmiae.org but the site is now compliant with all browsers and loads faster. I spent much of November and December working with Ryan Anderson at Perimeter Design in Salmon Arm, to rebuild the site and add the content. A few CMI members with web sites refer people to files on the "old" CMI web site. Please check that your links are changed to reflect the file names for the new web site.

Would all CMI members please check that your email address book entry for CMI has the address office@cmiae.org? In the past I occasionally used cmiae@telus.net but this address has been discontinued.

CMI Events update:

- About 145 people attended our *Wildland / Urban Interface Fires, Fuel Management, and Ecosystems* conference held in early November in Cranbrook. The conference summary is in preparation.
- Our *Annual General Meeting* and *Annual Researchers' Meeting* will be in May at the Creston Valley Wildlife Management Area. The date will be confirmed soon. We anticipate a field-trip-oriented meeting instead of a PowerPoint-oriented meeting.
- The Call for Papers has gone out for our May conference, *Conserving Wetlands in British Columbia*. The call closes on February 20. Details are on our web site.
- Dave Polster's course *Ecological Approaches to Managing Invasive Plants* will be held in May.

2. Baillie Fund Grant Deadlines (Birding)

Bird Studies Canada's Baillie Fund program provides grants for research, education, and conservation projects that advance the understanding, appreciation, and conservation of Canadian birds. The deadline for the Small Grant Program, which is open to individuals and organizations, is January 15, 2009. Up to 10 grants \$250 - \$1000 will be awarded. Applications and additional information are available at <http://www.birdscanada.org:80/about/jlbmf/index.jsp> or by contacting Audrey Heagy, ahagy@birdscanada.org or 1-888-448-2473, ext. 166.

3. Friends of Mount Revelstoke and Glacier \$5000 student research grant

A research grant of \$5,000 is available to assist a Canadian university graduate student participating in research which promotes better knowledge and understanding of the north Columbia Mountain ecosystem and its components, or better knowledge and understanding of the human history and cultural significance of man's activities in this region. Deadline is February 15, 2009. More information is at: <http://www.friendsrevglacier.com/awards.html>

4. New web site assists in making climate decisions

<http://www.climate-decisions.org>

On December 1, 2008 researchers at the University of British Columbia launched a website designed to guide decision making about climate change adaptation, with a focus on natural resources contexts. The web site provides extensive information and resources for organizations wishing to use structured decision making – a process that breaks difficult decisions down into manageable steps – to make choices regarding environmental policies. Besides offering an introduction to structured decision making, the Climate Decisions website explores key themes relating to climate change adaptation, and provides visitors with methods for applying these themes to their own local contexts. For example, there is information on how to downscale global climate models to generate locally relevant data, and advice on how to use scenarios as a decision making tool. The site also provides insight into complex topics relating to climate change, such as adaptive capacity and irreducible uncertainties.

5. BC Watershed Atlas now available online

The Freshwater Atlas is a standardized dataset for mapping the province's hydrological features developed by the Integrated Land Management Bureau. It is derived from the province's more detailed 1:20,000 scale topographic base maps (TRIM). The atlas defines watershed boundaries by height of land and provides a connected network of streams, lakes, and wetlands. The atlas was designed to be the authoritative source for mapping freshwater features in BC. It provides a consistent base and coding system ensuring the province's various freshwater-related inventories are tied to a common base. Watersheds are bounded by heights of land and these heights of land provide the authoritative reference for many administrative boundaries and land tenures. The Freshwater Atlas provides a connected network that serves as the foundation for sophisticated analysis and modelling. To find out more information about the

Freshwater Atlas or to download the dataset go on-line at:
<http://aardvark.gov.bc.ca/apps/dwds/home.so>
and search with "CWB" to locate all the product components (i.e. layers).

6. Provincial Land Use Planning: Which way from here?

Forest Practices Board Report, November 2008

http://www.fpb.gov.bc.ca/special/reports/SR34/SR34_ml.pdf

The *Forest and Range Practices Act* and the management regime surrounding it, are critical tools in the implementation of strategic land use planning. It is within that context that the Board provides this special 18 page report which: summarizes the history, and clarifies the current status, of strategic land use planning; enumerates mechanisms to implement plan objectives; and assesses the extent to which those mechanisms have been, and are likely to be, applied.

7. Wildland fire in ecosystems: Fire and non-native invasive plants

<http://treesearch.fs.fed.us:80/pubs/viewpub.jsp?index=30622>

This 2008 report from the US Forest Service Rocky Mountain Research Station reviews information on relationships between wildland fire and non-native invasive plants. It is meant to assist fire managers and other land managers concerned with prevention, detection, and eradication or control of non-native invasive plants. The 16 chapters in this volume synthesize ecological and botanical principles regarding relationships between wildland fire and non-native invasive plants, identify the non-native invasive species currently of greatest concern in major bioregions of the United States, and describe emerging fire-invasive issues in each bioregion and throughout the US.

8. Conferences and courses

Wetlands Institute
June 21 – 27, 2009
Kamloops, BC.

(Not to be confused with CMI's "Conserving Wetlands" conference in May!)

Stewardship coordinators, city planners, teachers, First Nations, ministry and municipality staff, NGO staff, business leaders, university students and youth working in the environmental field from around North America are all invited to attend the seven day Wetlands Institute. This intensive field experience will teach participants how to conduct wetland restoration, construction, and stewardship projects in the community of Kamloops, enabling participants to share the learning in their home communities. Participants will leave with the necessary skills to address wetland issues and with the knowledge to help maintain wetland habitat across North America. For further information, please contact Carolyn Anne Budgell, BCWF'S Wetlands Coordinator (wetlands@bcwf.bc.ca, 604- 970-9707).

Course on Erosion and Sediment Control
May 20 -22, 2009
Revelstoke BC

Vancouver Island University's Natural Resources Extension Program is offering this course. It is also offered at other locations and dates around the province. More details are at: <http://viu.ca/nrep/courseinfo.asp?ID=1353>

Update for January 27, 2009

1. CMI News

At the January 21 CMI Directors meeting, the Directors appointed **Gregg Walker of Parks Canada** to our Board of Directors. Gregg is the Fire and Vegetation Specialist with Mount Revelstoke and Glacier National Parks, and he was on the steering committee for our Wildland Urban Interface Fires conference. Welcome Gregg!

Our **CMI Annual Researchers' Meeting** and will be held at the Creston Valley Wildlife Management Area, May 7-8, 2009. We will have field trips on May 7, and presentations on May 8. We do not have a theme for presentations this year; we want to hear whatever you've got to say! If you have a project report or a new initiative, you are welcome to give a presentation or bring a poster. Please look at our web site www.cmiae.org for details. This is a casual meeting and non-members are welcome both as presenters and participants.

Our short **Annual General Meeting** will be held on May 8 as part of the Annual Researchers' Meeting.

It's time to start thinking about **nominating new Directors** for our Board. A potential Director needs to be a member in good standing, and be nominated by a member in good standing. The nomination and acceptance should be sent to the CMI office (email is fine) along with the nominee's resume and statement of why the nominee would like to be on the Board. CMI can have up to fifteen Directors. If there are more nominees than spaces available on the Board, we have an election by mail-in ballot. See our web site for the [Policy on Nominating and Selecting Directors](#), and to read about the [role of a CMI Director](#). Or, call Jackie at the CMI office with your questions.

2. BC Hydro Job Posting

Senior Environmental Coordinator, one year position, based in Castlegar.

Due date for application is February 8, 2009. See the details and list of duties at: <https://wwe1.bchydro.com/csbsites/bchydro/search.asp> and enter job #593097

3. Alberta's Species at Risk Strategy for 2009-2014 now available

<http://www.srd.alberta.ca/fishwildlife/speciesatrisk/strategy2009/default.aspx>

From their web site: "Alberta has a well-established and comprehensive program for the conservation and recovery of species at risk. Starting the Species at Risk program in the mid-1980s resulted in the completion of general and detailed status evaluations and recovery planning for many species. A new strategy, Alberta's Strategy for the Management of Species at Risk (2009-2014), provides direction and identifies priorities for the next five years for Albertans and Alberta government staff involved in species at risk recovery teams, advisory committees, and project partnerships."

4. Conferences and Courses

Bird Banding & Monitoring Workshop

March 27 - 29 , repeated April 24 - 26 and May 22 - 24 2009

<http://www.birdvancouver.com/workshops.html>

The Vancouver Avian Research Centre offers courses related to bird identification and bird banding. The 3 day introductory course consisting of presentations, specimen study, field mist-netting, banding, and processing under the direction of Derek Matthews, Master Bander and Bander-in-charge at the Vancouver Avian Research Centre. The workshop has been developed for people with little or no bird banding or bird in the hand experience and provides a fantastic opportunity to see birds up close and personal, to learn about their plumages, molt sequences, and life habits.

Botany BC 2009

Muncho Lake Provincial Park / Liard Hot Springs

July 15 - July 18, 2009

Botany BC is an annual meeting of botanists and plant enthusiasts of British Columbia and is open to anyone interested in plants regardless of skill level. Although Botany BC meetings are focused to British Columbia, they welcome plant enthusiasts from the neighbouring provinces/states, and from elsewhere in the world. Field trips will visit sites on alluvial flood plains, the alpine, and wetlands. Expect many unique plants, spectacular scenery and incredible wildlife viewing. Registration and detailed program are expected to be posted to the Botany BC website by February 28.

<http://members.shaw.ca/dmeidinger/botanybc/> To be notified as details develop please contact Elizabeth Easton at 250-953-3488 or elizabeth.easton@gov.bc.ca.

Update for February 19, 2009

1. CMI Annual General Meeting and Nominations for Directors

Our Annual General Meeting will be held at the Creston Valley Wildlife Management Area Visitor Centre on May 8, 2009.

We anticipate a few vacancies on the CMI Board for the 2009-2010 year, and we are

seeking nominations for Directors from among our members. Nominations close on FEBRUARY 28. A potential Director needs to be a member in good standing, (paid up) and be nominated by a member in good standing. The nomination and acceptance should be sent to the CMI office (email is fine) along with the nominee's resume and a statement of why the nominee would like to be on the Board. CMI can have up to fifteen Directors. If there are more nominees than spaces available on the Board, we will have an election by mail-in ballot. See our website for the [Policy on Nominating and Selecting Directors](#), and to read about the [role of a CMI Director](#). Or, call Jackie at the CMI office with your questions.

2. Call for papers and field trip leaders for CMI Annual Researchers' Meeting

Registrations now open.

Our Annual Researchers' Meeting will be May 7-8 at will be held at the Creston Valley Wildlife Management Area. We do not have a theme for presentations this year; we want to hear whatever you've got to say! If you have a project report or a new initiative, or something that you think will interest our multi-disciplinary membership, you are welcome to give a presentation or bring a poster. If you'd like to lead a field trip, just let us know. This is a casual meeting and non-members are welcome as presenters, field trip leaders, and participants. Please look at our web site www.cmiae.org for details.

3. Job Postings

Invasive Plant Management Technician (2 positions)
Mount Revelstoke and Glacier National Parks, Revelstoke
Deadline for Applications: **February 27, 2009**

Responsibilities are for all aspects of an invasive alien plant program: inventory and monitoring; design and implementation of experimental control treatments; and reporting. (This position is with the Federal Student Work Experience Program <http://emplois-jobs.gc.ca/fswep-pfete/index-eng.htm> As of today the dates on that web site reflect last year's dates but it's the correct site) Details for these positions and instructions on how to apply are available from: Gregg Walker, Fire & Vegetation Ecologist, Mount Revelstoke & Glacier National Parks, Gregg.walker@pc.gc.ca 250-837-7556

Volunteer Grizzly Bear Field Assistants
University of Alberta Grizzly Bear Project
Pincher Creek area, Alberta
Deadline for Applications: **April 1, 2009**

Volunteer positions are available for 2-4 months, throughout the summer and early fall, on a Master's project examining the effects of roads and access management on grizzly bear habitat use and movement in Southwest Alberta. Project is based out of the Pincher Creek area, to the North of Waterton Lakes National Park. If interested send a cover letter, CV, and phone numbers and email addresses of three(3) references to Joe

Northrup - jnorthru@ualberta.ca

4. Canadian Cooperative Wildlife Health Centre and newsletters

<http://wildlife.usask.ca/>

The Canadian Cooperative Wildlife Health Centre is an organization encompassing Canada's veterinary colleges. Its purpose is to apply the veterinary medical sciences to wildlife conservation and management in Canada. The organization is also dedicated to developing and using knowledge of wildlife health and disease to improve human health and the health of domestic animals. The CCWHC coordinates Canada's national wildlife health surveillance program and provides educational programs, information, and consultation to both government and non-government agencies, as well as to the public. Their website at has a wealth of information about wildlife health. You can also view PDF files of their newsletters at <http://wildlife.usask.ca/en/newsletter.php>

5. Proceedings of “Mountain Pine Beetle: From Lessons Learned to Community-based Solutions”

June 10-11, 2008 at UNBC in Prince George

BC Journal of Ecosystems and Management, Winter 2008

http://www.forrex.org/publications/jem/ISS49/vol9_no3_MPBconference.pdf

The Winter 2008 edition of this FORREX journal is the proceedings of a conference held at UNBC in Prince George last June (196 pages). The goal of this conference was to highlight and share significant "lessons learned" from both First Nations and non-First Nations perspectives—what is the latest science, experiential, and traditional ecological knowledge telling us about the influence of the mountain pine beetle as a disturbance agent on forested ecosystem dynamics? The changing dynamics of these ecosystems could affect the production of the products and services to which we have become accustomed.

6. “Columbia Wetlands—Natural Inspiration” Art Exhibit

If find yourself in Golden before March 29, 2009, stop by Kicking Horse Culture’s Art Gallery of Golden to view this multi-media art exhibit. From their website:

“The Columbia Wetlands inspired the art in this exhibit ... These works remind us of the great wealth — and of the underlying fragility — contained in this natural treasure. Artists focused their vision on both the microcosm and the macrocosm of the wetlands, seeing and interpreting every detail of light and shape within its vastness. We hope these works help inspire people to approach the wetlands, not as trespassers, but as respectful guests.”

If you can’t make it to see the original works, you can view the on-line version of the exhibit at <http://www.kickinghorseculture.ca/agog/wetlands/index.html>

7. Communities Adapting to Climate Change Initiative

<http://www.kast.com/?q=node/1344>

Staff Lounge, Selkirk College, Castlegar Campus

Thursday, February 26, 2009

Noon- 2:00 p.m.

This luncheon and talk is one of the Environmental Networking Luncheon Seminars hosted by Dillon Consulting Limited, Kootenay Association for Science and Technology, and Selkirk College. Michelle Laurie will speak on the Columbia Basin Trust's Communities Adapting to Climate Change initiative. Register and pay on-line at the above address on February 20.

I was interested to hear all the media coverage about Charles Darwin in the last week or so... not too many biologists make it to celebrity status!

"Let it be borne in mind how infinitely complex and close-fitting are the mutual relations of all organic beings to each other and to their physical conditions of life." --Charles Darwin, Origin of Species, 1859.

Update for March 24, 2009

1. CMI News

Field trip leaders needed

At this year's **CMI Annual Researchers' Meeting** at the Creston Valley Wildlife Management Area (May 7-8), we are shifting the emphasis from PowerPoint presentations to field trips. If you are willing to lead a trip in the Creston area, please send me a short description and say how many people you can take. If you have a computer presentation, please send your title and abstract ASAP. I'd like to post a list of field trips and presentations so people know what they are signing up for. Non-members are welcome.

Registrations are coming in for our "**Conserving Wetlands in British Columbia**" conference in Revelstoke, May 28-29. A speaker list and abstracts are available at: http://www.cmiae.org/_PDF/abstracts-wetlands-conference.pdf

The Conference Summary for our "**Wildland/Urban Interface Fires, Fuel Management, and Ecosystems**" event is now available as a free download at our web site. It is a 2.7 MB PDF document.

http://www.cmiae.org/_PDF/WUI-Fires-2008-summary.pdf

2. Job Posting

Salamander Research Position for June-August 2009

Julie Lee-Yaw, graduate student at UBC, is looking for one or two field assistants to help with research on long-toed salamanders in the Pacific Northwest this summer. The

field season will run from June until the end of August. The job involves helping to locate and catch salamanders, taking notes and conducting habitat analyses. There is also a small laboratory component during which the assistant will help with DNA extractions and PCR. This position will involve extensive travel throughout the Western USA and Canada. Field assistants will need to be flexible in their schedules as trips may last several weeks and must be willing to be based in Vancouver for the summer. For details contact Julie at lee-yaw@zoology.ubc.ca Applications close April 15 but apply BEFORE then as she is starting interviews before April 15.

3. East Kootenay Invasive Plant Council

Did you know there is now an East Kootenay Invasive Plant Council? Contact Heather McMahon at coordinator@ekipc.com if you'd like more information about this new group.

4. Publications and websites

Fungi Magazine

<http://www.fungimag.com>

This is a new magazine published in Wisconsin. Articles are available on-line. *From their website:* "Each issue of Fungi will explore the world of mycology from many different angles. With regular features ranging from toxicology to medicinal mushrooms, from photography to book reviews, Fungi will inform and entertain everyone from beginner to professional mycologist."

BC Species at Risk Public Opinion Survey

http://www.sar-pos.ca:80/SaR-POS_reports.html (link no longer exists)

Harshaw, H.W. (2008). *British Columbia Species at Risk Public Opinion Survey 2008: Final technical report*. Vancouver, BC: University of British Columbia Collaborative for Advanced Landscape Planning.

The final technical report is now available for download. The report summarizes the pattern of responses for each question, and includes recommendations for decision-makers and policy-makers. 191 pages, 9 MB download.

Mountain Caribou Recovery Implementation Plan - Update to the Mountain Caribou Progress Board, February 2009

http://www.env.gov.bc.ca/sarco/mc/files/progress_board_update20090213.pdf

Prepared by the Species at Risk Coordination Office, the purpose of this paper is to provide details of the current status of actions being taken under the Mountain Caribou Recovery Implementation Plan. Background and process details are also provided to put the current actions into context.

Did you know – The Species at Risk Coordination Office (SaRCO) was established in

2004, in part to obtain government direction on a recovery plan for mountain caribou, and to coordinate implementation of the plan for its first year. On November 1, 2008, SaRCO was transferred to Ministry of Environment (MoE) in order to transition the coordination role to MoE. As of March 31, 2009, the SaRCO will no longer exist as a distinct entity, and MoE staff will take over the role of fully coordinating delivery of the Mountain Caribou Recovery Implementation Plan. The plan continues to be a collaborative, inter-agency and multi-stakeholder government priority.

Parks and Protected Areas in Canada – Planning and Management (3rd Edition)

Edited by Philip Dearden and Rick Rollins

Oxford University Press

ISBN: 978-0-19-542734-9

From the Publisher: This collection provides a timely look at park management and planning in Canada by bringing together scholars from the fields of geography and recreation studies as well as officials in Canada's public service and non-governmental organizations. Divided into sections dealing with theoretical approaches and their applications, case studies, and the larger themes in park management and planning, such as the role of Aboriginal peoples in policy development, this volume provides a comprehensive overview of contemporary issues related to park and protected space management in Canada.

Columbia Wetlands Stewardship Partners – new web site

<http://www.columbiawetlands.org>

The mandate of the Columbia Wetlands Stewardship Partners is to manage the wetlands as a single system irrespective of ownership or jurisdiction and take a proactive stance in dealing with issues as they arise. They intend to take a positive, community-based approach to issues related to the wetlands, and resolve issues neighbour to neighbour and not through the traditional conflict based approaches that are generally used to deal with environmental issues in Canada.

Northward Shifts in the Abundance of North American Birds in Early Winter: A Response to Warmer Winter Temperatures?

By Daniel K. Niven and Gregory S. Butcher, Audubon Society

<http://www.audubon.org/news/pressroom/bacc/techreport.html>

Also see the less technical version:

<http://www.audubon.org/news/pressroom/bacc/pdfs/Birds%20and%20Climate%20Report.pdf>

Many of North America's birds are on the move, shifting their winter ranges northward and inland. A new analysis conducted by Audubon scientists using 40 years of data provides new and powerful confirmation that global warming is having a serious impact on natural systems. The focus of this paper is to (1) determine if birds have exhibited continent-wide latitudinal shifts in their distribution within a relatively short ecological time period of 40 years (which likely outpaces most changes in vegetation

communities), (2) investigate the possibility that changes in climatic conditions may be partially responsible for any such distributional changes, and (3) investigate guild-specific changes in distribution. Also discussed are additional possible causes of distributional shifts, such as changes in human-provisioned supplemental food.

5. Conferences and Courses

Working Beavers Forum

March 31 and April 1, 2009

Zephyr Lodge in Liberty Lake, Washington

<http://www.landscouncil.org:80/wildlife/forum.asp>

The Working Beavers Forum is designed for local, state, and federal agencies, tribal agencies, and non-profit organizations that are interested in beaver management. The goal of this forum is to convene a group of interested parties to discuss issues related to beavers and their benefit to watersheds. Includes sessions on ecosystem goods and services provided by beavers, beavers as agents for water retention and wetland restoration, and more. This conference is hosted by the Lands Council.

Update for April 27, 2009

1. CMI News

Our Annual Meeting is shaping up well, with 8 field trips and an evening talk at the Creston Valley Wildlife Management Area. Details are at our website, and pre-registration is necessary. Non-members are welcome.

Many thanks to those of you who have renewed your CMI membership. (If you are part of a corporate membership, your invoice was mailed last week). If you haven't renewed, I'll send you a separate reminder.

Later in the week I will be announcing the next offerings of Joe Thorley's "Introduction to R Software" (August) and Dave Polster's courses on "Soil Bioengineering" and "Ecological Approaches to Invasive Plant Management" (September).

2. Funding: Columbia Basin Trust's Environmental Initiatives Program

<http://www.cbt.org/Funding/?Programs>

The Columbia Basin Trust is about to announce their annual call for projects for the Environmental Initiatives Program. EIP provides support to community-initiated and supported environmental projects that aim to reduce the impacts humans have on local and regional ecosystems. The EIP provides funding for aquatic, terrestrial and education projects that lead to a healthier environment for Basin residents. Open to all residents (individuals, community groups, agencies/ organizations and youth) of the CBT area. Proposals from provincial, national or international organizations will be considered provided the applicant has a partnership arrangement with a Basin

organization and/or community. Deadline to submit will be May 25, 2009. (*As of today the EIP information is not yet posted... should be soon*)

3. Request for Proposals: Avian Synthesis Research

Yellowstone to Yukon

http://www.y2y.net/data/1/rec_docs/488_Y2Y_Avian_Publication_Final_PDF.pdf

Y2Y has announced a request for proposals to carry out an avian synthesis research project. Over the past five years, Y2Y has commissioned several avian research projects to address how various species of birds use the Y2Y landscape, and to identify potential areas of concern for avian biodiversity in the Yellowstone to Yukon region. An information gap has been identified that they would like to address before undergoing further avian conservation work.

Submission deadline is May 1, 2009.

Notification of decision is May 15, 2009.

Project to be completed by July 31, 2009.

4. Alberta's Plan for Parks

<http://www.tpr.alberta.ca/parks/P4P/>

Alberta has just released its "Plan for Parks". This is intended to be a blueprint to guide decisions for managing provincial parks. This long-term plan aims to ensure the sustainability of natural landscapes, enhance recreational opportunities, and help to improve the quality of life for Albertans.

5. Conferences and Courses

Adaptive Management of Natural Resources

May 4-7, 2009

Free on-line course

Presented by Drs. Jim Nichols, Mike Runge and Julien Martin,

<http://www.fort.usgs.gov/brdscience/AdaptiveManagementCourse.htm>

The US Geological Survey, Status and Trends Program, is offering a free short course, designed for resource managers, which are open to all who are interested. They will be taught using a conference call / voice over IP (VoIP) format with live web demonstrations and will be recorded for later study. (I checked, Canadians are welcome to sign up – Jackie)

From their website:

This course is designed to expose scientists and managers to the basic components and process of adaptive management. This approach is relevant to any sort of management decision that is repeated over time and may be useful in some cases with spatially replicated, one-time decisions. We begin with a discussion of structured decision making, an umbrella process of which adaptive management is a special case.

We then focus on the key elements of structured decision making and adaptive management: objectives, potential management actions, models of system behavior, optimization methods, and monitoring programs. We discuss approaches for selecting appropriate objectives and show how general objectives can be formalized into explicit objective functions. We discuss management actions for different classes of problems. We describe the development of models designed to project the consequences of the potential management actions on system behavior. We will briefly discuss optimization methods to identify decisions that are optimal with respect to the management objectives. Because estimates of system state are typically needed for informed management, we provide a general approach to developing a monitoring program, as well as discuss the specific roles of resulting data in the decision process. Finally, we show how these components combine in the adaptive management process. We argue that this process is ideal for management in the face of uncertainty and provides a natural mechanism for the conduct of science useful to management. Throughout the course, we will illustrate general approaches and concepts with a specific application involving possible management of disturbance of nesting golden eagles in Denali National Park.

Register for this course at <http://www.fort.usgs.gov/brdscience/courseRegister.aspx>
Questions? Call Paul Geissler, 970-226-9482, Paul_Geissler@usgs.gov

Fish and Wildlife in a Changing Climate: Options for Future Management Practices

June 1-2, 2009

David Strong Building, University of Victoria, Victoria BC

The purpose of this symposium is to examine new findings regarding potential climatic impacts on fish and wildlife in British Columbia, and to explore next steps for opportunities to minimize adverse effects on fish and wildlife resulting from climate change and human use. The workshop will bring together practitioners, academics, and stakeholder organizations from throughout the province. The symposium will consist of a plenary session, presentations from invited speakers to provoke dialogue about a topic, followed by discussions on some of the key issues facing fish and wildlife and adaptation actions that we can take to deal with climate change effects on BC's fish and wildlife, and a session synthesizing lessons learned and next steps. There will also be a grad students' research poster session and a dinner event option on campus on June 1. Outcomes from this event will include increased knowledge, coordination, and cooperation among participants to collaboratively address climate change adaptation for fish and wildlife in BC. Confirmed Speakers include Bruce Fraser from the Forest Practices Board, Dr Richard Hebda from the Royal BC Museum, Don Morgan from the Ministry of Forests and Range, Rocky Beach from the Washington State Department of Fish and Wildlife, and Patti Glick from the US National Wildlife Federation. Online registration will be available May 5th 2009 through MITACS website <http://www.mitacs.ca> .

For more information contact Sue Roppel sroppel@mitacs.ca 778-782-8686

Update for June 11, 2009

1. CMI News

The **Annual General Meeting** at the Creston Valley Wildlife Management Area was attended by about 25 people, and we sure had a good time! Eight different field trips were offered, and Marc-André Beaucher gave us an evening talk about the challenges of operating the CVWMA. Many thanks to our field trip leaders: Marc-André Beaucher, Leo DeGroot, Jakob Dulisse, Barb Houston, Irene Manley, Garth Mowat, and Brendan Wilson.

We announced our **Directors for 2009-2010** at our Annual General Meeting. They are:

Doug Adama, Golden
Marc-André Beaucher, Wynndel
Kevin Bollefer, Revelstoke
Martin Carver, Victoria
Patrick Daigle, Victoria
Jenny Feick, Victoria
Rachel Holt. Nelson
Irene Manley, Nelson
Mike Miller, Revelstoke
Paul Sneed, Castlegar
Natasha Thorpe, Revelstoke
Gregg Walker, Revelstoke
Del Williams, Victoria
Brendan Wilson, Shoreacres

Two of our long term CMI Directors, **Susan Hall and Chris Steeger**, have left the Board. Chris and Susan, we thank you for your many years of good advice and ideas!

Our **“Ecological Approaches to Invasive Plant Management”** course was fully subscribed and I am already taking names for the September offering of this course.

Our **“Conserving Wetlands in British Columbia”** conference in Revelstoke was attended by 90 people. We offered nineteen presentations, thirteen posters, and four field trips. A conference summary is in preparation and will be available as a free download from the CMI web site in a few months. Many thanks to our conference sponsors: BC Hydro, BC Ministry of Healthy Living and Sport, Columbia Basin Trust, Creston Valley Wildlife Management Area, Ducks Unlimited Canada, Fish and Wildlife Compensation Program, Nature Conservancy of Canada, and the Revelstoke Community Forest Corporation.

In late May our website experienced an attack by the ubiquitous Gamblar malware. The malware inserts code into each web page, which then attempts to redirect your browser to some other website. We have hired a website security expert to help us make sure this doesn't happen again. If you are getting strange re-directs on your computer, you are probably seeing the effects of Gamblar from other sites. Delete your temporary

internet files and cookies files, and those annoying re-directs should lessen. Being re-directed is not really a big problem; but the pages you are sent to can host viruses or other nasty things.

2. Publications

Horticultural report for Arrowhead townsite

Arrowhead townsite, located south of Revelstoke across from the Shelter Bay Ferry, was abandoned in the 1960's with the flooding of the Arrow Lakes Reservoir. With the support of the Columbia Basin Trust, the Arrowhead Conservation Society commissioned two reports in support of establishing the townsite's heritage values. "Heritage Plants of a Ghost Town: Arrowhead, British Columbia" (Jenny Coleshill and Rolf Hartman, January 2009) documents the horticultural plants still found on the site. The Cultural Heritage Assessment is also available. Both reports are at <http://revelstokemuseum.ca/Arrowhead.html>

Landowner's Guide to Wildlife Friendly Fences

<http://fwp.mt.gov/wildthings/livingwildlife/tips.html>

This well-illustrated guide was produced by Montana Fish, Wildlife, and Parks. It is being used as far afield as Hawaii, Argentina, and Australia. Here's a clip from the introduction:

"We share our lands with a rich and abundant array of wildlife in Montana – wildlife that must travel across landscapes to find food, shelter, and water for survival. Too often, animals and birds are injured or killed when they collide with fences or get tangled in wires. Most people would prevent these needless deaths if only they knew how." This publication tells you the "how".

Improving the Ecological Function of the Upper Bow River: Bow Lake to Kananaskis Dam

Blank, Matt and Tony Clevenger. 2008. Yellowstone to Yukon Conservation Initiative, Canmore, Alberta, Technical Report #7, April 2009. Available from the on-line library of the Y2Y web site: <http://www.y2y.net/Default.aspx?cid=55&lang=1>

3. Two free series of seminars

Future Forest Ecosystem Initiative seminar series

The BC Ministry of Forests and Range, Climate Change and Forest Carbon Unit, is hosting a series of conference call style presentations about climate change and adaptation in BC's forests. To participate, download the presentation and abstract in advance from

http://www.for.gov.bc.ca/ftp/HFP/external/!publish/Climate%20Change/Seminar_Series/

For details on how to join the call, please contact Kathy Hopkins

kathy.hopkins@gov.bc.ca

Upcoming talks are:

June 11, 2009: Potential supply of biomass for bioenergy from Canada' forests, C.C. Dymond, B.D. Titus, G. Stinson and W.A. Kurz

June 18, 2009: Monitoring forest and rangeland species and ecological processes in British Columbia in light of climate change, Dr. John Innes, Margie Eddington, Alyson McHugh, Alanya Smith

June 25, 2009: Effects of landscape connectivity on ecosystem adaptation to climate change in Central America. Bruno Locatelli, Pablo Imbach

Research Branch, Ministry of Forests and Range Seminar Series

Another free seminar series! For the schedule and details of how to dial in, visit:

http://www.for.gov.bc.ca/hre/research_seminars/

Upcoming two lectures are:

June 12, 2009: Peter Ott, Some interesting new statistical approaches (e.g. alpha designs) -

September 11, 2009: Reg Newman and Brian Wallace, Climate change/carbon and grazing -

4. Websites

British Columbia Invasive Plant Research Database

Invasive Plant Council of BC

Interested in invasive plant research in B.C? Search the new BC Invasive Plant Research Database to learn *Who* has done *What* research *Where*. Projects and publications are described.

http://www.invasiveplantcouncilbc.ca/?option=com_ipd

if you have projects or research you would like to add please contact the Invasive Plant Council directly, at: info@invasiveplantcouncilbc.ca

5. Conferences and Courses

Whitebark Pine Science and Management Workshop

September 10-11, 2009

Nelson, BC

The goals of this workshop are to present the latest news, science, and management tips to public lands staff, nature enthusiasts, students, scientists, educators, and citizens' to strengthen ties between BC, AB, and USA; and to provide an enhanced learning experience through on-site visit to a whitebark pine forest. Details are at:

<http://www.whitebarkfound.org/PDF-files/Whitebark-2009-Mtg-Announcement.pdf>

3rd International Bear-People Conflicts Workshop

November 15-17, 2009

Canmore, Alberta

This workshop will provide a forum for people working and volunteering on bear-human conflicts. Sessions will be as interactive and practical as possible, consisting mostly of

moderated group discussions on managing bears and people. Attendees are encouraged to share experiences on practical issues and techniques related to preventing and managing bear problems. The focus will be on methods proven useful as well as ones that need more testing or are not considered effective. The meeting is oriented towards conservation officers, park wardens, police/bylaw officers, biologists, wildlife managers, and others from agencies, industry, and communities working on bear conflicts. Participants should leave with increased knowledge and "tools" as well as perspectives on how and why approaches have changed over the years. Details are at:

http://www.rdc.ab.ca/future_students/continuing_education/conferences_events/international_bear/index.html

Society for Ecological Restoration – BC Chapter
Shared Responsibility for a Sustainable Landscape
November 5-8, 2009
Naramata BC

Call for papers, posters, and field trip leaders is now open. Details are at:
http://www.ser.org/serbc/pdf/conference_announcement_2.pdf

Update for August 24, 2009

1. CMI News

Check out our fall line-up of courses. Details and registrations are at our website in the Events section. All courses are in Revelstoke.

Ecological Approaches to Invasive Plant Management, with David Polster, September 21-22

Soil Bioengineering, with David Polster, September 24-25

Statistics for Biologists - A Refresher Course, with Dr. Carl Schwarz, October 20-22, (Course full) **Introduction to Bayesian Methods for Ecologists**, with Dr. Carl Schwarz, November 3-5 (4 spots left)

Statistics for Biologists - A Refresher Course, with Dr. Carl Schwarz November 17-19*

** The October stats refresher course was full within a week of when we opened for registrations. I am about to start publicizing the second offering of the course. If you would like to be in the November course offering please register ASAP.*

Joe Thorley's course "**Introduction to R Software**" ran fully subscribed last week. In the future Robyn Irvine may be available as a co-instructor, so we hope to be able to accept a larger number of participants per course.

The conference proceedings for our May event "Conserving Wetlands in British Columbia" will be on our website this week.

2. Job Opportunities

Program Manager - East Kootenay Conservation Program
Application deadline: September 10th, 2009.

The East Kootenay Conservation Program (EKCP) is a partnership of 49 conservation, industry, and government organizations dedicated to conserving natural areas for Kootenay communities. Their mandate is to coordinate and facilitate conservation efforts on private land, and to generate the support and resources needed to maintain this effort. The Steering Committee of the EKCP is seeking applications from qualified individuals to assume the lead role in this dynamic, fast-paced organization. The successful candidate will be responsible for the day-to-day administration, coordination, and implementation of the EKCP. They require a seasoned professional with a varied combination of education and experience to build on the demonstrated success of this strong organization. As the sole staff member, the incumbent will be an integral part of the organization and report directly to the Steering Committee Chairperson (or designate). The position is based in the Kootenays. For a complete information package call John Krebs at 250- 352-6874 or email john.krebs@bchydro.bc.ca.

3. Wetland Ways: Interim Guidelines for Wetland Protection and Conservation in British Columbia

http://www.env.gov.bc.ca/wld/documents/bmp/wetlandways2009/wetlandways_docintro.html

This document, produced by the Wetlands Stewardship Partnership, is one of a series of Guidelines and Best Management Practices documents that provides guidance on the protection and management of ecosystems in BC. It is written primarily for people who are planning some form of activity or development near wetlands, as well as those looking for guidance on ways to best maintain the high ecological values in these areas. These interim guidelines were prepared with input from many experienced reviewers and will be updated using feedback and experience from pilot user groups over the next two years. Comments on these guidelines are welcome and should be directed to wsp@gov.bc.ca

4. Groundwater Bylaws Toolkit

<http://www.obwb.ca/157/>

Produced in 2009 by the Okanagan Basin Water Board as an appendix to the better-known Green Bylaws Toolkit, the purpose of the Groundwater Bylaws Toolkit is to give local government planners practical tools to be used in Official Community Plans, Development Permit Areas and Bylaws to protect groundwater resources. It includes model bylaw language that local governments in BC can use in their own jurisdictions.

5. New tool for assessing wetlands in Oregon

http://oregonstatelands.us/DSL/WETLAND/or_wet_prot.shtml

Perhaps you will find this new tool from Oregon an interesting example.

ORWAP: A Tool for Assessing the Ecosystem Services of Individual Wetlands

The Oregon Rapid Wetland Assessment Protocol (ORWAP) is a free, standardized protocol for rapidly assessing the ecosystem services provided by an individual wetland. The input data come from two sources: (1) observations of general wetland characteristics during a single visit and from review of aerial imagery, and (2) existing contextual data compiled at four web sites. After users enter the data into an Excel spreadsheet, ORWAP automatically generates scores intended to reflect a wetland's ability to support the following: Water Storage and Delay, Sediment Retention and Stabilization, Phosphorus Retention, Nitrate Removal and Retention, Thermoregulation, Carbon Sequestration, Organic Matter Export, Pollinator Habitat, Aquatic Invertebrate Habitat, Anadromous Fish Habitat, Non-anadromous Fish Habitat, Amphibian & Reptile Habitat, Waterbird Feeding Habitat, Waterbird Nesting Habitat, Songbird, Raptor and Mammal Habitat, Pollinator Habitat, and Native Plant Diversity. For all but two of these attributes, scores are given for the two components which define the "ecological goods and services" a wetland provides: function effectiveness and function value. The services are also condensed into thematic groups. In addition, wetland Ecological Condition (Integrity), Provisioning Services, Public Use and Recognition, Sensitivity, and Stressors are scored. Values are estimated on a relative scale using indicators of a wetland's spatial context within the physical, biological, and socioeconomic landscape.

For more information visit http://oregonstatelands.us/DSL/WETLAND/or_wet_prot.shtml
Contact person: Dr. Paul Adamus (adamus7@comcast.net), Oregon State University, Corvallis, Oregon.

6. New datasets at Bird Studies Canada

<http://www.birdscanada.org/birdmon/>

In July, three large datasets were added to the NatureCounts portal hosted by Bird Studies Canada as part of the Avian Knowledge Network. They added the entire Project FeederWatch database, representing more than 14 million bird sightings from Canada and the U.S. for a period of more than 20 years. Results from the Marsh Monitoring Program have also been included, for the bird surveys and the amphibian surveys since 1995. In August, several of the British Columbia databases were updated to include 2009 data collected so far. This includes the BC Coastal Waterbirds Survey, and the BC Breeding Bird Atlas databases (breeding evidence and point counts).

Data from a variety of BSC programs can be downloaded or examined online through NatureCounts. Over the long term, their goal is to have data from all programs that are managed by BSC available through NatureCounts, and therefore to increase their utility for conservation and science. So far, NatureCounts includes about 42 million observation records, described in a single standard format also used by other partners of the Avian Knowledge Network.

7. E-FLORA BC continues to expand

<http://www.eflora.bc.ca/>

E=FLORA BC is an online biogeographical atlas of the plants of British Columbia that provides distribution mapping and summary ecological information. E-Flora BC has grown substantially since it first became available in 2004 with the launching of 3480 atlas pages for vascular plants (which brought the 8 volumes of the Illustrated Flora of British Columbia online). Today the atlas contains more than 5,500 atlas pages (and there are still gaps to fill). Recent improvements include: updates to static distribution maps; capability to add “additional notes” and keys to the atlas pages; keys for many genera are being added; the vascular plant Ecological Frameworks that appear on many atlas pages were updated; there is now a substantial macrofungi component since they incorporated 1680 macrofungi species accounts provided by Ian Gibson from his MatchMaker program (http://forestry-dev.org/biodiversity/matchmaker/index_e.html); there is more info on invasive species; ... and the list continues, maybe it's time to revisit E-FLORA BC.