



The Murreletter

Society for Northwestern
Vertebrate Biology

Volume 15, No. 2

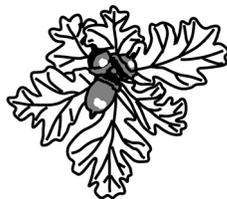
November 2007

President's Message

Greetings All,

As you will see in the pages before you, SNVB is gearing up for an incredibly active period in our history. We are asking that our membership be more engaged than ever. Our vision has three aspects that we aspire to: 1) improve access to scientific information; 2) inform an active and engaged membership; and 3) promote a membership representative of our community-at-large. Consider the reasons you are a SNVB member, how they fit into the vision, and what you can do to help the society continue to fulfill those reasons. If you are a member because you enjoy our informative (and fun) annual meetings, consider volunteering to help with meeting organization or fundraising. Or consider organizing a Science Café in your community to keep the fun (and information exchange) going all year! If you are a member because you enjoy a journal that continues to publish natural history notes alongside rigorous research papers, consider volunteering to be a Northwestern Naturalist Associate Editor or Northwest Fauna Editor. We encourage all of our members to become more involved in the day to day business of the organization and invite you to consider one of our open board positions. There are also lots of ways you can help SNVB that do not require a long-term commitment: help us develop a new membership database, design a t-shirt or annual meeting program cover, serve on a committee, submit a newsletter article or announcement, make a donation to the student scholarship program, or simply buy a t-shirt. Thank you in advance for your support. We look forward to seeing you in Missoula!

Cheers, Tara



SNVB Needs YOU!

Recruiting for board positions

Please contact Tara Chestnut (tarachestnut@gmail.com), the Nomination Committee Chair, for volunteer job descriptions if you are interested in running for one of these positions.

Executive Board

The following board positions are up for re-election in 2008: Treasurer, Southern Vice President (VP), Northern VP, Oregon VP, and Trustee. The VP terms are for two years. The Treasurer and Trustee terms are three years in length. Elections will take place by mail and at the annual meeting in Missoula.

Murreeditor (Murreletter Editor)

Help us keep in touch with our membership! The Murreletter Editor, or Murreeditor, is responsible for soliciting newsletter articles, compiling the newsletter and distributing it to the membership. The newsletter is published three times per year.



SOCIETY FOR NORTHWESTERN VERTEBRATE BIOLOGY STUDENT SCHOLARSHIP

The Society for Northwestern Vertebrate Biology (SNVB) provides one scholarship of up to \$1000 annually to student members. Undergraduate and graduate students conducting vertebrate research within the geographic scope of the society: northwestern North America west of the Great Plains and north of the Mojave Desert are eligible to apply. Applicants may become a member at the time of application. The recipient will be announced at the annual meeting in Missoula. Application guidelines can be found on our website, <http://www.snwvb.org/scholarship-guidelines.pdf>.

Society for Northwestern Vertebrate Biology

*...the oldest scientific association devoted to the study of
terrestrial vertebrates in the Pacific Northwest*

- established in 1920

Executive Board

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Who we are...

The Society for Northwestern Vertebrate Biology was founded in 1920 as the Pacific Northwest Bird and Mammal Society. Long recognized as the pre-eminent union of ornithologists and mammalogists in the Pacific Northwest, the society adopted its current name in 1988 to reflect an expanded taxonomic scope that included amphibians and reptiles. The scope expanded again in 1999 to include fish. Today the society strives to promote close working relationships among ornithologists, mammalogists, herpetologists, and ichthyologists in our region; foster exchange of scientific information and interest in the study of vertebrates; and offer a forum for these activities through meetings and publications.

Membership

All persons or institutions interested in the study of birds, mammals, amphibians, reptiles, and fishes are eligible for membership. Individual members receive the Northwestern Naturalist and the Murreletter, our newsletter. Other SNVB publications, such as Northwest Fauna, are available at a reduced rate. Other privileges of membership include notification of all SNVB meetings, power to vote in SNVB meetings and elections, and participating as a member of the SNVB board.

**For more information or to
become a member visit
<http://www.snwvb.org>**

The Murreletter

The Murreletter is published three times yearly and is distributed to the members of the Society of Northwestern Vertebrate Biology. Submission of stories, meeting announcements, and other material of interest to members of the society is encouraged. Submissions should be sent to the Murreletter Editor, Kathryn Ronnenberg. To receive the Murreletter electronically, which is strongly encouraged, please provide your current email address to SNVB Treasurer Julie Grialou.

SNVB Mission, Vision, and Values

In 2006, the board gathered for a retreat to outline our mission, vision and values. At the moment, the only guiding documents SNVB had are what is legally required, a constitution and bylaws. Mission, vision and values statements are far more informal than the constitution and bylaws, and are certainly not binding, but they are equally as important. They provide members with a sense of identity and direction. The mission, vision and values statements clearly describe what we do, what we want to become, and the traits or qualities we consider worthwhile. The board developed the preliminary draft statements you will find below. If you would like to provide comments and volunteer a few hours on the committee, please let Tara know, tarachestnut@gmail.com. Thanks!

Mission Statement: SNVB promotes interest in the study of vertebrates and their associated ecosystems in northwestern North America through communication and education.

Vision Statement: As the preeminent society of vertebrate biologists in northwestern North America, SNVB will:

- 1) continually improve access to and dissemination of the most current and credible scientific information
- 2) inform an active and engaged membership
- 3) promote the expansion of our membership to include a large and diverse group of individuals representative of our community at-large

Values Statement: SNVB members value rigorous scientific inquiry, open communication, accessible transfer of information, accountability, and last but not least, an active, engaged and long-standing membership.

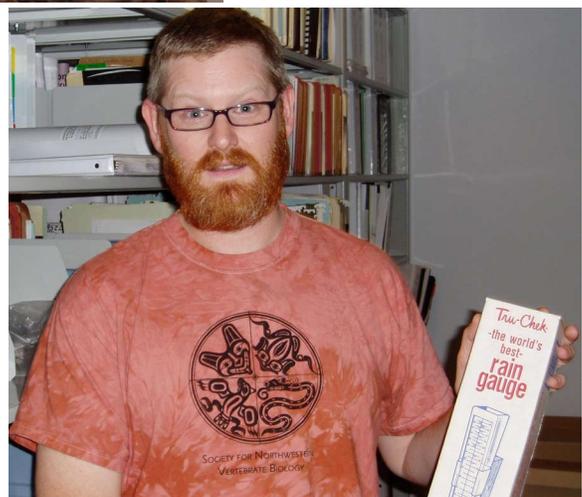


Give SNVB for the Holidays!!

With the gift giving time of year is upon us, consider giving your friends, family and colleagues SNVB gear! Pint glasses etched by Portland artist Zephyr Nelson, hand-dyed t-shirts by Pike Place Market vendor Loren Traves, LL Bean wind and water resistant fleece-lined vests, plus the latest amphibian field guide are all available for purchase. Join board members Tara and Hans on a photo shoot to see the t-shirts and vests. Orders must be received by December 5th and will ship on or before December 10th.



SOCIETY FOR NORTHWESTERN
VERTEBRATE BIOLOGY



Above: Men's (left) and women's (right) SNVB vests. Right: Women's (Tara) and men's cut (Hans) t-shirts in brown and rust.

SNVB Science Café

SNVB is inviting all members to become engaged with other members and the community-at-large through a new activity, a Science Café. The primary purposes of the café are to provide an opportunity for SNVB members to get together in informal settings between annual meetings, and provide an opportunity for the community (SNVB members and non-members, biologists and non-biologists) to discuss topics in vertebrate biology in an effort to promote and encourage scientific literacy.

An idea that started in England in 1998, the Science Café or Café Scientifique is based on the French Café Philosophique and has recently spread to a handful of locations in the U.S. Community members come together in a friendly locale after work and hear a short talk on an interesting current scientific topic. Here's a link for more information: Café Scientifique - <http://www.cafescientifique.org/>

Café Scientifique is a place where, for the price of a cup of coffee, a beer or a glass of wine, anyone can come to explore the latest ideas in science and technology. Meetings take place in cafés, bars, restaurants and even theatres, but always outside a traditional academic context. The primary goal is to promote public engagement with science and to make science accessible and accountable.

Start a SNVB Science Café in Your Community!

Please contact Tara Chestnut (tarachestnut@gmail.com) if you are interested in coordinating a science café. The main duties are to:

- 1) secure a place for the meeting (location, time, etc. are up to you but we encourage an all ages venue so younger students and people with young children can attend),
- 2) invite a monthly speaker on the topic of your choice (ideally, related to vertebrate biology),
- 3) arrange for a projector & laptop if the speaker needs it, and
- 4) invite folks to attend and advertise.

These activities should take between one and three hours each month. They can certainly be delegated amongst a group if you solicit assistance from friends or colleagues. Or, if you supervise students, this could be a great opportunity to help them develop leadership skills by recruiting them to make the arrangements, invite speakers or present their own work.

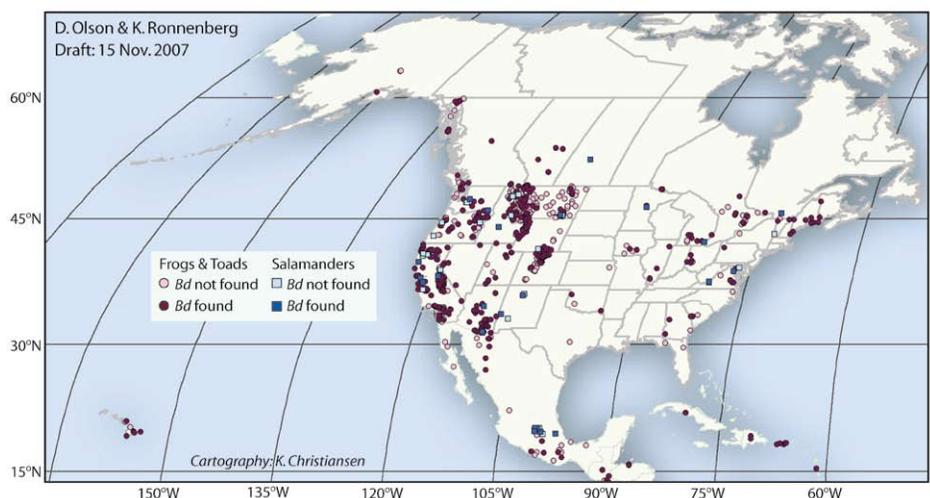


Amphibian Chytridiomycosis: Science and Management Interface in Arizona

The amphibian chytrid fungus (*Bd*) conference in Tempe, Arizona, November 5-7, attracted 200 participants from 9 countries, including research scientists, federal and state/province biologists and managers, and representatives from industries, the pet trade, zoos, and multiple funding institutions. New advances in science and management were presented, and break-out groups developed recommendations for managing this emerging infectious disease that is linked to amphibian population declines and extinctions around the world. Although sampling efforts are relatively few in the Northwest, *Bd* is being found in all NW states and provinces, and appears to be transmitted by movement of animals or water, likely including contaminated field gear. A pulse of journal publications is planned from the meeting in 2008, capturing the new findings and meeting proceedings. Immediate products such as disinfection protocols and how to respond to local die-offs will be posted at the PARC website: http://www.parcplace.org/Bd_conference.html.

The conference was possible due to the generous donations of sponsors including PARC, US Fish & Wildlife Service, US Department of Agriculture, Turner Foundation, Phoenix Zoo, Pet Industry Joint Advisory Council, USGS ARMI, Plum Creek, and Conservation International.

Right: Excerpt from the World *Bd* Map, D. Olson and K. Ronnenberg, draft dated 15 November 2007. Dark point markers indicate *Bd* found; light-colored point markers indicate *Bd* not found in animals tested.



Open Access for Northwestern Naturalist

At our annual meeting in Victoria this past March, I proposed that SNVB provide open access to Northwestern Naturalist. Although, we didn't have time for extensive discussion, a straw poll of those in attendance at the business meeting was strongly in favor of open access. However, the Board wanted to give all members an additional opportunity to provide input. Below is the pertinent information with regard to open access and its effect on our journal and society. Please provide any response or thoughts you have to the Editor, Bob Hoffman by January 31, 2008.

Goal

The goal of providing open access would be to make the research published in Northwestern Naturalist readily available to members of SNVB and other scientists by removing price barriers and some permission barriers while still preserving the unrestricted use of the content by the authors and preserving the potential for some income generated through BioOne and JSTOR.

Open Access¹

Open access literature is digital, online, free of charge (no price barriers), and free of most copyright and licensing restrictions (permission barriers).

Price barriers include the cost of acquiring a copy of an article through a service such as BioOne, JSTOR, Copyright Clearing House, Infotrieve, or interlibrary loan. By being posted on an accessible-to-anyone website, the only costs would be those related to accessing the Internet and printing a copy of the article.

Copyright and licensing restrictions are permission barriers that preclude the use of an article for various reasons unless the user has specific written permission to do so. Under an open access policy, copyright holders generally consent in advance to the unrestricted reading, downloading, copying, sharing, storing, printing, searching, linking, and crawling of the full-text of the work. Copyright holders can still retain the right to block altered, unattributed, and/or commercial distribution of the work. Essentially, these conditions authorize all the uses required by legitimate scholarship but block plagiarism, misrepresentation, and commercial re-use.

Best Option for Northwestern Naturalist: Both Print and Online Versions

There are several good reasons for maintaining a print version of the journal even with online access. First, many members prefer to read from hardcopy rather than from a monitor. Second, the printing process by Allen Press already

produces pdf files that we can post. Third, the printing process also produces the SGML files that BioOne and JSTOR use for making the journal available in electronic format. Without the generation of these files by Allen Press, there would be significant costs for doing so on our own.

The major potential drawback for providing open access to our recent issues is the potential loss of income from BioOne. Google and other search engines will continue to find Northwestern Naturalist content within BioOne as well as, presumably, on our own website. Regardless, the income generated by BioOne was never the reason we joined—it was to get our name and content out where more folks would find it. Probably, some researchers will continue to purchase downloads from BioOne, so there will still be some unknown amount of income from this source, which should simply be thought of as “gravy”.

Licensing Agreement

Currently, we have not been asking authors to assign copyright to Northwestern Naturalist nor have we been claiming copyright ownership anywhere in the journal. However, it will be important for all content posted online to have the same licensing restrictions with regard to attribution, commercial re-use, and derivatives. Hence, it will be necessary to have authors enter into a licensing agreement with Northwestern Naturalist. In a Creative Commons Attribution No Derivatives License² agreement, authors will be able to use the work as they see fit (no restrictions), and others will be able to use the work as long as the work is properly attributed to the authors and that it is unaltered (no derivatives) unless specifically permitted by the authors. I believe this will satisfy the copyright restrictions imposed by the Federal Government, but this will have to be verified.

Paying for Open Access

Subscription-only journals and even some journals with society backing are concerned that providing open access will reduce subscriptions and/or memberships, and this potential loss does exist for SNVB. Open access proponents suggest that those most benefiting from the publication of research (the authors or their funding agencies) be the ones who pay. As a result, some journals require authors pay a fee to have their articles be available to open access online (the fee for The Journal of Mammalogy is \$1500!). I believe, however, that SNVB provides more for its members than just the journal; it offers the annual meeting, a waiver of page charges for member authors, the Murreletter, and the general benefit of

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belonging to a group of people with similar interests. Access to back issues in JSTOR, if provided, would be another benefit. The loss of dues from members who don't renew because the journal is free online could be at least partly made up by increasing dues, increasing page charges (which has already been done), or by changing the membership requirements for publishing in *Northwestern Naturalist*. Currently none of the authors must be an SNVB member in order to publish in the journal, and only one author must be a member to be granted a waiver of page charges.

Footnotes:

¹Information on open access was taken from "Open Access Overview" written by Peter Suber and which is available online at: www.earlham.edu/~peters/fos/.

²Information on various open access license types was taken from the Creative Commons website at: <http://creativecommons.org/about/licenses/>.

Burr Betts

Editor Emeritus, Northwestern Naturalist



The only amphibian that made a live appearance at the PARC Amphibian Chytridiomycosis Conference: the Chiricahua Leopard Frog, *Rana chiricahuensis*. Conference participants saw them at the Phoenix Zoo's Native Species Conservation building on a pre-banquet tour. Photo by Jim Rorabaugh, USFWS.

Donate to the Student Scholarship

Donations to the SNVB Student Scholarship fund are completely tax-deductible and allow us to provide additional scholarships to undergraduate and graduate students. If you would like to make a contribution, please send a check or money order to Julie Grialou and indicate it is for the scholarship fund. Thanks for your generosity!

Darwin Day Celebration

AN INTERNATIONAL RECOGNITION OF
SCIENCE AND HUMANITY

Darwin Day Celebration - Invites Your Participation!

The concept of an annual celebration of Darwin, Science and Humanity was born in 1994 and the first Darwin Day (DD) event was held at Stanford University in 1995. Since that time DD has become an annual international celebration, on, or near, Darwin's birthday, February 12. To learn more go to <http://www.darwinday.org>. Currently, supporters of science are looking forward to a Global Extravaganza to mark the occasion of Darwin's Bicentennial Birthday in 2009 however, 2008 offers all of us an opportunity for a 'warm-up' performance!

The name "Charles Darwin" uniquely focuses the attention of both the press and the citizens of the world and by declaring February 12th the common date on which to celebrate science, scientists can establish a new tradition – one that honors our most valuable knowledge system, and is based on empirical data.

Darwin Day Celebration (DDC), as a COPUS* Network Participant, is reaching out to all of the other COPUS Participants to invite each of you and your members to join in the 2008 'warm-up' by taking the initiative to sponsor and produce your very own DDC EVENT, on or near Feb 12, 2008! We would be pleased to have you register and advertise your event, at no cost to you, on our website at <http://www.darwinday.org/englishL/events/index.html>, thereby joining all the others in a common cause. To assist you to get started, you will find many examples of previous celebrations on both our Homepage at <http://www.darwinday.org> and listed by categories at <http://www.darwinday.org/englishL/links/links1.html>.

Clearly, it damages the international community to be misinformed about science, particularly evolutionary science in the 21st Century. However, it is heartening to realize that the COPUS Network Participants have an opportunity to create an authentic annual tradition to actually CELEBRATE science. We hope you will join the many other groups already participating in this celebration of Science and Humanity!

*COPUS, the Coalition on the Public Understanding of Science, is an American Institute for Biological Sciences (AIBS) program. SNVB is an AIBS member and COPUS Network participant.



Announcing the 2008 Conference – a Joint Meeting of the Montana Chapter of the Wildlife Society, The Society for Northwestern Vertebrate Biology, and Partners for Amphibians and Reptile Conservation

February 25 – March 1, 2008
Holiday Inn Parkside, Missoula

Northwest Connections: Sustaining our Wildlife Populations in the Face of Climate Change, Human Population Growth, and Energy Development

This year's theme builds upon the theme of the previous two MT TWS conferences which captured the essence of wildlife as a public trust, and energy development issues. Complicating the picture for sustaining wildlife life over the long term are climate change and human population growth.

Monday February 25

The Wildlife Society Working Group Meetings

Common Loon (10:00-11:30)

Harlequin Duck (11:30-12:30)

All Bird (1:00 - 4:30)

Herps (5:00 – 7:00)

Bats (7:00 -9:00)

Tuesday and Wednesday morning, February 26 & 27
 Workshops

Impacts of Climate Change on Wildlife

Human Development and Wildlife

First annual meeting of the northwest chapter of Partners for Amphibian and Reptile Conservation

Wednesday afternoon through Friday, February 27-29

Plenary and Regular Meeting

Session Topics Include:

Climate Change and Pacific Northwest Wildlife

Maintaining Wildlife Connections in the Face of Development

Energy Development Impacts on Pacific Northwest Wildlife

Northwest Faunal Connections – Phylogeography of the Pacific Northwest

Human Population Growth and Development Trends in the Pacific Northwest

Vertebrate, Invertebrate and related habitat sessions

Saturday, March 1, Field Trips TBA.

If you can help out in any way (registration table, session moderating, AV) or would like to propose a workshop, please contact Program Chairs: Bryce Maxell (bmaxell@mt.gov) or Ryan Rauscher (rrauscher@mt.gov).

There will be on-line and early bird registration opportunities offered through the MT TWS Chapter website (<http://www.montanatws.org>). Student rates and daily registration fees will be offered for non-member resource professionals and private citizens to attend workshops and conference sessions, so spread the word to all interested parties.

CALL FOR PAPERS

It's never too early to get those abstracts ready! Presentations will be 30 minutes in length, including introduction of the presenter and time for questions. Students are especially encouraged to submit papers. Abstracts for oral presentations need to be submitted no later than January 11, 2008 to Ryan Rauscher (rrauscher@mt.gov). Abstracts for poster presentations need to be submitted to Denise Pengeroth (dpengeroth@fs.fed.us) no later than January 18, 2008.

See next page for abstract guidelines.

Abstract Guidelines

Please submit your abstract electronically to the appropriate electronic address identified above. Submit the following information with each abstract:

1. Lead author name, affiliation, mailing and email address, phone and fax numbers
2. Names, affiliations, and contact information of additional authors
3. ABSTRACT – You must use the referenced guidelines and example; please note that the abstract you submit will be the FINAL that is printed for the paper sessions.
4. Place an asterisk next to the presenting author's name.

The person submitting the title/abstract should provide a separate, detailed list of information for each author including:

- Place and full address of employment,
- Email address,
- Phone number,
- List of student authors,
- Indicate whether the presenting author is a student and if so whether he/she wants the presentation judged.

Follow the format for publication in the Intermountain Journal of Science, <http://www.intermountainjournal.org/toc/ijspdfs/guides.pdf>

Submit the document as an attachment in WordPerfect or Microsoft Word.

The title should be centered, CAPITALIZED, and brief — preferably no more than ten words. Please avoid the use of scientific (latin) names in the title.

Author and organization should be flush left, separated with commas, and a new line for each author. Authors should include first name, middle initial, and last name. If needed, a second line should be indented five spaces. Include the postal code in the author's address.

Indent first line of the abstract using the menu format >>> paragraph >>> first line (0.5 inch indent).

The entire document should be single spaced.

No hard returns within a paragraph.

No more than 250 words (excluding abstract title and author information)

Publication of Abstracts

Abstracts for plenary session talks and invited talks and titles of all talks will be published in both the Northwestern Naturalist and the Intermountain Journal of Sciences. Titles of all talks will be published in both the Intermountain Journal of Sciences and Northwestern Naturalist so that readers of both journals will know where the information has been published.

General session abstracts to be published in IJS will be: abstracts from MT TWS members, or abstracts from nonmembers of Montana TWS or SNVB that have a regional focus on the northern Rocky Mountains of Montana, Idaho, Wyoming, southeast BC or southern Alberta or Saskatchewan. Abstracts to

be published in Northwestern Naturalist will be abstracts from SNVB members, abstracts from nonmembers of Montana TWS or SNVB that have a regional focus on the Pacific Northwest as a whole or on California, Oregon, Washington, coastal British Columbia, NW Territories, Yukon Territory, or Alaska.

Abstract Example:

GUIDELINES FOR MANUSCRIPTS SUBMITTED TO THE INTERMOUNTAIN JOURNAL OF SCIENCES

Gary L. Dusek, Montana Fish, Wildlife and Parks, Bozeman, MT 59717-0322

The editorial board of the Intermountain Journal of Sciences (IJS) provides guidelines for authors who wish to submit manuscripts for publication. Manuscripts should follow the format and style presented here to assure prompt review and publication.

NW PARC Meeting: 26-27 February 2008, Missoula, MT

Mark your calendars! Northwest Partners in Amphibian and Reptile Conservation (NW PARC) will hold its inaugural annual meeting prior to the SNVB festivities in Missoula this February. PARC is an inclusive coalition of Federal and State government, Academia, NGOs, and Industry (e.g., pet industry, forest products industry, etc.) dedicated toward the conservation of herpetofauna and their habitats. This is an important meeting to determine regional priorities and task teams.

At this time, we are polling folks across the region as to their key herpetological conservation issues, ongoing programs and partnerships, priorities and regulations, and upcoming events. We also have opened nominations for Northwest Regional Co-chairs. Co-chairs are primarily responsible for the following tasks:

- Organizing annual meetings, sending out meeting minutes, and following up on action items
- Serving as a voting member on National PARC's Joint National Steering Committee (JNSC)
- Reporting activities and project progress to National PARC's JNSC
- Attending and representing PARC at regional herpetological and related conferences

For additional information about PARC, please visit www.parcplace.org

To provide input on issues, etc., or to submit chair nominations, please email NW PARC interim Chair Dede Olson (dedeolson@fs.gov).

Graduate Student Opportunities

Western Washington University, Environmental Sciences, Huxley College: Master's student position, interaction between boreal forests and climate. July 2008.

The expansion of forest vegetation within and into the Arctic is one of the profound transformations that the Arctic land surface is likely to undergo in the coming decades. The spread of forest vegetation has significant ramifications as it is likely to cause both positive and negative feedbacks on climate, and to alter the availability of crucial natural resources. This NSF-funded project is merging satellite-based measurements of forest growth, with field measurements, and models of carbon dynamics to arrive at a better understanding of how boreal forests have responded to climate over the last 25 years and how they might change in the future.

Interested applicants should contact Dr. Andy Bunn. Please visit: <http://myweb.facstaff.wwu.edu/bunna/>

For information about the M.S. in Environmental Science at WWU see:

<http://www.wvu.edu/huxley/students/gradprograms.shtml>

University of Montana, College of Forestry and Conservation, Department of Forest Management: M.S./Ph.D. Opportunity in landscape ecology/forest modeling. Spring or Fall 2008.

A graduate assistantship is available for a student interested in examining climate change impacts on plant species distributions, fire and disturbance regimes in the Sierra Nevada, California. The student will be encouraged to contribute to research examining the historic and contemporary distributions of woody plant species, fuel characteristics, and fire regimes of the Sierra Nevada Range. The project will entail the use of historic and modern datasets, the development of climate and biophysical surfaces, terrain modeling, and the application of mechanistic and statistical models to spatial data. Students will have the opportunity to pursue their own questions within these general themes. Motivated students interested in developing thesis or dissertation research projects in this area with prior experience in GIS and raster analysis, experience with ENVI/IDL, or R, are especially encouraged to apply. Applicants should have a strong academic record, prior field and computing experience, and a demonstrated interest in related research. Student support will include a combination of research/teaching assistantships, a stipend, medical benefits, and a tuition waiver.

For more information contact Dr. Solomon Dobrowski at solomon.dobrowski@cfc.umt.edu

For information on the College of Forestry & Conservation at the University of Montana, please see: <http://www.cfc.umt.edu/>

Utah State University, Department of Wildland Resources: Masters or Ph.D. in plant ecology.

Peter Adler is currently recruiting students interested in pursuing a Masters or Ph.D. in plant ecology. His research focuses on 1) the influence of climate change on plant population and community dynamics, 2) patterns of species diversity in space and time, and 3) plant-animal interactions, especially in arid and semiarid ecosystems (see <http://www.cnr.usu.edu/faculty/adler/>). Students will have the freedom to develop their own research projects related to these areas, relying on field work and/or analysis and modeling of existing data. Ph.D. applicants should plan on pursuing independent funding to complement the full stipend.

Contact: Peter Adler, [peter.adler \[at\] usu.edu](mailto:peter.adler@usu.edu)

Colorado State University: M.S. & Ph.D. in Landscape Ecology & Global Change.

Patrick Martin is seeking highly motivated M.S. and/or Ph.D. candidates to join his landscape ecology lab. Ongoing projects are centered on global change: (1) forest dynamics, disturbance and climate change in Rocky Mountain forests, and (2) exotic plant invasions of forest ecosystems.

More information on these projects and the lab's research are available at: <http://hla.colostate.edu/faculty/martin.htm>

Applications for this position should be submitted through the Graduate Degree Program in Ecology (<http://www.colostate.edu/Depts/GDPE/Homepage.html>).

Washington State University Vancouver, Environmental Science Program: Master's student position, ecology and conservation of at-risk butterflies and restoration of their habitats. Fall 2008.

Opportunities are available for graduate studies in the Conservation Biology Laboratory at Washington State University Vancouver. Students should be interested in ecology and behavior of at-risk butterflies or in restoration of butterfly habitat. Our lab addresses applied conservation and restoration questions by building on a strong foundation in population and community ecology. We use a mix of field, lab and quantitative techniques to address conservation and restoration questions. We will be starting two new projects in Fall 2008. The first is a project on the ecology and behavior of the Mardon Skipper, a federal candidate species in Washington's South Puget Sound Prairies. The second is a project to investigate prairie restoration for Fender's Blue, a federal endangered species, in the context of Oregon's Willamette Valley oak savannah habitat. See our website for a research overview and list of publications:

<http://www.vancouver.wsu.edu/faclschultzcl/index.html>

For more information, see <http://www.vancouver.wsu.edu/programs/sci/mes.html>

<http://www.vancouver.wsu.edu/programs/sci/generalinfo.html>

Oregon State University, College of Veterinary Medicine: Ph.D. student positions in disease ecology, one position in ecological theory and modeling, and one field ecologist.

Position profiles: One position will have a strong field-based component in South Africa, requiring excellent organizational skills, independence, and the ability to work in a remote location with a team of people from diverse cultural backgrounds, as well as quantitative aptitude to handle analysis of large experimental and observational datasets. The second position will focus on modeling the buffalo TB helminth system, providing the theoretical underpinning to the project; however the theory student will also be expected to participate in field data collection to ensure a firm grasp of the study system's biology. This position requires excellent quantitative skills and could suit someone with an undergraduate degree in mathematics/physics and a strong interest in biological systems, or a biologist with demonstrable interest in ecological theory.

Contact: Dr. Anna Jolles, jollesa@science.oregonstate.edu

Utah State University, Watershed Sciences Department: M.S. or Ph.D. student positions in aquatic ecology. January 2008.

The Wurtsbaugh Lab in the Watershed Sciences Department at Utah State University has openings for two graduate students with interests in Aquatic Ecology. One position will be associated with a NSF-funded project examining the influence of watershed structure on nutrient cycling and the stability of production processes in lakes. The other position will address mercury bioaccumulation through the benthic food web on biotopes in the

Great Salt Lake. SCUBA experience would be helpful for the latter project.

Interested students should contact Wayne Wurtsbaugh at: wayne.wurtsbaugh@usu.edu or 435 797-2584.

Montana State University, Department of Land Resources and Environmental Sciences: Several Ph.D. assistantships are available in aquatic ecology. August 2008.

Students will pursue questions in one of three broad research areas: 1) elucidating geomorphic and hydrologic controls on habitat diversity and biotic processes (e.g., biogeochemistry, productivity, metabolism, greenhouse gas emissions) in floodplain ecosystems; 2) developing novel, agent-based modeling approaches to simulate transport and biotic uptake of solutes from stream channels and hyporheic zones of gravel-

bedded streams; and 3) linking geomorphology and hydrology to fish habitat diversity and utilization in mainstem rivers of Montana.

Students will work with Dr. Geoffrey Poole. For more information, including application instructions, can be found at <http://www.eco-metrics.com/MSU/>

University of Montana, Wildlife Biology Program: MS and Ph.D. Student Positions Available. Spring 2008.

In collaboration with Montana Fish, Wildlife and Parks, the Nez Perce Tribe, Idaho Fish and Game, and the US Fish and Wildlife Service, successful applicants will work as part of a team (PI, Research Associate, 2 Ph.D. students, 1 M.S. student) developing post delisting management program for gray wolves in the northern Rocky Mountains. Research of both students will contribute to the development and implementation of a monitoring protocol for Idaho and Montana based on patch occupancy modeling. The protocol will ultimately be part of an adaptive management program for wolves following delisting. Applicants should possess degrees in wildlife biology or a related field, a strong work ethic, proven ability to work as part of an integrated team, and the maturity and judgment required to work with government and tribal agencies on a species of high public interest. Both positions will have a heavy focus on modeling, therefore applicants should have a strong interest and a rigorous background in quantitative approaches to wildlife research. Individual position descriptions follow. Both positions could start as early as Spring semester, 2008.

Please refer to www.forestry.umd.edu/academics/wildlife/ for information about the Wildlife Biology Program at the University of Montana

For more information contact: Dr. Mike Mitchell, mike.mitchell@umontana.edu

Central Washington University, Interdisciplinary watershed research M.S. combined with K-12 outreach.

Central Washington University's Yakima WATERS (Watershed Activities To Enhance Research in Schools) Project has eight GK-12 graduate fellows available for the 2008-9 academic year. Prospective students are encouraged to apply if interested in earning an M.S. in biological sciences, geological sciences, chemistry, or resource management while working with local teachers to integrate watershed research into the classroom. See <http://www.cwu.edu/~waters/> or contact waters@cwu.edu. Deadline February 15, 2008.



For more information about the
Society for Northwestern Vertebrate Biology
check out our Web site:
<http://www.snwvb.org>

Time to Submit Your Abstracts!

MONTANA CHAPTER OF THE WILDLIFE SOCIETY and
SOCIETY FOR NORTHWESTERN VERTEBRATE BIOLOGY
Joint Annual Meeting, in Missoula, Montana,
February 25 - March 1, 2008