



Faculty Employment Application

Human Resources
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Tucson, Arizona * 85721-0158

(520) 621-3662 Telephone
(520) 621-8299 TDD (8-5 M-F)

Job Number: 44727	Job Title: Assistant or Associate Professor	Date: Mar 9 2010 12:43PM
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Personal Information

Last Name: Gedalof	First Name: Ze'ev	Middle Name:	Email Address: zgedalof@uoguelph.ca			
Address: 115 Nottingham St.	City: Guelph, ON	State: NA	Zip Code:	International Postal Code: N1H 3N2	Country: Canada	
Home Phone: 519.362.7463	Cell / Other Phone:		Contact Number: 519.362.7463			

References

Name:	Institution/Organization	Address	Title:	Phone:	Email Address:
David L. Peterson	U.S. Forest Service & University of Washington	U.S. Forest Service Pacific Wildland Fire Sciences Lab 400 N 34th Street, Suite 201 Seattle, WA 98103	Research Biologist & Professor	206.732.7812	wild@u.washington.edu
John Smithers	University of Guelph	Department of Geography University of Guelph Guelph, ON N1G 2W1 Canada	Professor and Chair	519.824.4120	jsmithers@uoguelph.ca
Lori Daniels	University of British Columbia	Department of Geography University of British Columbia 1984 West Mall Vancouver, BC V6T 1Z2 Canada	Associate Professor	604.822.3442	daniels@geog.ubc.ca

Other Information

Are you legally authorized to work in the U.S.? No
--

What is your current employment status with the University of Arizona?

Not a University of Arizona employee

If you are a current employee enter your Employee Identification Number (EID) in the space to the right. If you never worked for the University, worked as a student, or terminated your employment prior to July of 2001 enter N/A. Note: Please do not enter hyphens in the EID field. Your 9-digit EID number (Ex: 120001234) may be found by logging into the Employee Link website. Your EID number is located in the "Current Employment" tab. You may also find your EID number on your pay stub. Note: Your Employee ID number is NOT your Social Security Number.

N/A

Supplemental Questions

Where did you first learn about this position?

Other (Enter name below)

Enter the specific name of any referral source, or the code printed on the business card you received from The University of Arizona career fair booth:

ITRDB Listserv

Have you ever been convicted of or plea bargained to a misdemeanor offense?

No

If yes, you must provide criminal conviction information and dates: (*You are responsible for knowing if traffic violations or other citations received were classified as a misdemeanor*).

Have you ever been convicted of or plea bargained to a felony offense?

No

If yes, you must provide criminal conviction information and dates: (*You are responsible for knowing if traffic violations or other citations received were classified as a felony*).

By indicating 'Yes' below, I affirm that my responses above are true, complete and accurate. I understand that if I accept a job offer, I will be asked to give my written consent for the University of Arizona to conduct a check of my criminal conviction history, motor vehicle record, educational credentials and work history.

I further understand that a 'yes' response will not automatically disqualify me from consideration. However, falsifying, misrepresenting, or omitting criminal conviction information on any application document will likely result in a withdrawal of any job offer and termination of any subsequent employment with the University.

Yes, I affirm that my responses above are true, accurate and complete to the best of my knowledge.

Can you perform the essential functions (job duties) of this position with or without accommodation?

Yes

What is your current employment status with The University of Arizona?

Not a University of Arizona employee

If you have never worked for the University or terminated your employment prior to July 2001, please enter N/A in the space to the right. If you are a current, former, or retired UA employee and were issued an EmplID please enter your number in the space to the right. Your EmplID can be found by logging in to UAccess Employee and viewing your paycheck. Please do not enter hyphens in the EmplID field. Note: Your EmplID is not your Social Security Number.

N/A

Agreement

I certify the statements made by me in this application are true and complete to the best of my knowledge and belief and are made in good faith. I understand that any false statement made herein will void this application and any actions based upon it, and I agree to revise this application should any of the information change. I understand that this application and all attachments are the property of The University of Arizona. I authorize The University of Arizona or any of its agents to make reference checks relating to my employment and I also authorize all prior employers to provide full details concerning my past employment. I authorize the University of Arizona to request and obtain records to determine the accuracy of my responses. I understand that employment in certain positions may be conditional upon a background verification including but not limited to criminal records. I certify that I am or will be legally authorized to work in the United States at the time of hire.

BY SIGNING BELOW, I certify that I have read and agree with these statements.

Ze'ev Gedalof

Applicant's Name

Applicant's Signature

Date

[Close Window](#)

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20 February, 2010

Ze'ev Gedalof

Associate Professor

Climate & Ecosystem Dynamics Research Laboratory

Department of Geography, University of Guelph

Guelph, ON N1G 2W1

zgedalof@uoguelph.ca

Connie Woodhouse

Chair, Search Committee

Dear Dr. Woodhouse,

Please accept the enclosed material as an application for job # 44727, Faculty Position in Forests in the Earth System. I completed my Ph.D. in 2003 in Ecosystem Analysis at the University of Washington, under the supervision of Drs. David L. Peterson and Nathan Mantua. Since 2004 I have been working at the University of Guelph, recognized as Canada's top comprehensive university three times since I was hired, in the Department of Geography and the Faculty of Environmental Science. My c.v. summarizes my career to date in fairly clinical detail, so I would like to take this opportunity to humanize it for you a little, and to identify some of my achievements that are most relevant to your decision-making process.

I have a history of innovation in the fields of quantitative fire ecology and dendroclimatology. I have always seen fire as one of a suite of processes that affect forest ecosystems. Consequently, my contributions to the field have been embedded in a matrix of publications not obviously linked to fire. For example, Davy *et al.* (in review) examined the effects of exotic grasses on soil moisture budgets in an oak savannah ecosystem. This analysis demonstrated the competitive effects of these exotic grasses on native vegetation, thereby providing critical insights into the processes by which prescribed fire might be used as a conservation tool. Franks *et al.* (in review) examined the effects of stand density and composition on the climatic sensitivity of *Quercus garryana* and *Pseudotsuga menziesii* – the results of which are critically important for interpreting tree-ring records from sites that have experienced fire suppression. I also have a number of more conventional publications that continue to have an important impact on the field, including McKenzie *et al.* (2004), Gedalof *et al.* (2005, 2006), and Gedalof (in press). In the attached research statement I discuss my contributions in more detail, and expand on where I see the important developments occurring in the next five to ten years.

To support this research I have been very successful in securing external funding, including major infrastructure grants, Natural Science and Engineering Research Council of Canada (our equivalent of the NSF) operating funds, government contracts, and governmental foundation awards. This research has directly supported ten graduate students over the last five years, six of

COLLEGE OF SOCIAL AND APPLIED HUMAN SCIENCES

Department of Geography

whom have successfully defended theses and all but one of whom has one or more manuscripts in preparation.

I am a dedicated teacher. As a professor at a comprehensive university, and working in a social sciences department, I have a relatively high teaching load – normally three to four undergraduate courses, and one graduate seminar, per year. I have taught large undergraduate classes, small capstone courses, and graduate seminars. Since joining the University of Guelph I

have taught eight different courses, and consistently received among the highest teaching evaluations in my department. In our most recent numerical assessment (these exercises are admittedly problematic) I was ranked second of 19 in my department. Given the nature of our program I have never had the opportunity to teach a course in any of my areas of expertise, and I would be very excited to teach courses at either the undergraduate or graduate level in forest ecosystem dynamics, fire ecology, dendrochronology, or forests and climate change.

I am intensely involved in university governance, I am committed to service to my peers, and engaged with my community of stakeholders. For example, I have served as Graduate Officer in the Department of Geography, I sit on the Bachelor of Science in Environmental Sciences program committee, I am a member of senate, and I represent my college in the Faculty Association. Within my broader discipline, I helped to organize the 2008 AmeriDendro meeting in Vancouver, and its associated field camp; I sit on the editorial board for the *Canadian Journal of Forest Research*; and I provide guidance on the use of prescribed fire for ecological restoration purposes to the Nature Conservancy of Canada, BC Parks, and the Canada Ministry of the Environment.

Last, I would like to address why I would like to leave my present position, and why I would like to join the University of Arizona. Deciding to apply for this position has not been easy. My colleagues at the University of Guelph are wonderful, my department has been very supportive of my career, and my students are great. However the teaching and administrative demands of working at a comprehensive university have limited my research opportunities – and research is my first love. More importantly, I am one of two fire ecologists, and the (now) last remaining dendrochronologist at the University of Guelph. I would embrace the opportunity to work with so many of my peers at the University of Arizona. Indeed, before this position was posted I had started the process of arranging to spend my sabbatical in Tucson, and regardless of the outcome of your hire I hope to spend some time working with friends and peers in Tucson soon. On a more personal note, I love the heat, I hate Ontario winters, and I'm a big fan of the Southwest. In short, I have no doubt that I will contribute to the tradition of research excellence that the University of Arizona has established in the fields of dendrochronology and fire ecology. My experience and expertise as an educator, administrator, and involved member of my professional community will contribute to the governance and profile of the University of Arizona.

Yours sincerely,

Ze'ev Gedalof

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RESEARCH STATEMENT

Global environmental change represents an important threat to forests (Gedalof *et al.* 2005). Understanding the effects of climatic variability and change on forest ecosystem processes could help provide tools for mitigating the adverse economic and ecological effects of climatic change. Similarly, understanding how forest ecosystems respond to environmental change should provide insights into the processes that structure communities (Gedalof *et al.* 2006). Much of my research program to date has focused on quantifying the relationships between climatic variability, forest dynamics, growth rates, and disturbance processes. My approach is fundamentally interdisciplinary, adopting methods and ideas from geomorphology, forest ecology, and the social sciences. My goal over the next several years is to refine much of my earlier work to focus on understanding how disturbance coupled with environmental variability and change have affected forest structure and composition at ecotone environments, and to assess how

these changes might influence their relationships to climate.

RECENT PROGRESS

Since starting my position at the University of Guelph in 2004 I have developed a fully independent research program, focusing on several related problems in climate change and forest ecosystem dynamics. These problems can be broadly placed into the three categories, although the work of which I am most proud transcends these categories: i) growth-climate relationships of trees; ii) controls on wildfire; and iii) biotic and abiotic controls on stand structure and composition. I have made progress on these problems in several important fashions:

Growth-climate relationships of trees over space and time

Working with my graduate and undergraduate students I have made important progress in understanding how climate affects the growth rates of trees, and how those relationships vary in space and time. For example, I used a network of climatically-sensitive trees to reconstruct the history of discharge of the Columbia River. This analysis showed that the relationship between growth rates and discharge has not been consistent over time – due mainly to changes in forest structure over the past century attributable to a combination of forestry operations and fire suppression (Gedalof *et al.* 2004). Space-time modeling of a network of *Thuja occidentalis* growth rings was used to reconstruct climate of Southwestern Ontario for the last millennium, and to show that growth rates of the 20th century are unprecedented in the last three-thousand years (Clark *et al.* in review). Analysis of *Quercus garryana* growth throughout its natural range shows that climatic sensitivities vary depending on within stand competitive interactions (Franks, MSc, 2007) and between stand abiotic factors (Maertens, MSc, 2008).

Top-Down versus Bottom-up Controls on Wildfire

The relative importance of fire suppression and fuels accumulation versus climatic variability in causing wildfires remains a controversial topic in fire ecology. Working from historical records of area burned I have shown how these controls represent a spectrum of forces acting on forests, rather than a dichotomy (Gedalof *et al.* 2005). This research has been summarized into a conceptual model of wildfire as a time-scale

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dependent process that is forced by top-down factors, but that exhibits feedbacks in response to bottom-up factors (Gedalof, *in press*). We are currently applying this conceptual model to assess how these forces change with management practices and sitespecific disturbance histories (DaSilva, MSc, 2009). This work is particularly relevant to conservation and forest management strategies, since most climate change projections forecast increasing fire activity in the future (e.g., McKenzie *et al.* 2004)

Climatic Interactions, Stand Dynamics & Forest Regeneration

Bioclimatic envelope models of future forest distributions necessarily assume a uniform response of species to climatic change. Projections of future vegetation distributions assume a rapid response to climatic change, often neglecting processes such as disturbance and competition. A growing body of evidence is challenging these assumptions. We have shown that in a temperate oak savanna, climatic variability interacts with wildfire and exotic species introductions to affect the relative regeneration rates of oak and conifer species (Gedalof *et al.* 2006; Smith, MSc, 2007). The mechanism for these changes is related to competition with introduced grasses for soil moisture (Davy *et al.* in review). Similar patterns are seen in a subalpine ecotone

sediment core that is characterized by long-term stability of vegetation punctuated by episodic, abrupt, fire-mediated changes in composition (Prichard *et al.* 2009).

FUTURE DIRECTIONS

Over the next several years I plan to integrate these areas of inquiry to develop a conceptual model of stand dynamics that explicitly incorporates climate, disturbance, and ecological interactions to help predict forest transitions at ecotone environments. Specifically, I plan to examine the following basic research questions: (1) How have changes in forest structure and composition associated with fire exclusion affected the sensitivity of trees to climatic variability and change? (2) How have forest ecotones shifted in response to climatic change, and what has been the role of fire (and fire exclusion) in mediating these shifts? and (3) What are the effects of increasing atmospheric carbon on stand structure and composition, and attendant fuel loadings? To address these questions I will establish a series of transects that span low-elevation treeline sites, montane ecotone forests, and high-elevation treeline sites. At each of these ecotones I will develop geographically explicit reconstructions of fire history, fire effects, stand structure, and stand composition.

Within the field of fire ecology more generally, I see several emerging frontiers that I plan to be a part of. In particular, I see opportunities developing through the integration of multiple lines of evidence that function at different spatial and temporal scales. The use of high resolution sediment cores and tree-rings to reconstruct fire histories is one such example, and I have been collaborating with Michael Pisaric (Carleton University) and Marlow Pellatt (Parks Canada) on two applications of this technique. Another emerging opportunity derives from the assimilation of land surface models and geographically explicit fire reconstructions. In mixed severity fire regimes in particular, fire behavior is spatially complex: low-to-moderate severity fires kill a variable proportion of canopy trees and result in uneven-aged forests that include trees with multiple fire scars and indistinct boundaries. Detailed fire history and stand structure

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data can provide insights into the behavior of fires in these systems, but they cannot provide insights into the fundamental controls on this behavior.

TEACHING STATEMENT

As a professor in a social sciences department at a comprehensive university I have had many opportunities to develop my teaching skills. I have taught large undergraduate classes, small(ish) senior capstone courses, field classes, and graduate seminars. Each of these settings requires a distinct approach and a distinct skill set. Regardless of the audience, though, I believe that University teaching needs to be focused primarily on learning and the learning process, rather than on students, professors, or course content. I begin preparing for every class by asking the question “What do I hope the students will learn from this class?” From there I look for ways to facilitate the learning process, including teaching techniques, reference materials, exercises, or assignments. Much of the course material I teach is outside my own fairly narrow field of specialization, and I am often learning the material alongside my students. Occasionally the roles of teacher and student get reversed, and I learn from the students rather than teach them. When this happens, the students are often amazed to discover that they finally and suddenly understand a concept that they thought they had learned many times previously. Throughout my teaching endeavours I try to emphasize three principal skills: astute

observation, critical thinking and analysis, and clear and precise writing. The material I teach – biogeography, paleoecology, climatology, and resource management – is in most respects a context in which to practice these skills. While the specific theories, empirical knowledge, and observations are important, it is more essential that the students learn to critically assess the meaning of these ideas, and to learn to communicate their thoughts clearly and articulately.

Much of my own research, and virtually all of the research I have done that is of any consequence, has been interdisciplinary in nature. I try to emphasize interdisciplinary scholarship in my classes by forcing students to think across conventional disciplinary boundaries. I do this by requiring students to evaluate the broader social contexts in which biophysical research is undertaken, and the biophysical processes on which resource management decisions and social institutions are founded. I also encourage students to think creatively about how apparently unrelated disciplinary conventions or tools could be employed to solve problems outside their normal field of research. For example, what insights might history, anthropology, mathematics, or English literature provide into the climate record of a particular region.

Canadian universities are committed to the idea that teaching and research should enhance each other. I am convinced that this “mutual enrichment” occurs only rarely, and that in most cases teaching and research are mutually exclusive activities. The fourth-year or graduate-level special topics seminar is one possible, fairly unimaginative, exception to this generalization. To truly integrate teaching and research requires a rethinking of both teaching and research. Teaching can complement research when

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students are given the opportunity to participate in research exercises in ways that make a difference: when they are encouraged to think critically about the research context and study design, and when the students’ contributions make a difference to the success or failure of the experiment. Similarly, research can complement teaching when it is brought into the classroom in terms of theory, hypotheses, experimental design, and philosophical context. The more common approach of reading the current literature to assess the state-of-the-science does not offer the students much more than a set of facts that are most relevant only to the professor teaching the class.

To achieve these goals requires innovative teaching techniques. I am working my through the Society for Teaching and Learning in Higher Education “Green Guides” on effective teaching, and have adopted a number of pedagogical devices to improve the classroom experience, including learning through writing exercises, concept maps for course components, careful and critical use of PowerPoint as a teaching tool, flexible syllabi that allow students to work to their strengths, and two-way feedback mechanisms. I would be pleased to provide you with a copy of my teaching dossier if this would be useful to you.

SERVICE & ADMINISTRATION STATEMENT

Service and administration are a critical component of any collegial governance system, and I have a history of commitment to my colleagues and peers. Within my department I have served as Graduate Chair and B.Sc.(Env.) program counselor, at the University level I sit on the major science awards committee, I serve on senate, I am a member of the Faculty Association council, and the Bachelor of Science in Environmental science program committee.

Beyond my own university, I am an associate editor for the *Canadian Journal of Forest*

Research. I also sit on the *Fire and Stand Dynamics Steering Committee*, an expert panel that advises the Research Implementation Group of the Garry Oak Ecosystem Recovery Team on the use of fire as a conservation tool in one of Canada's most endangered ecosystems. I helped to organize the 2008 Ameridendro conference in Vancouver, BC, and the associated North American Dendroecological Field Week.

Ze'ev Gedalof

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ZE'EV GEDALOF

Associate Professor

Department of Geography

University of Guelph

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(fax) 519.837.2940

zgedalof@uoguelph.ca

<http://www.uoguelph.ca/geography/faculty/gedalof.htm>

Education

2003 **Ph.D. Forest Ecosystem Analysis**

College of Forest Resources, University of Washington / Climate Impacts Group,
Joint Institute for the Study of the Atmosphere and Ocean, University of
Washington

Dissertation: *Links Between Pacific Basin Climatic Variability and Natural
Systems of the Pacific Northwest*

1999 **M.Sc. Geography**

Department of Geography, University of Victoria

Thesis: *Low frequency climate variability in the Northeast Pacific interpreted
from the annual growth-rings of mountain hemlock*

1996 **B.Sc. Geography**

Department of Geography, University of Victoria

Employment History

2008 - University of Guelph

present *Associate Professor*

2004 - University of Guelph

2008 *Assistant Professor*

2003 - University of Victoria Tree-Ring Laboratory

2004 *Post Doctoral Fellow*

2000 - Climate Impacts Group, University of Washington.

2002 *Doctoral Research Assistant*

1996 - Flat Earth Neogeographics.

2000 *Proprietor*

RESEARCH SUPPORT

External Research Funding

2008 -

2010

\$90,000 Ontario Ministry of Natural Resources, Transboundary Air
Grant Funding Agreement. "Regional variance in patterns of past climate
change in southern Ontario, using proxy data from the ancient forests of the
Niagara Escarpment" (Co-investigator with 3 others)

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2008 -

2010

\$190,000 Natural Sciences and Engineering Research Council of Canada, Strategic

Research Opportunity. “Historic Climate-Fire-Vegetation Interactions of the West versus East Kootenays” (Co-investigator with 2 others)

2006 -
2008

\$112,800 Canada Foundation for Innovation. “Development of a Paleoecology / Paleoclimatology Laboratory” (Principal investigator)

2006 -
2008

\$112,800 Ontario Innovation Trust. “Development of a Paleoecology / Paleoclimatology Laboratory” (Principal investigator)

2006 -
2007

\$25,000 Natural Sciences and Engineering Research Council of Canada, Special Research Opportunity. “Dendrochronology at the Roof of the World” (Principal Investigator. Declined)

2005 -
2009

\$82,500 Natural Sciences and Engineering Research Council of Canada, Discovery Grant. “Multicentury perspectives on ecosystem dynamics and climatic variability” (Principal investigator)

2004 -
2006

\$77,800 Canadian Climate Change Action Fund, Research Grant “A multi-century perspective on forest disturbance dynamics in central British Columbia” (Coinvestigator with Dan J. Smith and André Arsenault)

2004 -
2006

\$225,000 Canadian Climate Change Action Fund, Research Grant. “Impacts of Climate Change and Fire on the Ecological Integrity of Garry Oak Ecosystems: An Active Management Approach for Parks Canada” (Co-investigator with Marlow Pellatt and 5 others)

2004 -
2006

\$16,000 Natural Sciences and Engineering Research Council of Canada, Research Tools and Instruments. “Digital Microscope Tree-Ring Measurement System” (Principal investigator)

2003 -
2005

\$78,000 Canadian Climate Change Action Fund, Research Grant “Coastal vulnerability to climate change and sea level rise, Graham Island, Haida Gwaii (Queen Charlotte Islands) BC.” (Co-investigator with Ian J. Walker and 4 others)

2003 -
2004

\$45,000 Interdepartmental Recovery Fund “Garry Oak ecosystem dynamics” (Coinvestigator with Marlow Pellatt and Dan J. Smith)

Internal Research Funding

2005 Undergraduate Research Asssistantship (\$5,600. Principal investigator)

2004 - 2005 New Faculty Research Grant (\$12,500. Principal investigator)

2003 - 2004 New Faculty Research Grant (\$12,500. Principal investigator)

PUBLICATIONS

Books & Book Chapters:

Gedalof, Z. (in press). Climate and Spatial Patterns of Wildfire. Chapter 5 in *The Landscape Ecology of Fire*. D. McKenzie, C. Millar, and D. Falk (Eds.). Springer.

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Newman, J., **Z. Gedalof**, S. Hunt and M. Anand. (in preparation). *Climate Change Biology*. Under contract with CABI press, to be published 2010.

Gedalof, Z. and D.J. Smith. (2005). Controls on High-Elevation Treeline in Westernmost Canada. Guest Statement. Pages 75-76 in *Environmental Change and Challenge*. P. Dearden and B. Mitchell. Canada, Oxford University Press.

Gedalof, Z. and D. Smith (1999). Interdecadal climate variability in the Northeast Pacific interpreted from tree-rings. *Decoding Canada's Environmental Past: Adaptation Lessons Based on Changing Trends and Extremes in Climate and Biodiversity. Number Two*. D.C. MacIvor, Ed. Downsview, Ont., Atmospheric Environment Service, Environment Canada: 49-58.

Walker, I.J., et al. (2008). British Columbia. Chapter 8 in *From Impacts to Adaptation: Canada in a Changing Climate* D. Lemmen, F. Warren, E. Bush, and J. Lacroix (Eds). Ottawa: National Research Council.

Refereed Journal Articles:

Gedalof, Z. and A. Berg. (in review). Tree-Ring Evidence for Limited Direct CO₂ Fertilization of Forests over the 20th Century. Submitted to *Global Biogeochemical Cycles*; accepted pending revisions.

Clark, M.G., **Z. Gedalof**, P. Kelly and D.W. Larson. (in review). 2500 years of spatial and temporal variability of Thuja occidentalis growth along the Niagara Escarpment spanning south-western Ontario, Canada. Submitted to *Canadian Journal of Forest Research*.

Davy, L., **Z. Gedalof** and A. Berg. (in review). Exotic grasses reduce infiltration and moisture availability in a temperate oak savanna. Submitted to *Northwest Science*.

Prichard, S. J., **Z. Gedalof**, W. W. Oswald, and D. L. Peterson. (2009). Holocene fire and vegetation dynamics in a montane forest, North Cascade Range, Washington, USA. *Quaternary Research* 72:57-67.

Gedalof, Z., M. Pellatt, and D.J. Smith. (2006). From prairie to forest: three centuries of environmental change at Rocky Point, Vancouver Island, BC. *Northwest Science*.

Gedalof, Z., D. L. Peterson and N.J. Mantua. (2005). Atmospheric, climatic and ecological controls on extreme wildfire years in the northwestern United States. *Ecological Applications*. 15(1): 154-174.

Melling, H., D.A. Riedel, and **Z. Gedalof** (2005). Trends in thickness and extent of seasonal pack ice, Canadian Beaufort Sea. *Geophysical Research Letters* 32: doi:10.1029/2005GL024483.

Gedalof, Z., D. L. Peterson and N.J. Mantua. (2004). Columbia River flow and drought since 1750. *Journal of the American Water Resources Association*. 40(6): 1579 – 1592.

McKenzie, D., **Z. Gedalof**, P. Mote, and D.L. Peterson. (2004). The effects of climatic variability and change on wildfire. *Conservation Biology*. 18(4): 890 – 902.

Gedalof, Z., N. J. Mantua and D. L. Peterson (2002). A multi-century perspective on variability in the Pacific Decadal Oscillation: new insights from tree rings and coral. *Geophysical Research Letters* 29: doi:10.1029/2002GL015824.

Gedalof, Z. and D.J. Smith (2001). Low-frequency climate variability and regime-scale shifts in Pacific North America. *Geophysical Research Letters*. 28(8): 1515 – 1518.

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Gedalof, Z. and D.J. Smith (2001). Dendroclimatic Analysis of Mountain Hemlock (*Tsuga mertensiana*) in Pacific North America. *Canadian Journal of Forest Research*. 31: 322 – 332.

Invited Presentations

Gedalof, Z. S. Smith and M. Pellatt. Tree-Ring Analysis of Garry Oak (*Quercus garryana*) Savannas at their Northernmost Limits. BC Protected Areas Research Forum, Dec. 4-6, 2006, Victoria, BC.

Gedalof, Z. Tree-Ring Analysis of Garry Oak Savannas at their Northernmost Limits. Department of Geography, York University, Feb. 2006.

Gedalof, Z., P. Mote, D. McKenzie, and D.L. Peterson (2005) Top-down controls on Wildfire in the American west. Pages 33 – 44 in Mixed Severity Fire Regimes: Ecology and Management. L. Taylor et al. (Eds.) Pullman, WA, Association for Fire Ecology.

Prichard, S.J., **Z. Gedalof,** and D.L. Peterson (2005) A 10,000-year record of fire and vegetation history in the North Cascade Range, Washington, USA. Pages 21 – 32 in Mixed Severity Fire Regimes: Ecology and Management. L. Taylor et al. (Eds.) Pullman, WA, Association for Fire Ecology.

Gedalof, Z. D.L. Peterson and N.J. Mantua (2003). Columbia River flow since A.D. 1750 reconstructed from tree rings. Eos Transactions, AGU. 84(46), Fall Meeting Supplement. 344.

Gedalof, Z., N.J. Mantua, D.L. Peterson and D.J. Smith (2001). Proxy perspectives on North Pacific climate variability. *American Meteorological Society, 1st International Conference on Global Warming and The Next Ice Age.* Halifax, Nova Scotia, August 19-24, 2001.

Externally Reviewed Technical Reports

Walker, I.J., *et al.* (2008) British Columbia. *Chapter 8 in From Impacts to Adaptation: Canada in a Changing Climate* D. Lemmen, F. Warren, E. Bush, and J. Lacroix (Eds). Ottawa: National Research Council.

Gedalof, Z. (2000). Burns Bog and Adjacent Areas: Dendroecology. Prepared for Delta Fraser Properties Partnership and the Environmental Assessment Office in support of the Burns Bog ecosystem review

Gedalof, Z., K. Jardine and M. Neal. (1997). Interior Watershed Assessment Procedure (IWAP) for the Tyaughton-Marshall watersheds. Prepared for the British Columbia Ministry of Environment.

Jardine, K., M. Neal and **Z. Gedalof.** (1997). Interior Watershed Restoration Procedure, Cariboo River Watershed, British Columbia. Prepared for Ministry of Environment, Lands and Parks, Cariboo Region, Fisheries Branch.

Mullan, D.M., L. Chew, C. Cunningham, **Z. Gedalof** and A. Dewey. (1998). Nazko River Watershed Integrated Watershed Restoration Plan. A report for Slocan Forest Products and the Ministry of Forests (Quesnel Forest District).

Sedun, T., M. Mullan, J. Castellias and **Z. Gedalof.** (1998). Hurley River Watershed Integrated Watershed Restoration Plan (IWRP). Prepared for the Bridge River Economic Development Society, Gold Bridge, BC.

Sedun, T., M. Mullan, J. Castellias and **Z. Gedalof.** (1998). Tyaughton Creek and Marshall Creek Integrated Watershed Restoration Plan (IWRP). Prepared for the Bridge River Economic Development Society, Gold Bridge, BC.

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Jardine, K., **Z. Gedalof** and M. Neal. (1997). Interior Watershed Assessment Procedure (IWAP) for the Nazko River watershed. Prepared for the British Columbia Ministry of Environment.

Selected Conference Presentations and Proceedings:

☐ Indicates student co-author

☐ Walker, J. J., J. Halfar, D. Schulze, **Z. Gedalof,** and Kent Moore (2009). High-resolution reconstruction of Arctic paleoclimate derived from 53 million year old kimberlite-hosted *Metasequoia* wood. European Geophysical Union, AGM. April 19-24, 2009.

Gedalof, Z., ☐ J. Franks, ☐ T. Maertens and ☐ L. Davy (2009). The growth-climate relations of Oregon white oak (*Quercus garryana*) – context, competition and climatic change. Association of American Geographers, AGM. March 20-27, 2009.

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- Gedalof, Z.** and A. Berg (2007). Tree-Ring Evidence for CO₂ Fertilization Of Forests and its Effects on the “Divergence Problem”. Eos Trans. AGU, 88(52), Fall Meeting Supplement, Abstract PP51C-0662.
- Gedalof, Z.** and A. Berg (2008). Tree-Ring Evidence for Limited Direct CO₂ Fertilization of Forests Over the 20th Century. First American Dendrochronology Conference. June 21-28, 2008, Vancouver BC.
- Gedalof, Z.**, R. Au, B. Blundon, G. Carnwath, P. Clark, J. Kane, S. Lapp, S. Maxwell, M. Morena, M. Tjoelke, and J. Vanstone (2008). Tree-Ring Climate Relationships for Douglas-fir and Ponderosa Pine at Olalla Creek, British Columbia. First American Dendrochronology Conference. June 21-28, 2008, Vancouver BC.
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- Clark, M.G. and **Gedalof, Z.** and Berg, A. (2008). A 1380 Year Dendrochronological Record Spanning South Western Ontario. First American Dendrochronology Conference. June 21-28, 2008, Vancouver BC.
- Maertens, T. and **Gedalof, Z.** (2008). The growth-climate relationship of Oregon white oak (*Quercus garryana*). First American Dendrochronology Conference. June 21-28, 2008, Vancouver BC.
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- Smith, S.J., and **Z. Gedalof** (2006) Garry oak savannah dynamics in the Gulf Islands National Park Reserve: pattern and process of stand change. *Garry Oak Ecosystems Recovery Team Research Colloquium*. Victoria, BC. February 24th, 2006.
- Gedalof, Z.**, S. Smith, D. Smith, and M. Pellatt (2006). Tree-Ring Analysis of Garry Oak (*Quercus garryana*) Savannas at its Northernmost Limits. *7th International Conference on Dendrochronology*. Beijing, China, June 11-17, 2006.
- Gedalof, Z.**, D.H. Lewis, D. Smith, and M. Pellatt (2005). Tree-ring analysis of Garry oak (*Quercus garryana*) savannas at its northernmost limits. *Canadian Association of Geographers, Annual General Meeting*. London, Ont., May 31 – June 4, 2005.
- Pellatt, M.G., D.J. Smith, C. Robinson, A. Cannon, R.W. Mathewes, **Z. Gedalof** and Marian McCoy (2005). Impacts of Climate Change and Fire on the Ecological Integrity of Garry Oak Ecosystems: An Active Management Approach for Parks Canada. *Garry Oak Ecosystems Recovery Team Research Colloquium*. Victoria, BC. February 25th, 2005.
- Gedalof, Z.**, D.L. Peterson and N.J. Mantua (2004). Sub-treeline tree-ring records provide improved

climate reconstructions. *Tree Rings and Climate: Sharpening the Focus*. Tucson, AZ. April 6 – 9, 2004.

Mote, P., A.F. Hamlet and **Z. Gedalof** (2004). Influences of Climate Trends on Snowpack and Wildfire in the West. *Eos Trans. AGU*, 85(47), Fall Meeting Supplement, page numbers.

Mote, P., and **Z. Gedalof** (2004). Climate variability and wildfire in the western U.S., with disturbing implications for a warmer future. *26th Conference on Agricultural and Forest Meteorology*. Vancouver, B.C. August 23 – 27, 2004.

Prichard, S., D.L. Peterson, **Z. Gedalof**, and W. Oswald (2004). Holocene fire and vegetation dynamics in a montane forest, North Cascade Range, Washington, USA. *Ecological Society of America, Annual General Meeting*. Portlaine, Oregon. July 30-Aug. 6, 2004.

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Gedalof, Z., D.L. Peterson and N.J. Mantua (2003). Subregional climatology affects area burned by wildfire in the U.S. Pacific Northwest. *Pacific Climate Variability (PACLIM) XXX*. Monterey, CA, April 6 – 9, 2003.

Gedalof, Z., D.L. Peterson and N.J. Mantua (2003). A 250 Year Perspective on Streamflow in the Columbia River Basin. *Western Division of the Canadian Association of Geographers, Annual General Meeting, Program and Abstracts*. Prince George, BC, March 13 - 15 2002.

Gedalof, Z., N.J. Mantua and D.L. Peterson (2002). A Comparative Analysis of Pacific Basin Climate Reconstructions. *Western Division of the Canadian Association of Geographers, Annual General Meeting, Program and Abstracts*. Vancouver, BC, March 15 - 17, 2002.

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Gedalof, Z., and D.L. Peterson (2001). Atmospheric forcing of severe wildfire years in the American Northwest. *American Meteorological Society Fourth Symposium on Fire & Forest Meteorology*. Reno, Nevada, November 13-15, 2001.

Gedalof, Z., and D.L. Peterson (2001). Atmospheric forcing of severe wildfire years in the American Northwest. (poster). *US Office of Personnel Management's Professional Council of Federal Scientists and Engineers*. Seattle, Washington. April 26-27, 2001.

Gedalof, Z., and D.L. Peterson (2001). Atmospheric forcing of spatial-temporal patterns in severe wildfire years in the American Northwest. *Western Division of the Canadian Association of Geographers Annual General Meeting, Program and Abstracts*. Calgary, Alberta. March 8 – 10, 2001.

Gedalof, Z. (2001). The association between mid-tropospheric circulation anomalies and the area burned by wildfire in the American Northwest. *American Meteorological Society, Pacific Northwest Weather Workshop 2001*. Seattle, WA. March 2 – 3, 2001.

Gedalof, Z., and D.J. Smith (2000). Tree-ring analysis of North Pacific climate variability. *International Conference on Dendrochronology for the Third Millennium*. Mendoza, Argentina. 2-7 April 2000.

Gedalof, Z., and D.J. Smith (1999). Interdecadal climate variability in the Northeast Pacific interpreted from tree-rings. *Workshop on Decoding Canada's Environmental Past: Adaptation Lessons Based on Changing Trends and Extremes in Climate and Biodiversity*. Victoria, BC. January 18, 1999.

Smith, D.J. and **Z. Gedalof** (1999). Dendroclimatology on the outer shores. *Canadian Association of Geographers Annual General Meeting, Programme with Abstracts*. Lethbridge Alberta. June 3 - 5, 1999.

Smith, D.J., **Z. Gedalof**, C.P. Laroque and D.H. Lewis (1999). Little Ice Age climates and glacier regimes in coastal British Columbia: evidence from moraines and tree-rings. *Canadian Quaternary Association / Canadian Geomorphology Research Group Annual General Meeting, Program and Abstracts*. Calgary, Alberta. August 24 - 27, 1999.

Gedalof, Z., D.J. Smith (1999). Blips and bellyflips: dendroclimatic evidence for regime-scale climate

shifts since 1600. *Canadian Quaternary Association / Canadian Geomorphology Research Group Annual General Meeting, Program and Abstracts*. Calgary, Alberta. August 24 - 27, 1999.

Gedalof, Z., and D.J. Smith (1998). In pursuit of the Pacific Decadal Oscillation: a dendroclimatic approach. *Western Division of the Canadian Association of Geographers Annual General Meeting, Program and Abstracts*. Richmond BC. March 12 - 14, 1998.

Gedalof, Z., and M. Harrower (1996). Using AVHRR imagery to map Sea Surface Temperature around Vancouver Island. *Western Division of the Canadian Association of Geographers Annual General Meeting, Program and Abstracts*. Lethbridge, Alberta. March 7 - 9, 1996.

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TEACHING

Graduate Student Advising

2012 (Expected) S. Stewart (Ph.D.) Committee Member

2011 (Expected) K. Schutten (M.Sc.) Advisor

2011 (Expected) V. Stretch (M.Sc.) Advisor

2011 (Expected) L. Silva (Ph.D. ENVB) Committee Member

2010 (Expected) A. Duwyn (M.Sc. Int. Bio) Committee Member

2010 (Expected) A. Menczel (M.Sc.) Committee Member

2010 (Expected) V. Mather (M.Sc.) Advisor

2010 (Expected) R. Cathro-Oliver (M.Sc.) Advisor 2009 E. DaSilva (M.Sc.) Advisor

2009 M. Graham Clark (M.Sc.) Advisor

2009 A. Flower (M.Sc. Int. Bio.) Committee Member

2008 S. Pinto (M.Sc. Int. Bio.) External Examiner

2008 Marjorie Sorenson (M.Sc. Int. Bio.) Committee Member

2008 L. Davy (M.Sc.) Advisor

2008 T. Maertens (M.Sc.) Advisor

2008 A. Mika (M.Sc. ENVB) Committee Member

2008 Hyuk Je Lee (Ph.D. ZOO) Committee Member

2007 J. Axelson (M.Sc. U Regina Geog.) External Examiner

2007 J. Franks (M.Sc.) Advisor

2007 S. Smith (M.Sc.) Advisor

2005 Dan Shugar (M.Sc.) External Examiner

2005 Luke Powell (M.Sc.) Committee Member

2005 Paula Kolisnek (M.A.) External Examiner

2004 Jennifer Bell (M.Sc.) External Examiner

2004 Ruth McMath (M.Sc.) External Examiner

Undergraduate Student Advising

2010 R. Bradley (GEOG*4990) Advisor

2010 B. Kielstra (GEOG*4990) Advisor

2009 B. Ahrens (GEOG*4690) Faculty Supervisor

2009 E. Chesterfield (GEOG*4690) Faculty Supervisor

2009 T. Drennen (GEOG*4690) Faculty Supervisor

2009 R. Gray (GEOG*4690) Faculty Supervisor

2009 V. Hawkins (GEOG*4690) Faculty Supervisor

2009 C. Henderson (GEOG*4690) Faculty Supervisor

2009 J. MacDonald (GEOG*4990) Advisor

2009 N. Charlton (GEOG*4990) Advisor

2008 V. Mather (GEOG*4990) Advisor

2007 K. Clayton (GEOG*4690) Faculty Supervisor

2007 A. Sterrett (GEOG*4690) Faculty Supervisor

2007 W. Trenouth (GEOG*4690) Faculty Supervisor
2007 J. Randall (GEOG*4690) Faculty Supervisor
2007 G. Roeper (GEOG*4690) Faculty Supervisor
2006 K. Alkema (GEOG*4690) Faculty Supervisor
2006 G. Atkinson (GEOG*4690) Faculty Supervisor

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Undergraduate Student Advising (Continued)

2006 T. De Szegheo Lang
(GEOG*4690)

Faculty Supervisor

2006 K. Elliot (GEOG*4690) Faculty Supervisor

2006 L. Hart (GEOG*4690) Faculty Supervisor

2006 S. Lewis (GEOG*4690) Faculty Supervisor

2006 S. Smith (GEOG*4690) Faculty Supervisor

2006 J. Kerr (GEOG*4990) Advisor

2005 S. Ploeger (GEOG*4990) Advisor

2004 D. Sandink (GEOG*4990) Advisor

2004 B. McKerracher (GEOG*4690) Faculty Supervisor

2004 L. Lay (GEOG*4690) Faculty Supervisor

2004 S. Devita (GEOG*4690) Faculty Supervisor

2004 C. Humphrey (GEOG*4690) Faculty Supervisor

2004 E. Shapiro (GEOG*4690) Faculty Supervisor

2004 A. Edwardson (GEOG*4690) Faculty Supervisor

2004 D. Caissie (GEOG*4690) Faculty Supervisor

2004 S. Plenderleith (GEOG*4690) Faculty Supervisor

Other High Quality Training

2010 J. Hall Workstudy

2009-10 G. Clark Laboratory Technician

2009-10 B. Ahrens Workstudy

2008-09 E. Marteli Workstudy

2008-09 J. Rogers Workstudy

2008-09 K. Duhn Laboratory Technician

2008 E. Marteleira Workstudy

2008 A. Birmingham Workstudy

2006 C. Delaney Workstudy

2006 H. Hoomanmayer Workstudy

2005 S. Turner Undergraduate Research Assistant

2005 L. Powell Research Assistant

2004-05 R. McMath Laboratory Technician

2004 K. Brelsford Field Assistant, Laboratory Technician

2004 J. Bell Laboratory Technician

2004 A. Johnson Laboratory Technician

2003-04 D. Lewis Field Assistant, Laboratory Technician

1999-2000 K. Brown Field Assistant

1999-2000 D. Riedel Field Assistant

1998-99 E. S. Murphy GIS Specialist

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Undergraduate Courses Taught

2009 ENVS*2150 Terrestrial Systems §

2009 GEOG*4690 Geographic Field Research (with W. Nickling and S. Bloom) §
2009 GEOG*3110 Biotic and Natural Resources
2008 GEOG*3110 Biotic and Natural Resources
2008 ENVS*2150 Terrestrial Systems §
2007 GEOG*3110 Biotic and Natural Resources
2007 GEOG*2460 Analysis in Geography
2007 GEOG*4690 Geographic Field Research (with W. Nickling and R. Kreutzwiser)
2007 ISS*4000 Research Project in Environmental Studies
2006 GEOG*4690 Geographic Field Research (with R. Kostaschuk and B. Bradshaw) §
2006 GEOG*3110 Biotic and Natural Resources
2005 GEOG*3110 Biotic and Natural Resources §
2005 GEOG*4110 Environmental Systems Analysis
2005 GEOG*4110 Environmental Systems Analysis §
2004 GEOG*4690 Geographic Field Research (with R. Kostaschuk and R. Patrick) §

Graduate Courses Taught

2010 GEOG*6330 Biotic Proc. & Biophys. Systems
2009 GEOG*6330 Biotic Proc. & Biophys. Systems
2008 GEOG*6330 Biotic Proc. & Biophys. Systems
2007 GEOG*6330 Biotic Proc. & Biophys. Systems
2006 GEOG*6330 Biotic Proc. & Biophys. Systems §
2006 GEOG*6340 Human Environment Systems Analysis
2005 GEOG*6340 Human Environment Systems Analysis
2005 GEOG*6330 Biotic Proc. & Biophys. Systems (with K. Miyanishi) §
2004 GEOG*6340 Human Environment Systems Analysis §

§ indicates development of new curriculum

SERVICE & ADMINISTRATION

Committee Memberships

2007 - present Arboretum Research Associate
2007 - present Advisory Panel, Guelph Institute for the Environment
2006 - present M.Sc. (Env.) Graduate Program Committee
2005 - present B.Sc. (Env.) Program Committee
2005 - present Environmental Geography Faculty Advisor
2005 - present Graduate Affairs Committee
2005 - present Graduate Admissions Committee
2005 - present University of Guelph Faculty Association, Council Member
2004 - present Faculty of Environmental Sciences, Environmental Geography Program Counsellor
Associate Editor, *Canadian Journal of Forestry Research*
Member, *Fire & Stand Dynamics Steering Committee*, Garry Oak Ecosystem Recovery Team