

Curriculum Vitae

Daniel G. Gavin

Department of Geography
1251 University of Oregon
Eugene, OR 97403-1251

Phone: (541) 346-5787
email: dgavin@uoregon.edu
web: geography.uoregon.edu/gavin

EDUCATION

University of Washington	Division of Ecosystem Sciences, College of Forest Resources	Ph.D. 2000
University of Washington	Division of Ecosystem Sciences, College of Forest Resources	M.S. 1997
Dartmouth College	Department of Biological Sciences	B.A. 1992

PROFESSIONAL EXPERIENCE

Assistant Professor, Department of Geography, University of Oregon	2006–
Research Associate, Department of Botany and Agricultural Biochemistry, University of Vermont	2005–2006
Postdoctoral Associate, Department of Plant Biology, University of Illinois at Urbana-Champaign.	2001–2005
Postdoctoral Associate, College of Forest Resources, University of Washington.	2000
Research Assistant, College of Forest Resources, University of Washington.	1994–2000
Field Camp Co-Manager, Gunung Palung Project in Tropical Forest Ecology and Management, West Kalimantan (Borneo), Indonesia.	1992–1993

PUBLICATIONS

Peer-reviewed publications

- Gavin, D.G.** 2009. The coastal-disjunct mesic flora in the inland Pacific Northwest of USA and Canada: refugia, dispersal, and disequilibrium. *Diversity and Distributions* **15**:972-982.
- Gavin, D.G.**, F.S. Hu, I.R. Walker, and K.S. Westover. 2009. The northern inland temperate rainforest of British Columbia: Old forests with a young history? *Northwest Science* **83**:70-78.
- Marlon, J.R., P.J. Bartlein, C. Carcaillet, **D.G. Gavin**, S.P. Harrison, P.E. Higuera, F. Joos, M.J. Power, and I.C. Prentice. 2008. Climate and human influences on global biomass burning over the past two millennia. *Nature Geoscience* **1**: 697-702.
- Gavin, D.G.**, B. Beckage, and B. Osborn. 2008. Forest dynamics and the growth decline of red spruce and sugar maple on Bolton Mountain, Vermont: a comparison of modeling methods. *Canadian Journal of Forest Research* **38**: 2635-2649.

- Beckage B., B. Osborne, **D.G. Gavin**, C. Pucko, T. Siccama, and T. Perkins. 2008. A rapid upward shift of a forest ecotone during 40 years of warming in the Green Mountains of Vermont. *Proceedings of the National Academy of Sciences of the USA* **105**:4197-4202.
- Chase, M., C. Bleskie, I.R. Walker, **D.G. Gavin**, and F.S. Hu. 2008. Midge-inferred Holocene summer temperatures in southeastern British Columbia, Canada. *Palaeogeography, Palaeoclimatology, Palaeoecology* **257**: 244-259.
- Power, M. and 84 others. 2007. Changes in fire regimes since the Last Glacial Maximum: an assessment based on a global synthesis and analysis of charcoal data. *Climate Dynamics*. DOI 10.1007/s00382-007-0334-x.
- Bigler, C., **D.G. Gavin**, C. Gunning, and T.T. Veblen. 2007. Drought induces lagged tree mortality in a subalpine forest in the Rocky Mountains. *Oikos* **116**: 1983-1994.
- Gavin, D.G.**, D. Hallett, F.S. Hu, K. Lertzman, S.J. Prichard, K.J. Brown, J.A. Lynch, P. Bartlein, and D.L. Peterson. 2007. Forest fire and climate change: insights from sediment charcoal records. *Frontiers in Ecology and the Environment* **5**: 499-506.
- Higuera, P.E., M.E. Peters, L.B. Brubaker, and **D.G. Gavin**. 2007. Understanding the origin and analysis of sediment-charcoal records with a simulation model. *Quaternary Science Reviews* **26**:1790-1809.
- Gavin, D.G.**, and F.S. Hu. 2006. Spatial variation of climatic and non-climatic controls on species distribution: the range limit of *Tsuga heterophylla*. *Journal of Biogeography* **33**:1384-1396.
- Gavin, D.G.**, F.S. Hu, K. Lertzman, and P. Corbett. 2006. Weak climatic control of stand-scale fire history during the late Holocene. *Ecology* **87**:1722-1732.
- Hu, F.S., L.B. Brubaker, **D.G. Gavin**, P.E. Higuera, J.A. Lynch, T.S. Rupp, and W. Tinner. 2006. How climate and vegetation influence the fire regime of the Alaskan boreal biome: the Holocene perspective. *Mitigation and Adaptation Strategies for Global Change* **11**:829-846.
- Clegg, B.F., W. Tinner, **D.G. Gavin**, and F.S. Hu. 2005. Morphological differentiation of *Betula* (birch) pollen in northwest North America and its palaeoecological application. *Holocene* **15**:229-237.
- Gavin, D.G.**, L.B. Brubaker, J.S. McLachlan, and W.W. Oswald. 2005. Correspondence of pollen assemblages with forest zones across steep environmental gradients, Olympic Peninsula, Washington, USA. *Holocene* **15**:648-662.
- Foit, F.F., **D.G. Gavin**, and F.S. Hu. 2004. The tephra stratigraphy of two lakes in south-central British Columbia, Canada and its implications for mid-late Holocene volcanic activity at Glacier Peak and Mount St. Helens, Washington, USA. *Canadian Journal of Earth Sciences* **41**:1401-1410.
- Gavin, D.G.** 2003. Forest soil disturbance intervals inferred from soil charcoal radiocarbon dates. *Canadian Journal of Forest Research* **33**:2514-2518.
- Gavin, D.G.**, L.B. Brubaker, and K.P. Lertzman. 2003a. An 1800-year record of the spatial and temporal distribution of fire from the west coast of Vancouver Island, Canada. *Canadian Journal of Forest Research* **33**:573-586.

- Gavin, D.G.**, L.B. Brubaker, and K.P. Lertzman. 2003b. Holocene fire history of a coastal temperate rain forest based on soil charcoal radiocarbon dates. *Ecology* **84**:186-201.
- Gavin, D.G.**, W.W. Oswald, E.R. Wahl, and J.W. Williams. 2003c. A statistical approach to evaluating distance metrics and analog assignments for pollen records. *Quaternary Research* **60**:356-367.
- Oswald, W.W., L.B. Brubaker, F.S. Hu, and **D.G. Gavin**. 2003. Pollen-vegetation calibration for tundra communities in the Arctic Foothills, northern Alaska. *Journal of Ecology* **91**:1022-1033.
- Lertzman, K., **D. Gavin**, D. Hallett, L. Brubaker, D. Lepofsky, and R. Mathewes. 2002. Long-term fire regime estimated from soil charcoal in coastal temperate rainforests. *Conservation Ecology* 6(2): 5. [online]
- Gavin, D.G.** 2001. Estimation of inbuilt age in radiocarbon ages of soil charcoal for fire history studies. *Radiocarbon* **43**:27-44.
- Gavin, D.G.**, J.S. McLachlan, L.B. Brubaker, and K.A. Young. 2001. Postglacial history of subalpine forests, Olympic Peninsula, Washington, USA. *Holocene* **11**:177-188.
- Gavin, D.G.**, and L.B. Brubaker. 1999. A 6000 year soil pollen record of sub-alpine meadow vegetation in the Olympic Mountains, Washington, USA. *Journal of Ecology* **87**:106-122.
- Gavin, D.G.**, and D.R. Peart. 1999. Vegetative life history of a dominant rain forest canopy tree. *Biotropica* **31**:288-294.
- Gavin, D.G.**, and D.R. Peart. 1997. Spatial structure and regeneration of *Tetramerista glabra* in peat swamp rain forest in Indonesian Borneo. *Plant Ecology* **131**:223-231.
- Gavin, D.G.**, D.R. Peart, and M. Leighton. 1996. Canopy gaps in peat swamp forest in West Kalimantan, Indonesia. *Tropical Biodiversity* **3**:243-249.
- Gavin, D.G.**, and D.R. Peart. 1993. Effects of beech bark disease on the growth of American beech (*Fagus grandifolia*). *Canadian Journal of Forest Research* **23**:1566-1575.

SELECTED PAPERS PRESENTED (2001-2009) (* INVITED SPEAKER)

- Gavin, D.G., et al. 2009. Multiple abrupt shifts in the early Holocene climate of western Canada. Annual Meeting of the Association of American Geographers. Las Vegas, NV.
- *Gavin, D.G. 2009. Biogeographic implications of fire regimes through the Holocene in the Pacific Northwest (USA and British Columbia). Boreal Forest Fire Symposium, Lac Duparquet, Québec. Keynote Speaker.
- *Gavin, D.G. and Hu, F.S. 2008. The potential role of Pleistocene refugia in the Holocene development of the interior wet-belt forests of the Pacific Northwest, USA. International Palynological Congress, Bonn, Germany.
- *Gavin, D.G. 2008. Paleoecological evidence of the controls of forest composition and the late Holocene development of the interior wet-belt forests of eastern British Columbia. Botany 2008 (Botanical Society of America/Canadian Botanical Society), Vancouver, BC.
- *Gavin, D.G. and Bartlein, P.J. 2008. The "Quaternary conundrum" and postglacial biogeography in the inland Pacific Northwest. Ecological Society of America, Milwaukee, WI.

- Gavin, D.G. 2008. Assembling the biota of the interior wet belt: separate lines of evidence from paleoecology, phylogeography, and climate models. BC's Inland Rainforest – Conservation and Community. University of Northern British Columbia, Prince George, BC.
- *Gavin, D.G. 2008. Assembling the biota of northern Idaho: separate lines of evidence from paleoecology, genetics, and climate models. American Society for Environmental History. Boise, ID.
- Gavin, D.G. and Hu, F.S. 2007. History of disjunct species distributions in the Pacific Northwest. Congress of the International Union for Quaternary Research, Cairns, Australia.
- Gavin, D.G. and Beckage, B. 2007. The roles of climate and disturbance in the decline of sugar maple and red spruce in northern New England. Association of American Geographers, San Francisco, CA.
- *Gavin, D.G., Hu, F.S., Lertzman, K.P. and Hallett, D.J. 2006. Holocene fire-climate relationships in eastern British Columbia-and adjacent areas. American Quaternary Association, Bozeman, MT.
- *Gavin, D.G., Hu, F.S., Lertzman, K.P. and Hallett, D.J. 2006. Forest fires in space and time: comparing long records of forest fires to understand their climatic controls. American Statistical Association, Seattle WA.
- *Gavin, D.G. and Hu, F.S. 2004. Scale-dependent controls of late-Holocene forest fires in British Columbia: insights from intra-regional paleorecord comparisons. American Geophysical Union, San Francisco, CA.
- Gavin, D.G. and Hu, F.S. 2003. Climatic vs. non-climatic control of western hemlock distribution in its coastal and interior ranges. Annual Meeting of the Ecological Society of America, Savannah, GA.
- Gavin, D.G. and Hu, F.S. 2002. Late Holocene range expansion of western hemlock and western redcedar in the interior Pacific Northwest. Annual Meeting of the Ecological Society of America, Tucson, AZ.
- Gavin, D.G. and Lertzman, K.P. 2001. Rates of windthrow-caused soil disturbance inferred from soil charcoal radiocarbon dates. Annual Meeting of the Ecological Society of America, WI.

COURSES

Advanced Biogeography: Dendrochronology; GEOG 423/523)	2009
Long-term Environmental Change (University of Oregon; GEOG 430)	2008
Fire in the Environment (University of Oregon; GEOG 410)	2007
The Natural Environment (University of Oregon; GEOG 141)	2007–
Biogeography, Advanced Biogeography (University of Oregon; GEOG 323)	2007–
Biogeography (University of Vermont)	2004
Weather and Climate (University of Vermont)	2003
General Ecology (Seattle University, two semesters)	2000-2001

GRANTS AND CONTRACTS

Joint Fire Science Program. D.G. Gavin, E.K. Heyerdahl, and R. Parsons. Interactive effects of insects, fire and climate on fuel loads and fire behavior in mixed conifer forest. \$266,000.	2009-2012
U.S. National Committee for Quaternary Science and the National Academies.	2007

- Travel Fellowship to the XVII Congress of the International Union for Quaternary Research, Cairns, Australia.
- University of Oregon Junior Professorship Development Award. \$1000. 2007
- United States Geological Survey. D.G. Gavin. Software development for analysis of lake sediment charcoal records. \$5000. 2005
- National Science Foundation. F.S. Hu and D.G. Gavin. "Climatic and ecological controls on the Holocene range expansion of western hemlock and western redcedar in the interior Pacific Northwest". \$330,000 2002–2005
- Global Forest Foundation, Vancouver, B.C. D.G. Gavin, K.P. Lertzman and P. Corbett. "Disturbance regimes of subalpine forests in the West Kootenays" CDN\$30,000. 2000–2003
- College of Forest Resources, University of Washington. Research Improvement Grant. \$2,200. 1998
- Science Council of British Columbia, Forest Renewal BC. K.P. Lertzman (PI), L.B. Brubaker, L.B., D.G. Gavin, and Nelsen, E. "Long-term fire histories in coastal temperate rainforest" CDN\$227,810. 1996–2000

AWARDS (SINCE 1995)

- Rippey Innovative Teaching Award, College of Arts and Sciences, University of Oregon. 2007
- William S. Cooper Award, Ecological Society of America (with Linda Brubaker and Ken Lertzman). 2005
- Second Place among student presentations, Ecology and Environmental Sciences Section, AAAS Pacific Division Meeting, Ashland, OR. 2000
- Woods Scholarship, College of Forest Resources, University of Washington. 2000
- Edward S. Deevey Award for Excellence in Paleoecology, Ecological Society of America Annual Meeting, Spokane, WA. 1999
- Xi Sigma Pi Forestry Honor Society, University of Washington. 1995

Invited departmental seminars

- Fireside Conversations on Global Warming, University of Oregon, November 2008.
- Department of Geological Sciences, University of Oregon, November 2008.
- Center for Ecology and Evolutionary Biology, University of Oregon, February 2008.
- Freshman Honors Science Colloquia, University of Oregon, February 2008.
- Center for Ecology and Evolutionary Biology, University of Oregon, February 2007.
- College of Forestry, Oregon State University, Corvallis, OR. November 2006.
- Middlebury College, Middlebury, VT. November 2005.
- University of Vermont, Burlington, VT. April 2005.
- Harvard Forest, Petersham, MA. December 2003.
- Department of Biological Sciences. Dartmouth College. November 2002.

Program in Ecology and Evolutionary Biology, University of Illinois at Urbana-Champaign.
January 2002.

University of Minnesota, Department of Ecology, Evolution, and Behavior. March 2001.

United States Forest Service, Rocky Mountain Research Station Fire Sciences Lab, Missoula,
MT. February 2001.

University of Washington, Quaternary Research Center. 2000.

Workshops

Global Paleofire Working Group, Totnes, UK, October 2007.

Fire History Workshop, Flagstaff, AZ, May, 2005.

NOAA-PAGES Fire and Climate Workshop, Tucson, AZ, April 2002.

The role of science in management decisions in Clayoquot Sound, Clayoquot Biosphere Project,
Tofino, B.C., January 1998.

SERVICE AND ACTIVITIES

Service and Outreach

Associate Editor, International Biogeography Society newsletter	2009-
Osher Life-Long Learning, Eugene OR	2009
National Science Foundation; Panelist	2008
Graduate Admissions Committee, Department of Geography	2008–2009
Presentation, Washington County Small Woodlands Association	2008
High School science class outreach (Crow, OR)	2007
Organized symposia: “Severe insect outbreaks in North American forests: recent trends, long-term recurrence and the role of climate” 2003 Annual Meeting of the Ecological Society of America, Savannah, GA.	2003
Chair, Paleoecology Section, Ecological Society of America	2002–2003
Vice Chair, Paleoecology Section, Ecological Society of America	2001–2002
"Futures Committee on Undergraduate Curricula” College of Forest Resources, University of Washington	1999

Peer Reviewer for manuscripts:

Canadian Journal of Forest Research; Ecology; Ecosystems; Global Change Biology; Global
Environmental Change; The Holocene; Journal of Biogeography; Journal of the Torrey Botanical
Society; Journal of Tropical Ecology; Journal of Vegetation Science; Mitigation and Adaptation
Strategies for Global Change; Oecologia; Physical Geography; Quaternary Research; Quaternary
Science Reviews; Trees: Structure and Function

Peer Reviewer for proposals:

National Science Foundation

Natural Sciences and Engineering Research Council (Canada)

Advising

Ph.D., Primary advisor: Erin Herring

Ph.D., Secondary advisor: Paul Blanton (Geography); Suzanne Walther (Geography); Jennifer Marlon (Geography); Gabe Yospin (Biology); Daniele McKay (Geological Sciences); Phil Higuera (University of Washington, 2002–2005)

Masters, Primary advisor: Ian David Crickmore

Masters, Secondary advisor: Jaime Dexter

Undergraduate thesis, Primary advisor: Katie Argo (University of Oregon, 2007); Natasha Wadlington (University of Illinois, 2003-2004); Teresa Opalka (Seattle University, 1999)