Title Assistant Professor

First Name Daniel

Middle Name

Last Name Gavin

Institution UO

Department Geography

Email dgavin@uoregon.edu

Phone 541-346-5787

9/5/2007

Permission date

Photo

Website

http://geography.uoregon.edu/gavin/

Research Fields

- ☐ Atmospheric chemistry
- ☐ Biogeochemistry
- ☐ Carbon Footprint Analysis
- ☐ Climatology
- ☐ Community & Disaster Planning
- ☐ Data Analysis & Statistical Modeling
- ☐ Ecology & Ecosystem Management
- ☐ Economics
- ☐ Energy policy & technology
- ☐ Ethics
- ☒ Fire
- ☒ Forestry & Forest Management
- ☐ Geographic Information Systems
- ☐ Horticulture
- ☐ Human Impacts - economics
- ☐ Human Impacts - health
- ☐ Human Impacts - policy
- ☐ Hydrology
- ☐ Impacts - agriculture & horticulture
- ☐ Impacts - ecosystems, populations
- ☐ Impacts - physical
- ☐ Instrumentation
- ☐ Mitigation Policy
- ☐ Modeling Climate
- ☐ Modeling Ecosystems
- ☐ Modeling Socioeconomic Processes
- ☐ Natural Resource Policy & Planning
- ☐ Outreach & Engagement
- ☒ Paleoclimatology
- ☒ Paleoecology
- ☐ Physical Ecology
- ☐ Physiological Ecology
- ☐ Urban Ecology
- ☐ Water Policy & Planning
- ☐ Other…

Specific Research Interests

Forest responses to climatic change
Bioclimatic envelope modeling
Controls of patterns of forest fire over the past several millennia
Tree-ring records of forest growth and mortality

Projects

Biogeographic response to climate change: the role of spatially disjunct plant populations

Controls of tree-species distributions in the northern Rocky Mountains: do paleorecords and species distribution models agree?

Fire history of the Applegate Valley, southern Oregon.

Selected Recent Publications

Bigler, C., D.G. Gavin, C. Gunning, and T.T. Veblen. In press. Drought induces lagged tree mortality in a subalpine forest in the Rocky Mountains. Oikos.

Gavin, D.G., D.J. Hallett, F.S. Hu, K.P. Lertzman, S.J. Prichard, K.J. Brown, J.A. Lynch, P.J. Bartlein, and D.L. Peterson. 2007. Forest fire and climate change in western North America: Insights from sediment charcoal records. Frontiers in Ecology and the Environment. In Press (November).

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. In press.

Gavin, D.G., F.S. Hu, K.P. Lertzman and P. Corbett. 2006. Weak climatic control of forest fire history during the late Holocene. Ecology 87:1722-1732.

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.

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.

Gavin, D.G. and F.S. Hu 2005. Bioclimatic modelling using Gaussian mixture distributions and multiscale image segmentation. Global Ecology and Biogeography 14:491-501. [PDF]

Professional Activities