

**DON MCKENZIE**

RESEARCH LANDSCAPE ECOLOGIST  
USDA Forest Service, Pacific Northwest Research Station  
400 N. 34<sup>th</sup> Street, Suite 201, Seattle, WA 98103  
Phone: 206.732.7824 Fax: 206.732-7801  
Email: donaldmckenzie@fs.fed.us

**EDUCATION**

**University of Washington, College of Forest Resources, Seattle, WA**

Ph.D., Landscape Ecology, June 1998

M.S., Forest Biometrics, December 1994

**University of California at Berkeley, Berkeley, CA**

B.A., Anthropology and Psychology, June 1974

**RESEARCH INTERESTS**

Climatic change and its effects on disturbance regimes, species responses, and air quality in protected areas; paleological fire studies, controls on fire regimes, and scaling relationships; forest biogeography and climatic variability.

**PROFESSIONAL EXPERIENCE**

Research Landscape Ecologist, US Forest Service, 2002-

Research Scientist, University of Washington, 1998-2002

**CURRENT UNIVERSITY AFFILIATION**

**University of Washington**

Affiliate professor: College of Forest Resources, and Center for Science in the Earth System (CSES) Climate Impacts Group

**PUBLICATIONS**

**McKenzie, D.**, D.L. Peterson, and J.S. Littell. 2009. Global warming and stress complexes in forests of western North America. pp. 319-337. In S. V. Krupa (series editor), *Developments in Environmental Science*, Vol. 8, *Wildland Fires and Air Pollution*, A. Bytnerowicz, M. Arbaugh, A. Riebau, and C. Anderson (eds.). Amsterdam, The Netherlands: Elsevier Science, Ltd.

**McKenzie, D.**, C.L. Raymond, and S.C. Cushman. 2008. Modeling understory vegetation and its response to fire. Chapter 15, pp. 391-414. In J. Millspaugh and F.R. Thompson III (eds.), *Models for Planning Wildlife Conservation in Large Landscapes*. Burlington, MA: Academic Press.

Kellogg, L.-K.B., **D. McKenzie**, D.L. Peterson, and A.E. Hessler. 2008. Spatial models for inferring topographic controls on low-severity fire in the eastern Cascade Range of Washington, USA. *Landscape Ecology* 23:227-240.

Heyerdahl, E.K., **D. McKenzie**, L.D. Daniels, A.E. Hessler, J.S. Littell, and N.J. Mantua. 2008. Climate drivers of regionally synchronous fires in the inland Northwest (1651–1900). *International Journal of Wildland Fire* 17:40-49.

**McKenzie, D.**, C.L. Raymond, L.-K.B. Kellogg, R.A. Norheim, A.G. Andreu, A.C. Bayard, K.E. Kopper, and E. Elman. 2007. Mapping fuels at multiple scales: landscape application of the Fuel Characteristic Classification System. *Canadian Journal of Forest Research* 37:2421-2437.

- Falk, D.A., C.M. Miller, **D. McKenzie**, and A.E. Black. 2007. Cross-scale analysis of fire regimes. *Ecosystems* 10:809-823.
- Cushman, S.A., **D. McKenzie**, D. L. Peterson, J.S. Littell, and K.S. McKelvey. 2007. Research agenda for integrated landscape modeling. USDA Forest Service RMRS General Technical Report RMRS-GTR-194.
- McKenzie, D.**, S.M. O'Neill, N. Larkin, and R.A. Norheim. 2006. Integrating models to predict regional haze from wildland fire. *Ecological Modelling* 199:278-288.
- McKenzie, D.**, A.E. Hessler, and Lara-Karena B. Kellogg. 2006. Using neutral models to identify constraints on low-severity fire regimes. *Landscape Ecology* 21:139-152.
- McKenzie, D.**, S.M. O'Neill, N. Larkin, and R.A. Norheim. 2006. How will climatic change affect air quality in parks and wilderness? In: D. Harmon, ed. Proceedings of the 2005 George Wright Society Annual Meeting, Philadelphia, PA.
- Wiedinmyer, C., B. Quayle, C. Geron, A. Belote, **D. McKenzie**, X. Zhang, S.M. O'Neill, and K.K. Wynne. 2006. Estimating emissions from fires in North America for air quality modeling. *Atmospheric Environment* 40:3419-3432.
- Hessler, A.E., J. Miller, J. Kernan, and **D. McKenzie**. 2006. Mapping wildfire boundaries from binary point data: comparing approaches. *Professional Geographer* 59:87-104.
- Halpern, C.B., **D. McKenzie**, S.A. Evans, and D.A. Maguire. 2005. Early responses of forest understories to varying levels and patterns of green-tree retention. *Ecological Applications* 15:175-195.
- McKenzie, D.**, Z.M. Gedalof, D.L. Peterson, and P. Mote. 2004. Climatic change, wildfire, and conservation. *Conservation Biology* 18:890-902.
- McKenzie, D.** 2004. La historia del fuego y su relación con el clima. Pages 13-28 in: L. Villers-Ruiz and J López-Blanco, eds. *Incendios forestales en México: métodos de evaluación*. Universidad Nacional Autónoma de México, México, DF.
- McKenzie, D.**, S. Prichard, A.E. Hessler, and D.L. Peterson. 2004. Empirical approaches to modelling wildland fire in the Pacific Northwest: methods and applications to landscape simulations. Chapter 7 in A.J. Perera, L. Buse, and M.G. Weber, eds., *Emulating Natural Forest Landscape Disturbances*. Columbia University Press, New York, NY.
- Peterson, D.L., M.C. Johnson, J.K. Agee, T.B. Jain, **D. McKenzie**, and E.D. Reinhardt. 2005. Forest structure and fire hazard in dry forests of the western United States. USDA Forest Service General Technical Report PNW-GTR-628. Pacific Northwest Research Station, Portland, OR.
- Hessler, A.E., **D. McKenzie**, and R. Schellhaas. 2004. Drought and Pacific Decadal Oscillation linked to fire occurrence in the inland Pacific Northwest. *Ecological Applications* 14:425-442.
- McKenzie, D.**, D.W. Peterson, D.L. Peterson, and P.E. Thornton. 2003. Climatic and biophysical controls on conifer species distributions in mountain forests of Washington State, USA. *Journal of Biogeography* 30:1093-1108.
- McKenzie, D.**, D.W. Peterson, and D.L. Peterson. 2003. Modelling conifer species distributions in mountain forests of the Pacific Northwest. *Forestry Chronicle* 79:253-258.

- McKenzie, D.,** A. Hessler, and D.L. Peterson. 2001. Recent growth in conifer species of western North America: assessing the spatial patterns of radial growth trends. *Canadian Journal of Forest Research* 31:526-538.
- Halpern, C.B., and **D. McKenzie.** 2001. Disturbance and post-harvest ground conditions in a structural retention experiment. *Forest Ecology and Management* 154:215-225.
- McKenzie, D.,** D.L. Peterson, and J.K. Agee. 2000. Fire frequency in the Columbia River Basin: building regional models from fire history data. *Ecological Applications* 10:1497-1516.
- McKenzie, D.,** C.B. Halpern, and C.R. Nelson. 2000. Overstory influences on herb and shrub communities in mature forests of western Washington, USA. *Canadian Journal of Forest Research* 30:1655-1666.
- Peterson, D.L., S.J. Prichard, and **D. McKenzie.** 2000. Disturbance in Mountain Forests. In Price, M., ed. *Forests in Sustainable Mountain Development: a State-of-Knowledge Report for 2000.* CAB International, Oxford, England. Pages 51-59.
- Schmoltdt, D.L., D.L. Peterson, R.E. Keane, J.M. Lenihan, **D. McKenzie,** D.R. Weise, and D.V. Sandberg. 1999. Assessing the effects of fire disturbance on ecosystems: a scientific agenda for research and management. USDA Forest Service General Technical Report PNW-GTR-455.
- McKenzie, D.** and C.B. Halpern. 1999. Modeling understory shrub distributions in Pacific Northwest forests. *Forest Ecology and Management* 114:293-308.
- McKenzie, D. 1998.** Fire, vegetation, and scale: toward optimal models for the Pacific Northwest. *Northwest Science* 72:49-65.
- McKenzie, D.,** D.L. Peterson and E. Alvarado. 1996. Predicting the effect of fire on large-scale vegetation patterns in North America. USDA Forest Service Research Paper PNW-489, Pacific Northwest Research Station, Portland, Oregon.
- McKenzie, D.,** D.L. Peterson and E. Alvarado. 1996. Extrapolation problems in modeling fire effects at large spatial scales: a review. *International Journal of Wildland Fire* 6:65-76.
- Maguire, D.A., J.L.F. Batista and **D. McKenzie.** 1993. Horizontal structure of uneven-aged mixed-species forests modeled as an inhomogeneous Poisson process. Proceedings of the IUFRO conference on Spatial Stochastic Processes in Forestry.

#### **PROFESSIONAL MEMBERSHIPS**

International Association for Landscape Ecology  
Ecological Society of America  
Society for Conservation Biology  
American Geophysical Union