

CURRICULUM VITAE

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EDUCATION

1980 Ph.D. Forest Ecology, University of Illinois, Urbana

1977 M.S. Botany, University of Illinois, Urbana

1976 B.S. Zoology, University of Illinois, Urbana

PROFESSIONAL EXPERIENCE

2001- Research Biologist, USDA Forest Service, Pacific Northwest Research Station, Fire and Environmental Research Applications Team; and Professor, College of Forest Resources, University of Washington, Seattle, WA

1989-01 Research Biologist (Field Station Leader), U.S. Geological Survey, Cascadia Field Station; and Professor, College of Forest Resources, University of Washington, Seattle, WA

1984-89 Research Ecologist, USDA Forest Service, Atmospheric Deposition Effects Research Work Unit, Pacific Southwest Research Station, Riverside, CA; Unit Leader 1988-89

1981-84 Research Ecologist, USDA Forest Service, Fire Management Planning Research Work Unit, Pacific Southwest Research Station, Riverside, CA

1980-81 Visiting Assistant Professor, Department of Forestry, University of Illinois, Urbana

FIELDS OF SCIENTIFIC INTEREST

Fire science and fire ecology

Effects of climate change on biological and human systems

Mountain ecology and subalpine forest ecology

Effects of environmental stress on tree growth and forest ecosystems

Resource management on public lands

Ecological scale applications

PUBLICATIONS

Case, M.J. and D.L. Peterson. 200x. Fine-scale variability in growth-climate relationships of lodgepole pine, North Cascade Range, Washington. *Northwest Science* in review.

Peterson, D.L., L. Evers, B. Gravenmier, and E. Eberhardt. 2006. Analytical and decision support for hazardous fuels management. USDA Forest Service General Technical Report PNW-GTR-xxx. Pacific Northwest Research Station, Portland, OR. In press.

Holman, M.L. and D.L. Peterson. 200x. Sensitivity of forest growth to climatic variability in the Olympic Mountains, Washington. *Canadian Journal of Forest Research* in press.

Johnson, M.C., Peterson, D. L., and C.L. Raymond. 2006. Guide to fuel treatments in dry forests of the western United States: assessing forest structure and fire hazard. USDA Forest Service General Technical Report PNW-GTR-xxx. Pacific Northwest Research Station, Portland, OR. In press.

Keeley, J.E., G. Aplet, N.L. Christensen, S.G. Conard, E.A. Johnson, P.N. Omi, D.L. Peterson, and T.W. Swetnam. 2006. Ecological foundations for fire management in North America. *Ecological Applications* in press.

Nakawatase, J.M. and D.L. Peterson. 200x. Spatial and temporal variability in forest growth-climate relationships in the Olympic Mountains, Washington. *Canadian Journal of Forest Research* in press.

Stephenson, N., C. Allen, J. Baron, D. Fagre, D. McKenzie, D. Peterson, and K. O'Brian. 200x. Response of Western mountain ecosystems to climatic variability and change: the Western Mountain Initiative. *Park Science* in press.

Tyler, M.W. and D.L. Peterson. 200x. Vascular plant species diversity in low-elevation coniferous forests of the western Olympic Peninsula: a legacy of land use. *Northwest Science* in press.

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- Johnson, M.C. and D.L. Peterson. 2005. Forest fuel treatments in western North America: merging silviculture and fire management. *Forestry Chronicle* 81:365-368.
- Littell, J. and D.L. Peterson. 2005. A method for estimating vulnerability of Douglas-fire growth to climate change in the northwestern U.S. *Forestry Chronicle* 81:369-374.
- Peterson, D.L. M.C. Johnson, J.K. Agee, T.B. Jain, D.M. McKenzie, and E.R. 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.
- Peterson, D.L. and J. Littell. 2005. Biological change in the global greenhouse – *Climate Change and Biodiversity*. Book review. *Conservation Biology* in press.
- Raymond, C.L. and D.L. Peterson. 2005. Fuel treatments alter the effects of wildfire in a mixed-evergreen forest, Oregon, USA. *Canadian Journal of Forest Research* in press.
- Strom, A., R.C. Francis, N.J. Mantua, E.L. Miles, and D.L. Peterson. 2005. Preserving low-frequency climate signals in growth records of geoduck clams (*Panopea abrupta*). *Palaeo* 228:167-168.
- Raymond, C.L. and D.L. Peterson. 2005. How did prefire treatments affect the Biscuit Fire? *Fire Management Today* 65:18-22.
- Fagre, D.B., S.W. Running, R.E. Keane, and D.L. Peterson. 2004. Assessing climate change effects on mountain ecosystems using integrated models: a case study. In H. Bugmann and U. Huber (eds.), *Global Change and Mountain Regions*. Kluwer Academic Publishing, Dordrecht, The Netherlands.
- Gedalof, Z. D.L. Peterson, and N.J. Mantua. 2004. Atmospheric, climatic and ecological controls on extreme wildfire years in the northwestern United States. *Ecological Applications* 15:154-174.
- Gedalof, Z. D.L. Peterson, and N.J. Mantua. 2004. Columbia River flow and drought since 1750. *Journal of the American Water Resources Association* 40:1579-1592.
- Hessl, A.E., C. Milesi, M.A. White, D.L. Peterson, and R.E. Keane. 2004. Ecophysiological parameters for Pacific Northwest trees. USDA Forest Service General Technical Report PNW-GTR-618. Pacific Northwest Research Station, Portland, OR.
- McKenzie, D, Z. Gedalof, D.L. Peterson, and P. Mote. 2004. Climatic change, wildfire, and conservation. *Conservation Biology* 18:890-902.

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- Elman, E. and D.L. Peterson. 2003. Post-harvest regeneration of high-elevation forests in northern Washington, USA. *Forestry Chronicle* 79:268-272.
- Fagre, D.B., D.L. Peterson, and A.E. Hessler. 2003. Taking the pulse of mountains: ecosystem responses to climatic variability. *Climatic Change* 59:263-282.
- McKenzie, D., D.W. Peterson, and D.L. Peterson. 2003. Predicting conifer species distribution in mountain forests of Washington state, USA. *Forestry Chronicle* 79:253-258.
- 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.
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- Mote, P.W., E.A. Parson, A.F. Hamlet, W.S. Keeton, D. Lettenmaier, N. Mantua, D.W. Peterson, D.L. Peterson, R. Slaughter, and A.K. Snover. 2003. Preparing for climatic change: the water, salmon, and forests of the Pacific Northwest. *Climatic Change* 61:45-88.
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- Tyler, M.W. and D.L. Peterson. 2003. Effects of forest policy on landscape pattern of late-seral forest of the western Olympic Peninsula, Washington. *Agriculture, Ecosystems and Environment* 101:289-306.
- Fagre, D.B. and D.L. Peterson. 2002. Modeling and monitoring ecosystem responses to climate change in three North American mountain ranges. Pages 249-259 in C. Körner and E. Spehn (eds.), *Global Mountain Biodiversity: Changes and Threats*. Springer-Verlag, Berlin.

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- Peterson, D.L. and R.D. Hammer. 2001. From open to closed canopy: a century of change in a Douglas-fir forest, Orcas Island, Washington. *Northwest Science* 75:262-269.
- Peterson, D.W. and D.L. Peterson. 2001. Mountain hemlock growth responds to climatic variability at annual and decadal scales. *Ecology* 82:3330-3345.
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- Peterson, D.L. 2000. Monitoring air quality in mountains: designing an effective network. *Environmental Monitoring and Assessment* 64:81-91.
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- Peterson, D.L., E.G. Schreiner, and N.M. Buckingham. 1997. Gradients, vegetation, and climate: spatial and temporal dynamics in mountains. *Global Ecology and Biogeography Letters* 6:7-17.
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- Schmoltdt, D.L. and D.L. Peterson. 1997. Infusing resource management planning with analytical tools. In J. Thompson (ed.), *Ecosystem Management and Decisionmaking*. USDA Forest Service, Fort Collins, CO.

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- Peterson, D.L. and M.J. Arbaugh. 1986. Postfire survival in Douglas-fir and lodgepole pine: comparing the effects of crown and bole damage. *Canadian Journal of Forest Research* 16:1175-1179.

- Peterson, D.L. and R.D. Hammer. 1986. Soil nutrient flux: a component of nutrient cycling in temperate forest ecosystems. *Forest Science* 32:318-324.
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- Peterson, D.L. 1985. Crown scorch volume and scorch height – estimates of postfire tree condition. *Canadian Journal of Forest Research* 15:596-598.
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- Peterson, D.L. 1983. Estimating postfire timber damage with a simulation model. Pages 159-162 in *Proceedings of the Seventh Conference of Fire and Forest Meteorology*, Fort Collins, CO. American Meteorological Society, Boston, MA.
- Brown, S.L. and D.L. Peterson. 1983. The structural characteristics and production of two Illinois bottomland forests. *American Midland Naturalist* 110:107-117.
- Peterson, D.L. 1983. Predicting fire-caused mortality in four northern Rocky Mountain conifers. Pages 276-280 in *Proceedings of the Society of American Foresters National Convention*, Portland, OR. Society of American Foresters, Bethesda, MD.
- Peterson, D.L. and G.L. Rolfe. 1983. Effects of flooding on silver maple (*Acer saccharinum* L.) and American sycamore (*Platanus occidentalis* L.) seedlings: implications for biomass production. *Transactions of the Illinois State Academy of Science* 76:91-102.
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- Peterson, D.L. and G.L. Rolfe. 1980. Litter dynamics of a bottomland hardwood forest in southern Illinois. Pages 103-115 in *Proceedings of the Third Central Hardwood Forest Conference* (G.S. Cox and H.E. Garrett, Eds.), Columbia, MO.
- Peterson, D.L. and G.L. Rolfe. 1979. Determining sample size in throughfall studies. *Forest Science* 25:582-584.
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- Peterson, D.L., G.L. Rolfe, and F.A. Bazzaz. 1979. Nutrient dynamics of litterfall and decomposition in a bottomland hardwood forest. University of Illinois Forestry Research Report 79-4.
- Peterson, D.L. and F.A. Bazzaz. 1978. Life cycle characteristics of *Aster pilosus* in early successional habitats. *Ecology* 59:1005-1013.

PRESENTATIONS

Invitational papers before professional societies

- Nineteenth Annual Air Pollution Workshop, Helena, MT, April 1987. "The effects of atmospheric deposition on forest ecosystems: a research approach" (invited paper).
- Nineteenth Annual Air Pollution Workshop, Helena, MT, April 1987. "Dendrochronological and statistical methods for evaluating the effects of air pollution on tree growth" (invited paper).
- Air Pollution Control Association, annual meeting, Dallas, TX, June 1988. "Growth trends in oxidant-stressed forests of the Sierra Nevada" (invited paper).
- Northwest Scientific Association, Bellingham, WA, March 1992. "Landscape management in a changing environment" (invited paper in symposium "Biodiversity Issues in the Pacific Northwest").
- Air and Waste Management Association, Pacific Northwest Chapter, annual meeting, Portland, OR, January 1994. "Evaluating the impacts of air pollution on class I areas" (invited paper).
- International Ecology Conference (INTECOL), Manchester, Great Britain, August 1994. "Gradients, vegetation, and climate: spatial and temporal dynamics in mountains" (invited paper in symposium "Complexity and Simplicity in Mountains").

George Wright Society conference, Portland, OR, April 1995. "Effects of ozone on terrestrial vegetation" (invited paper in symposium "Air Resources: Threats and Strategies for Protection").

Society for Ecological Restoration conference, Seattle, WA, September 1995. "The role of fire in ecological restoration" (session chair for symposium).

International Workshop on Past, Present, and Future Climatic Variability: The Impacts on Forests, Wengen, Switzerland, September 1997. "Climate, limiting factors and environmental change in high-altitude forests of western North America" (invited paper).

Olympic Natural Resources Center Science Conference, Forks, WA, February 1999. "Space and time: the final frontiers in science and resource management" (invited paper).

EMAP Symposium on Western U.S. Ecological Systems, San Francisco, CA, April 1999. "Monitoring air quality in mountains: designing an effective system" (invited paper).

International Association of Landscape Ecology, Tempe, AZ, April 2001. "Linking multi-scale empirical approaches to process-based models of fire and succession" (invited paper in symposium "Landscape Fire Succession Modeling").

Washington Society of American Foresters, Snoqualmie, WA, May 2002. "The only constant" (invited paper).

North American Forest Biology Workshop, Pullman, WA, July 2002. "Restoring the role of fire in Western ecosystems: will the smoke get in our eyes?" (invited keynote speaker)

Rocky Mountain Summit, Whitefish, MT, September 2002. "Climatic variability and natural resources in mountain ecosystems" (invited keynote speaker)

Offered papers before scientific societies

Ecological Society of America, annual meeting, Stillwater, OK, August 1979. "Nutrient dynamics in central Illinois forests."

Third Central Hardwood Forest Conference, Columbia, MO, September 1980. "Litter dynamics of a bottomland hardwood forest in southern Illinois."

Ecological Society of America, annual meeting, Bloomington, IN, August 1981. "The nutrient dynamics of herbaceous vegetation in upland and floodplain forest communities."

Soil Science Society of America, annual meeting, Anaheim, CA, November 1982. "Seasonal nutrient variation in a floodplain forest soil of central Illinois."

Seventh Conference on Fire and Forest Meteorology, Society of American Foresters and American Meteorological Society, Fort Collins, CO, April 1983. "Estimating postfire timber damage with a simulation model."

Ecological Society of America, annual meeting, Grand Forks, ND, August 1983. "Seasonal variation in soil nutrient pools of a floodplain forest."

Society of American Foresters, annual meeting, Portland, OR, October 1983. "Predicting fire-caused mortality in four northern Rocky Mountain conifers."

Eighth Conference on Fire and Forest Meteorology, Society of American Foresters and American Meteorological Society, Detroit, MI, May 1985. "Evaluating the effects of air pollution and fire on tree growth by tree ring analysis."

American Association for the Advancement of Science, Pacific Division meeting, Symposium on Modeling and the Management of Natural Resources, Missoula, MT, June 1985. "Estimating postfire changes in production and value of northern Rocky Mountain-Intermountain rangelands."

Northwest Scientific Association, Bellingham, WA, March 1992. "Climate change and subalpine tree growth."

Northwest Scientific Association, Bellingham, WA, March 1992. "Effects of climate and other environmental factors on tree establishment in subalpine meadows."

Northwest Scientific Association, Bellingham, WA, March 1992. "Effects of climate on regeneration of subalpine forests following wildfire."

Ecological Society of America, annual meeting, Honolulu, HI, August 1992. "A dendroecological analysis of drought sensitivity for ponderosa pine along the Front Range of Colorado, U.S.A."

Ecological Society of America, annual meeting, Honolulu, HI, August 1992. "Effects of climate and other environmental factors on tree establishment in subalpine meadows of Mt. Rainier National Park."

Ecological Society of America, annual meeting, Honolulu, HI, August 1992. "Effects of climate on regeneration of subalpine forests following wildfire in the Cascade Range."

Ecological Society of America, annual meeting, Honolulu, HI, August 1992. "Subalpine forests and climate change: a dendroecological study."

Ecological Society of America, annual meeting, Honolulu, HI, August 1992. "The effects of climate on growth of subalpine fir (*Abies lasiocarpa*) across elevation gradients."

Soil Science Society of America, annual meeting, Minneapolis, MN, November 1992. "Soil-landform relationships on Mount Constitution, Orcas Island, Washington."

Ecological Society of America, annual meeting, Madison, WI, August 1993. "Response of Pacific Northwest ecosystems to climate change."

Ecological Society of America, annual meeting, Madison, WI, August 1993. "Growth response of subalpine fir to climatic variation."

George Wright Society meeting, Jacksonville, FL, November 1993. "Developing inventory and monitoring plans for national parks: a new approach."

George Wright Society meeting, Jacksonville, FL, November 1993. "Genetic Resource Management Units: managing biodiversity in national parks."

Fourth Biennial International Symposium for Advanced Technology in Natural Resource Management, American Society of Photogrammetry and Remote Sensing, Toronto, Ontario, August 1994. "The analytic hierarchy process and participatory decisionmaking."

Soil Science Society of America, annual meeting, Seattle, WA, November 1994. "Carbon storage in subalpine forests and meadows of the Olympic Mountains, Washington."

Soil Science Society of America, annual meeting, Seattle, WA, November 1994. "Soil organic carbon in an Olympic Mountains glacial cirque."

George Wright Society meeting, Portland, OR, April 1995. "Ozone monitoring at Mt. Rainier National Park."

Ecological Society of America, annual meeting, Snowbird, UT, August 1995. "Carbon storage in subalpine forests and meadows of the Olympic Mountains, Washington."

Ecological Society of America, annual meeting, Snowbird, UT, August 1995. "Effects of fire on vegetation in North American biomes: potential vegetation type transitions and limits of scale translation."

Ecological Society of America, annual meeting, Snowbird, UT, August 1995. "Growth and genetic relationships of subalpine fir (*Abies lasiocarpa*) in the Olympic Mountains, Washington."

Ecological Society of America, annual meeting, Snowbird, UT, August 1995. "Modeling the potential effects of climate change on high elevation vegetation in the Olympic Mountains."

Air and Waste Management Association, Pacific Northwest Section, annual meeting, Spokane, WA, November 1995. "Spatial patterns of ozone exposure in Mt. Rainier National Park."

Ecological Society of America, Providence, RI, August 1996. "Potential impacts of recreational use on high-elevation heather populations."

Air and Waste Management Association, Pacific Northwest Section, annual meeting, Seattle, WA, December 1996. "Ozone injury in common plant species of the Cascade Mountains: results of controlled exposures."

Air and Waste Management Association, Pacific Northwest Section, annual meeting, Seattle, WA, December 1996. "Assessing tropospheric ozone in western Washington."

Northwest Scientific Association, Olympia, WA, March 1998. "Spatial models of fire frequency for the Columbia River Basin."

Northwest Scientific Association, Olympia, WA, March 1998. "Developing an NSDI Clearinghouse node for the Olympic Peninsula."

Northwest Scientific Association, Olympia, WA, March 1998. "Climatic change and limiting factors in high-altitude forests."

Landscape Ecology Conference, Madison, WI, March 1998. "Spatial models of fire frequency for the Columbia River Basin."

Northwest Scientific Association, Tacoma, WA, March 1999. "Long-term hydrological patterns at Crater Lake, Oregon."

Northwest Scientific Association, Tacoma, WA, March 1999. "Recent growth trends in conifer species of western North America."

Northwest Scientific Association, Tacoma, WA, March 1999. "Spatial and temporal trends in elk habitat on the Olympic Peninsula."

American Society of Photogrammetry and Remote Sensing, Portland, OR, May 1999, "The Olympic Peninsula Clearinghouse: a model National Spatial Data Infrastructure node."

International Association for Landscape Ecology, Snowmass, CO, July 1999, "Recent growth in conifer species of western North America: assessing regional and continental patterns."

Ecological Society of America, Spokane, WA, August 1999, "Climatic variation and limiting factors in high-altitude forests of the Pacific Northwest."

Ecological Society of America, Spokane, WA, August 1999, "Growth response of mountain hemlock forests to climatic variability in the Pacific Northwest."

Ecological Society of America, Snowbird, UT, August 2000, "Taking the pulse of mountains: stress and ecosystem change in the 20th century."

Ecological Society of America, Snowbird, UT, August 2000, "Recent growth in conifer species of western North America: assessing regional and continental patterns."

Canadian Association of Geographers, Western Division, Calgary, Alberta, March 2001. "Atmospheric forcing of spatial-temporal patterns in severe wildfire years in the American Northwest."

Association of American Geographers, New York, NY, March 2001. "Climatic variability and coniferous forests of the Pacific Northwest."

Association of American Geographers, New York, NY, March 2001. "Taking the pulse of mountains: ecosystem responses to climatic variability."

International Association of Landscape Ecology, Tempe, AZ, April 2001, "Effects of human land use on landscape structure on the western Olympic Peninsula, Washington, U.S.A

Society of American Foresters, Arlington, WA, April 2003. "Restoring the role of fire in Western ecosystems: will the smoke get in our eyes?"

Presentations at technical conferences, workshops, etc.

Task force of the National Council of the Paper Industry on Air and Stream Improvement, Riverside, CA, April 1985. "Methods of assessing ozone injury in trees with emphasis on tree ring analysis."

Acid Deposition/Air Pollution Research Workshop, Sequoia and Kings Canyon National Parks, CA, January 1986. "Patterns of growth in Jeffrey pine."

Workshop sponsored by the National Council of the Paper Industry on Air and Stream Improvement, Tucson, AZ, February 1986 "Detecting the effects of air pollution on tree growth: ozone and Jeffrey pine in the Sierra Nevada."

Symposium on Causes and Effects of Air Pollution in Central California, California State University, Fresno, CA, August 1986. "Growth patterns in ozone-stressed Jeffrey pine" (invited paper).

International Symposium on Ecological Aspects of Tree-Ring Analysis, Lamont-Doherty Geological Observatory, Columbia University, Tarrytown, NY, August 1986. "Detecting the effects of air pollution on growth of Jeffrey pine in the Sierra Nevada, California."

Peer review meeting of the National Acid Precipitation Assessment Program, Atlanta, GA, March 1987. "Effects of ozone injury on pine growth in the southern Sierra Nevada."

Technical workshop on research at Eastern Brook Lakes Watershed, University of California, Riverside, CA, April 1987. "Patterns of tree growth at Eastern Brook Lakes Watershed."

Annual meeting of the Forest Response Program, Corpus Christi, TX, February 1988. "Growth trends in the mixed conifer forest of the Sierra Nevada."

IUFRO Conference on Air Pollution and Forest Decline, Interlaken, Switzerland, October 1988. "The effects of ozone stress on tree growth and vigor in the Sierra Nevada of California, USA."

Global Climate Change Educators Conference, Seattle, WA, January 1991. "Effects of climate change on forests."

Conference on Improving Natural Resource Management through Monitoring, Corvallis, OR, March 1992. "Designing and implementing long-term natural resource monitoring programs."

Conference on Threats to the National Wilderness Preservation System, Portland, OR, May 1992. "Identifying and managing for the potential impacts of global change in wilderness" (invited paper).

International Conference on Mountain Environments in Changing Climates, Davos, Switzerland, October 1992. "Recent changes in the growth and distribution of subalpine forests in western North America" (invited paper).

International Conference on Mountain Environments in Changing Climates, Davos, Switzerland, October 1992. "Toward a functional network of mountain protected areas."

U.S. Forest Service Remote Sensing Conference, Portland, OR, April 1994. "Designing and developing a multi-resource GIS database linking vegetation inventory data for four national parks in the Pacific Northwest."

Conference on Stand Inventory Technologies for Forest Ecosystem Management, Portland, OR, May 1994. "National Park Service database development project."

Pacific Northwest Ozone Workshop, Bellingham, WA, April 1995. "Summary of ozone monitoring at Mount Rainier National Park using passive ozone samplers during summer 1994."

International Joint Commission Workshop on Air Quality, Vancouver, British Columbia, November 1995. "Evaluating the effects of ozone on terrestrial vegetation: a conceptual approach" (invited paper).

Washington Ozone Workshop, Olympia, WA, December 1995. "Measuring ozone distribution at Mt. Rainier National Park with passive samplers." (invited paper)

International Treeline Workshop, Jasper, Alberta, October 1996. "Forest growth and regeneration patterns at treeline in the Pacific Northwest." (invited paper)

North Cascades National Park Long-Term Ecological Monitoring Workshop, March 1998. "Air quality in the North Cascades."

George Wright Society Conference, Asheville, NC, March 1999. "Using analytical tools for decision making and program planning in natural resources: breaking the fear barrier."

World Affairs Council, Seattle, WA, May 1999. "Global climate change in Pacific Northwest forests."

Fire Science Conference and Workshop, Boise, ID, June 1999. " Fire frequency in the Interior Columbia River basin: building regional models from fire history data."

Information Systems Workshop, Corvallis, OR, July 1999, "The Olympic Peninsula NBII node."

National Biological Information Infrastructure Workshop, Seattle, WA, August 1999. "The Olympic Peninsula NBII and NSDI clearinghouse."

Regional Ecosystem Office Information Systems Workshop, Portland, OR, February 2000. "Creating a clearinghouse for scientific information: a case study on the Olympic Peninsula."

National Park Service Resource Management Conference, San Diego, CA, March 2000. "Biological and social science research at Cascadia Field Station: partnerships with national parks in the Pacific West region."

Conference on Forestry and Climate Change, Glasgow, Scotland, April 2000. "Effects of climatic variability on forest ecosystems in the Pacific Northwest, USA."

Conference on Validation Monitoring of Salmon in the Pacific Northwest, Olympia, WA, December 2000. "Principles of validation monitoring."

Pacific Northwest Weather Workshop, Seattle, WA, March 2001. "The association between mid-tropospheric circulation anomalies and the area burned by wildfire in the American Northwest."

Office of Personnel Management's Professional Council of Federal Scientists and Engineers, Seattle, WA, April 2001. "Atmospheric forcing of severe wildfire years in the American Northwest."

Washington Department of Natural Resources, Commissioner Doug Sutherland's office, Olympia, WA, April 2001, "Climate Change and Forests."

North Cascades National Park, Newhalem, WA, June 2001. "Climatic variability and forest ecosystems."

Global Change and Terrestrial Ecology Fire Modeling Workshop, West Glacier, MT, September 2001. "Linking empirical and process-based fire models."

Center for Science in the Earth System, Advisory Review, Seattle, WA, March 2002. "Climate and forest resources in the Pacific Northwest."

Tundra Workshop, Whitefish, MT, April 2002. "Climatic variability and treeline."

North Cascades National Park, Newhalem, WA, June 2002. "Climatic variability and natural resources in the Pacific Northwest."

Seminars

Department of Forestry, University of Illinois, Urbana, IL, June 1980. "Nutrient cycling in bottomland forests and implications for management."

USDA Forest Service Fire Laboratory, Riverside, CA, November 1980. "Nutrient dynamics of riparian forest communities."

Mount Holyoke College, South Hadley, MA, February 1981. "Nutrient dynamics and function of bottomland forest communities."

USDA Forest Service Fire Laboratory, Riverside, CA, November 1982. "The effects of wildfire on timber in the northern Rocky Mountains."

Department of Earth Sciences, University of California, Riverside, CA, February 1983. "Estimating wildfire effects with computer simulation techniques."

Department of Botany and Plant Sciences, University of California, Riverside, California, November 1983. "Fire ecology in the northern Rocky Mountains."

USDA Forest Service Fire Laboratory, Riverside, CA, March 1986. "Detecting the effects of air pollution on tree growth in the Sierra Nevada."

Riverside County Museum of Natural History, Riverside, CA, March 1986. "Plant adaptations in southern California environments."

Department of Botany and Plant Sciences, University of California, Riverside, CA, May 1986. "Effects of ozone on Jeffrey pine growth in the southern Sierra Nevada."

U.S. Environmental Protection Agency, Corvallis, OR, October 1986. "Patterns of growth in ozone-stressed Jeffrey pine in the southern Sierra Nevada."

U.S. Environmental Protection Agency, Corvallis, OR, March 1987. "Methods of detecting the effects of air pollution injury on tree growth."

USDA Forest Service, Northeastern Research Station, Burlington, VT, March 1987. "Effects of ozone injury on pine growth in the southern Sierra Nevada."

Crater Lake National Park, OR, July 1991. "Global climate change in the Pacific Northwest."

Mt. Rainier National Park, WA, October 1991. "Impacts of climate change on subalpine ecosystems."

Laboratory of Tree-Ring Research, University of Arizona, Tucson, AZ, April 1991.
"Evaluating growth trends of subalpine fir in the Pacific Northwest."

North Cascades National Park, Sedro-Woolley, WA, April 1992. "Sensitivity of subalpine ecosystems to climate change."

Olympic National Park, Port Angeles, WA, June 1992. "Climate change and high elevation ecosystems."

National Park Service, Seattle, WA, July 1993. "Climate change and national parks in the Pacific Northwest."

Society for Conservation Biology, Seattle, WA, November 1994. "The National Biological Survey and natural resources research."

Olympic National Park, Port Angeles, WA, April 1998. "Tropospheric ozone in western Washington."

University of Washington, Seattle, WA, November 1999. "Climate change research in national parks of the Pacific Northwest."

Joint Institute for the Study of Atmosphere and Oceans, Seattle, WA, February 2000.
"CLIMET: a research program on the effects of climatic variability on natural resources in the Pacific Northwest."

Fall Forestry Seminar 2000, Washington State University, Eatonville, WA, December 2000.
"The role of fire and other ecological disturbances in Pacific Northwest forests."

Civil Engineering Seminar, University of Washington, Seattle, WA, March 2001. "Life at treeline in a changing climate."

Forest Service Pacific Northwest Research Station Leadership Meeting, Seattle, WA, April 2002. "What do trees, salmon, and geoducks have in common?"

Oregon Graduate Institute, Portland, OR, May 2002. "Climatic variability and natural resources in the Pacific Northwest."

Washington State University, Pullman, WA, April 2003. "Climatic variability and natural resources in the Pacific Northwest."