

AARON WEISKITTEL

Assistant Professor of Forest Biometrics and Modeling
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EDUCATION

Ph.D., 2007

Oregon State University, Department of Forest Science, Corvallis, OR

Major: Forest growth and yield modeling

Dissertation title: Development of a hybrid model for intensively managed Douglas-fir plantations in the Pacific Northwest

M.S., 2003

Oregon State University, Department of Forest Resources, Corvallis, OR

Major: Quantitative Silviculture

Thesis title: Alterations in Douglas-fir crown structure, morphology, and dynamics due to Swiss needle cast in the Oregon Coast Range

B.S., 2001

The Ohio State University, School of Natural Resources, Columbus, OH

Major: Natural Resources (Forestry)

Thesis title: Canopy gap characteristics of an old-growth forest in Ohio

EXPERIENCE

Production Forestry Research Fellow, 2006 - 2007

The Weyerhaeuser Company, Albany, OR

Invited Research Fellow, Fall of 2006

Forest Research Institute of Baden-Württemberg, Freiburg, Germany

Graduate Research Assistant, 2001-2006

Oregon State University, Corvallis, OR

PUBLICATIONS

Peer-Reviewed

Weiskittel, A.R., Maguire, D.A., Johnson, G.P., and Monserud, R.A. in review. Development of a hybrid modelling approach for intensively managed Douglas-fir plantations in the Pacific Northwest. I. Verification of stand-level predictions. Submitted to Ecological Modelling.

Weiskittel, A.R., Maguire, D.A., Johnson, G.P., and Monserud, R.A. in review. Development of a hybrid modelling approach for intensively managed Douglas-fir plantations in the Pacific Northwest. II. Verification of tree-level predictions. Submitted to Ecological Modelling.

Weiskittel, A.R., Gould, P.J., and Temesgen, H. in review. Regional variation in the self-thinning boundary line for three species with varying levels of shade tolerance. Submitted to Forest Science.

Weiskittel, A.R., Temesgen, H., Wilson, D.S., and Maguire, D.A. 2008. Modelling within- and between-stand variability in Douglas-fir, hybrid spruce, and ponderosa pine specific leaf area. *Annals of Forest Science* 103.

Weiskittel, A.R. and Maguire, D.A. 2007. Alterations in Douglas-fir leaf area index and litterfall dynamics caused by Swiss needle cast disease in north coastal Oregon. *Annals of Forest Science* 64: 121-132.

Weiskittel, A.R., Maguire, D.A., and Monserud, R.A. 2007. Response of branch growth and mortality to silvicultural treatments in coastal Douglas-fir plantations: Implications for predicting tree growth. *Forest Ecology and Management* 251: 182-194.

Weiskittel, A.R., Garber, S.M., Johnson, G.R., Maguire, D.A., and Monserud, R.A. 2007. Annualized diameter and height growth functions for plantation-grown Douglas-fir, western hemlock, and red alder in the Pacific Northwest. *Forest Ecology and Management* 250: 266-278.

Weiskittel, A.R., Maguire, D.A., and Monserud, R.A. 2007. Modeling crown structural responses to competing vegetation control, thinning, fertilization, and Swiss needle cast in coastal Douglas-fir of the Pacific Northwest, USA. *Forest Ecology and Management* 245: 96-109.

Temesgen, H. and Weiskittel, A.R. 2006. Leaf mass per area relationships across light gradients in hybrid spruce. *Trees* 20: 522-530.

Weiskittel, A.R., Maguire, D.A., Garber, S.M., and Kanaskie, A. 2006. Influence of Swiss needle cast on foliage age class structure and vertical foliage distribution in Douglas-fir plantations of north coastal Oregon. *Canadian Journal of Forest Research* 36: 1497-1508.

Weiskittel, A.R. and Maguire, D.A. 2006. Branch surface area and its vertical distribution in coastal Douglas-fir. *Trees* 20: 657-667.

Weiskittel, A.R., Maguire, D.A., Monserud, R.A., Rose, R., and Turnblom, E.C. 2006. Intensive management influence on Douglas-fir stem form, branch characteristics, and simulated product recovery. *New Zealand Journal of Forestry Science* 36: 293-312.

Weiskittel, A.R. and Hix, D.M. 2003. Canopy gap characteristics of an oak-hickory old-growth forest. *Ohio Journal of Science* 103: 111-115.

Reports

Weiskittel, A.R. and Maguire, D.A. 2006. Influence of year on the relationship between foliage retention and branch biomass. *In*: Shaw, D., editor. Swiss needle cast cooperative 2006 annual report. Oregon State University, College of Forestry. Corvallis, OR. pp 38-39.

Weiskittel, A.R., Maguire, D.A., and Monserud, R.A. 2006. Influence of Swiss needle cast on branch growth and mortality: implications for individual tree growth projections. *In*: Shaw, D., editor. Swiss needle cast cooperative 2006 annual report Oregon State University, College of Forestry. Corvallis, OR. pp 40-42.

Weiskittel, A.R. and Maguire, D.A. 2006. Influence of Swiss needle cast on Douglas-fir branch attributes across a Swiss needle cast gradient. *In*: Shaw, D., editor. Swiss needle cast cooperative 2006 annual report. Oregon State University, College of Forestry. Corvallis, OR. pp 43-44.

Weiskittel, A.R. and Maguire, D.A. 2006. Influence of sulfur and sulfur + lime on Douglas-fir upper crown branch attributes. *In*: Shaw, D., editor. Swiss needle cast cooperative 2006 annual report. Oregon State University, College of Forestry. Corvallis, OR. pp 45-46.

Weiskittel, A.R. and Maguire, D.A. 2005. Using hybrid models to predict annual stand-level growth across a range of Swiss needle cast severity. *In*: Mainwaring, D. and Shaw, D., editors. Swiss needle cast cooperative 2005 annual report. Oregon State University, College of Forestry. Corvallis, OR. pp 18-20.

Weiskittel, A.R. and Maguire, D.A. 2005. Influence of intensive management and sulfur treatments on Douglas-fir foliage. *In*: Mainwaring, D. and Shaw, D., editors. Swiss needle cast cooperative 2005 annual report. Oregon State University College of Forestry. Corvallis, OR. pp 21-22.

Weiskittel, A.R. and Maguire, D.A. 2005. Response in Douglas-fir leaf area index and litterfall dynamics to Swiss needle cast in North Coastal Oregon. *In*: Mainwaring, D. and Shaw, D., editors. Swiss needle cast cooperative 2005 annual report. Oregon State University College of Forestry. Corvallis, OR. pp 37-50.

Weiskittel, A.R., Maguire, D.A., and Monserud, R.A. 2005. Influence of fertilization and thinning on Douglas-fir branch number and size. *Stand Management Cooperative Quarterly Newsletter*. University of Washington College of Forest Resources. Seattle, WA. pp. 5-7.

Weiskittel, A.R., and Maguire, D.A. 2004. Influence of stand development and intensive silviculture on crown sparseness. *In*: Mainwaring, D., editor. Swiss needle cast cooperative 2004 annual report. Oregon State University College of Forestry. Corvallis, OR. pp 31-34.

Weiskittel, A.R. and Maguire, D.A. 2004. Growth and mortality models that incorporate the effects of Swiss needle cast; an examination of SMC ORGANON biases and development of new equations using data from the growth impact, pre-commercial thinning, and commercial thinning studies. *In*: Mainwaring, D., editor. Swiss needle cast cooperative 2004 annual report. Oregon State University College of Forestry. Corvallis, OR. pp 64-70.

Weiskittel, A.R. Maguire, D.A., and Higgins, M. 2004. Growth response of young Douglas-fir plantations with severe Swiss needle cast to vegetation management and balanced fertilizer applications. *In*: Mainwaring, D., editor. Swiss needle cast cooperative 2004 annual report. Oregon State University College of Forestry. Corvallis, OR. pp 71-74.

Weiskittel, A.R. and Maguire, D.A. 2004. Influence of Swiss needle cast on Douglas-fir stem properties. *In*: Mainwaring, D., editor. Swiss needle cast cooperative 2004 annual report. Oregon State University College of Forestry. Corvallis, OR. pp 91-97.

Weiskittel, A.R., Maguire, D.A. and Kanaskie, A. 2003. Alterations in Douglas-fir crown structure and morphology due to Swiss needle cast in the Oregon Coast Range. *In*: Filip, G. Swiss needle cast cooperative 2003 annual report. Oregon State University, College of Forestry, Corvallis, OR. pp. 61-63.

Conference Proceedings

Weiskittel, A.R., Maguire, D.A., and Monserud, R.A. 2007. Development of a hybrid modeling approach for intensively managed Douglas-fir in the Pacific Northwest. *In*: Dystrka, D. and Monserud, R.A. Proceedings of the IUFRO Working Party 4.01.05 Forest growth and timber quality: Crown models and simulation methods for sustainable forest management conference. Portland, OR.

Weiskittel, A.R., Maguire, D.A., and Monserud, R.A. 2005. Influence of intensive management on Douglas-fir stem taper, branch characteristics, and wood quality: measurements and simulation. *In*: Todoroki, C.L. Proceedings of the IUFRO Working Party 5.01.04 Wood Quality Modeling Working Group 2005 conference. Auckland, NZ.

Weiskittel, A.R., Maguire, D.A., and Manter, D. 2004. Alterations in Douglas-fir foliage age class structure and vertical distribution imposed by Swiss needle cast disease in the Oregon Coast Range. *In*: Hasenauer, H. and Mäkelä, A. editors. Modeling forest production. Scientific tools, data needs and sources, validation and application. BOKU University, Vienna, Austria.

Weiskittel, A.R. and Maguire, D.A. 2003. Alterations in Douglas-fir fine litterfall imposed by Swiss needle cast in the Oregon Coast Range. *In: Proceedings of the 4th North American Forest Ecology Workshop*. Oregon State University, College of Forestry. 16-20 June 2003. Corvallis, OR.

Weiskittel, A.R., Maguire, D., and Kanaskie, A. Fire risk, Swiss needle cast, and Douglas-fir crown structure in the Oregon Coast Range: A progress report. *In: Proceedings of Forest Health Monitoring Work Group Meeting*. USDA Forest Service. 28-30 January 2003. Monterey, CA.

Weiskittel, A.R. and Orwig, D.A. 2001. Stand response to hemlock woolly adelgid infestation in Connecticut. *Ohio Journal of Science* 101(1): 25.

Weiskittel, A.R. 2000. Composition, structure, and dynamics of hemlock stands with various levels of woolly adelgid infestation in Connecticut. *In: Proceedings of the Eighth Annual Harvard Forest Summer Student Symposium*. Harvard Forest. Petersham, MA.

Conference Posters

Weiskittel, A.R., Maguire, D.A. and Kanaskie, A. 2004. Effect of Swiss needle cast on Douglas-fir crown structure as it relates to fire risk and behavior in young plantations of western Oregon. *Forest Health Monitoring Work Group Meeting*. USDA Forest Service

Weiskittel, A.R. and Maguire, D.A. 2003. Alterations in Douglas-fir fine litterfall imposed by Swiss needle cast in the Oregon Coast Range. *The 4th North American Forest Ecology Workshop*. 16-20 June 2003. Corvallis, OR.

Weiskittel, A.R., Maguire, D.A., and Kanaskie, A. 2003. Fire risk, Swiss needle cast, and Douglas-fir crown structure in the Oregon Coast Range. *Forest Health Monitoring Work Group Meeting*. USDA Forest Service 28-30 January 2003. Monterey, CA.

RESEARCH GRANTS

USDA Forest Service Pacific Northwest Research Station, January 2004 – January 2007, 'Development of a hybrid model for intensively managed Douglas-fir', \$50,000

USDA Forest Service Forest Health Monitoring, January 2001 – January 2003, 'Influence of Swiss needle cast on Douglas-fir crown structure as it relates to fire risk in Western Oregon', \$100,000

Oregon State University College of Forestry, January 2003, Dilworth Memorial Research Grant, \$5,000

TEACHING EXPERIENCE

Teaching assistant for 10-week graduate-level statistics course in winter of 2005

Completed 10-week graduate course on developing and teaching at the university-level

AWARDS

Western Mensurationists 2006 Best Speaker