

CURRICULUM VITAE

ROBERT G. WAGNER

February 2019

CONTACT INFORMATION

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EDUCATION

Ph.D.	1989	Silviculture/Vegetation Management, Department of Forest Science, Oregon State University, Corvallis, OR.
M.S.	1980	Forest Ecology/Silviculture, College of Forest Resources, University of Washington, Seattle, WA.
B.S.	1977	Forest Management, College of Natural Resources, Utah State University, Logan, UT.

FIELDS OF EXPERTISE

Academic and research leadership, industry/university partnerships, silviculture, forest management, forest regeneration, vegetation ecology and management

PROFESSIONAL EXPERIENCE

2016 – Present Head & Professor, Department of Forestry & Natural Resources, Purdue University, West Lafayette, Indiana.

As Department Head, I lead faculty, staff, and students in achieving excellence in learning, discovery, and engagement in the science, management and sustainable use of natural resources around the globe. FNR programs focus on forestry and wood products, wildlife, fisheries and aquatic sciences, interdisciplinary ecology, and natural resources social science. The department includes approximately 32 tenure-track faculty, 55 professional staff, 15 adjunct faculty, 20 postdoctoral associates, 85 graduate students, and 245 undergraduate students. Responsibilities include an annual operating budget of about \$15 million, >\$85 million in endowments, and management of 5,000 acres of forestland.

2010 – 2016 Director, Center for Research on Sustainable Forests, University of Maine, Orono, Maine.

The Center for Research on Sustainable Forests (CRSF) initiates and conducts research on commercial forests, family forests, conservation lands, and nature-based tourism. The Cooperative Forestry Research Unit (CFRU) is a long-standing research cooperative that coordinates research on over 8 million acres in northern Maine's commercial forest. The Family Forests program is coordinating research on forest resource issues affecting nearly 6 million acres of small private forests owned by over 120,000 small woodland owners in southern and eastern Maine. The Conservation Lands research program is coordinating research on issues affecting about 4 million acres of conservation forestlands. The Nature-Based Tourism program conducts leading collaborative research, education, and outreach on sustainable tourism in Maine. As Director of the center, I also managed Theme 3 (Forest Productivity and Forest Products) of the Northeastern States Research Cooperative (NSRC) – a USDA competitive grant program that supports cross-disciplinary, collaborative research in the Northern Forest. The Howland Research Forest also is managed under the CRSF as and Ameriflux Network, a network of sites across North and South America that are monitoring ecosystem CO₂, water, and energy fluxes.

2004 – 2016 Henry W. Saunders Distinguished Professor in Forestry, School of Forest Resources

The Henry W. Saunders Distinguished Professorship was created to “encourage highly qualified educators for teaching students in forestry” and to “advance knowledge by developing research of the hardwood species.” The Saunders Chair also includes providing leadership in helping UMaine “establish and maintain itself as an outstanding world class forestry institution.” My teaching responsibilities included Research Methods (SFR 521), Forest Regeneration (SFR 410), and Introduction to Forest Resources Professions (SFR 103) courses, and serving as advisor to graduate students.

1999 – 2016 Director, Cooperative Forestry Research Unit, University of Maine, Orono, Maine.

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As Director of the Cooperative Forest Research Unit (CFRU), I managed a research cooperative representing more than 30 forestland owners that own or manage 8.3 million acres of forestland in Maine (half of the state's total forestland). I have brought together diverse organizations including industrial forestland owners, large family forest owners, TIMOs, REITs, conservation organizations, pulp mills, energy companies, and government agencies to collaborate on research addressing common forest resource problems. The mission of the CFRU is to conduct applied research that contributes to the sustainable management of Maine's forests, and includes research focused on silviculture, forest modeling, wildlife habitat, biodiversity, and riparian zone management. As Director of CFRU, I also served as Maine's Site Director for the Center for Advanced Forestry Systems (CAFS), a NSF I/UCRC program that includes a national consortium of industry/university research cooperatives. As a scientist in the CFRU, my research included research focuses on commercial thinning, improving quality of hardwood regeneration, long-term dynamics of spruce-fir stands following herbicide and PCT treatments, modeling Maine's long-term wood supply, and vegetation management in Northeastern forests.

2008 – 2013

Director, School of Forest Resources, University of Maine, Orono.

As Director of the School, I led faculty and staff in delivery of the university's Land Grant mission in forest resources education, research, and service. The School includes 20 faculty, 150 undergraduates, 60 graduate students, and 8 staff. These duties included overseeing 13,000 acres of university forest properties near campus and across the state. Major accomplishments during my term included: major revision of the school's curricula; hiring of five new tenure-track faculty members in a difficult fiscal environment (two from new external endowments); successful SAF accreditation of all SFR majors and SWST accreditation of one new major; major renovation of Nutting Hall; building of the new Barbara Wheatland Geospatial Laboratory from a private endowment, and a significant increase to the school's \$16 million in endowment funds (which is the largest of any department in the 7 campus UMaine System).

2006 – 2013

Associate Director, Forest Bioproducts Research Institute (FBRI).

As a Co-PI of the NSF research team that received a \$6.9 million award from the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR) and a \$3.5 million match by the Maine Economic Improvement Fund, I helped develop FBRI. The goal of FBRI is to advance understanding about the scientific underpinnings, system behavior, and policy implications for the production of forest-based bioproducts that meet societal needs for materials, chemicals and fuels in an economically and ecologically sustainable manner. As Associate Director I was responsible for leading FBRI research on understanding the wood supply implications, ecological impacts, social acceptability, and economic viability of emerging forest bioenergy and bioproducts markets in the state of Maine.

2003 – 2008

Professor of Silviculture, School of Forest Resources, University of Maine, Orono, & Cooperating Scientist, U.S. Forest Service, Northern Research Station.

As a faculty member in the School of Forest Resources, I coordinated the Acadian

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Forest Ecosystem Research Program (AFERP) located on the Penobscot Experimental Forest. AFERP is a long-term, multi-disciplinary, cooperative research effort examining the ecological effects of expanding-gap silvicultural systems in the Acadian forest. My research AFERP research projects involved vegetation succession and downed woody debris dynamics following gap harvesting, and developing new methods for quantifying stand structural complexity. Forty percent of my appointment included serving as a Cooperating Scientist with the U.S. Forest Service, Northern Research Station from 1998-2008.

1998 – 2003 Associate Professor, Department of Forest Ecosystem Science, and Director, Cooperative Forestry Research Unit, University of Maine, Orono.

1991 – 1998 Program Leader & Senior Scientist, Ontario Forest Research Institute, Ontario Ministry of Natural Resources, Sault Ste. Marie, Ontario, Canada.

I developed and led the Vegetation Management Alternatives Program (VMAP) that was funded from an Ontario Cabinet Submission for a 5-year \$15 million appropriation. This comprehensive program included applied and fundamental research, professional and public education, and field delivery. The program advanced all aspects of forest vegetation management in Ontario, changing the way forest managers view and practice forest vegetation management. Accomplishments from 1991-96 included successfully developing and investigating a wide variety of vegetation management alternatives, advancing knowledge about the ecological effects of vegetation management practices, producing over 300 technical publications (more than 80 of which are in peer-reviewed journals), and providing continuing education opportunities for hundreds of forest managers and technicians.

As program leader, I managed 15-20 scientists and technicians in the institute and in four regional science and technology units at other locations. As part of the program, I also initiated and managed a multi-million dollar trust fund for competitive research proposals with university, federal, and private research organizations across Canada.

As a principal investigator, my research emphasized work in the area of plant interference, vegetation dynamics and succession, vegetation management alternatives, ecophysiology, and the ecological effects of silvicultural activities. I have been co-investigator of projects involving forest modeling, expert systems, effects of vegetation management on small mammal populations, and a study of public attitudes and perceptions about forestry issues. As an adjunct professor at several Ontario universities, I supervised graduate student projects on mechanisms of interspecific competition.

1991 - 1992 Unit Leader, Scientist and Stand Dynamics/Silviculture Unit, Ontario Forest Research Institute, Ministry of Natural Resources, Sault Ste. Marie, Ontario, Canada.

Provided leadership and supervision for seven scientists and six technicians conducting research in stand dynamics and general silviculture for the institute. The unit was dedicated to research in the areas of tolerant hardwood silviculture, boreal mixedwood stand dynamics and ecology, and forest vegetation management. Development of the VMAP (above) and ministry re-organization

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shifted my responsibilities to full-time leadership of that program.

- 1990 - 1991 Provincial Vegetation Management Specialist, Forest Health and Protection Section, Ministry of Natural Resources, Sault Ste. Marie, Ontario, Canada.
Provided leadership, technical recommendations, and forest policy development for all aspects of forest vegetation management on crown forestlands managed by the Ontario Ministry of Natural Resources (40 million hectares). Included supervision of several technical staff responsible for the weed control program in 10 provincial nurseries and herbicide-use assessment.
- 1986 - 1989 Assistant Director, CRAFTS (Coordinated Research on Alternative Forestry Treatments and Systems in vegetation management) Cooperative, Department of Forest Science, College of Forestry, Oregon State University, Corvallis.
Assisted Director in leading a university-based research cooperative involving 20 industrial and government forestry organizations. Primary responsibilities included initiating and coordinating a wide range of research projects focusing on plant ecology, vegetation management, modeling, and other silvicultural aspects of forest regeneration in the Pacific Northwest.
- 1981 - 1986 Faculty Research Assistant, CRAFTS Cooperative (acting Cooperative Director from 10/82 to 8/83).
Project coordinator and research technician for coop studies on alternative vegetation management practices.
- 1980 - 1981 Tree Planting Crew Supervisor, Pope & Talbot Co., Port Gamble, WA.
- 1980 Graduate Research Assistant, College of Forest Resources, University of Washington, Seattle. Biomass of coniferous understory trees in Crater Lake National Park, Oregon.
- 1979 - 1980 Graduate Teaching Assistant, University of Washington-USDA Forest Service. Region 6 Silviculture Institute, basic sciences and silvicultural prescriptions modules
- 1978 - 1979 Graduate Teaching Assistant, University of Washington, College of Forest Resources. undergraduate forest ecology (4 quarters)
- 1976 - 1977 Research Technician, Utah State University, Logan. Biomass of conifers in a high-elevation spruce-fir forest.

PUBLICATIONS

Refereed Journal Articles

(Total = 94)

(underlined authors are graduate students or post-doctoral fellows for which I was advisor)

Wagner, R.G., Gonzalez-Benecke, C.A., Nelson, A.S., Jacobs, D.F. 2018. Forest regeneration in changing environments. *New Forests* 49(6): 699-703. <https://doi.org/10.1007/s11056-018-9687-8>

Bose, A.K., A. Weiskittel, C. Kuehne, **R.G. Wagner**, E. Turnblom, H.E. Burkhart. 2018. Tree-level growth and survival following commercial thinning of four major softwood species in North America. *Forest Ecology and Management* 427: 355-364. <https://doi.org/10.1016/j.foreco.2018.06.019>

Castle M., A. Weiskittel, **R.G. Wagner**, M.J. Ducey, J. Frank, G. Pelletier. 2018. Evaluating the influence of stem form and damage on individual-tree diameter increment and survival in the Acadian Region: implications for predicting future value of northern commercial hardwood stands. *Canadian Journal of Forest Research* 48: 1–13. <https://dx.doi.org/10.1139/cjfr-2018-0081>

Kuehne, C., A. Weiskittel, A. Pommerening and **R.G. Wagner**. 2018. Evaluation of 10-year temporal and spatial variability in structure and growth across contrasting commercial thinning treatments in spruce-fir forests of northern Maine, USA. *Canadian Journal of Forest Research* 75: 20. <https://doi.org/10.1007/s13595-018-0697-7>.

Bose, A.K., A. Weiskittel, C. Kuehne, **R.G. Wagner**, E. Turnblom, H.E. Burkhart. 2018. Does commercial thinning improve stand-level growth of the three most commercially important softwood forest types in North America? *Forest Ecology and Management* 409: 683-693. <https://doi.org/10.1016/j.foreco.2017.12.008>

Bose, A.K., **R.G. Wagner**, B.E. Roth, and A.R. Weiskittel. 2018. Influence of browsing damage and overstory cover on regeneration of American beech and sugar maple nine years following understory herbicide release in central Maine. *New Forests* 49(1): 67-85. <https://doi.org/10.1007/s11056-017-9605-5>.

Bose, A.K., A.R. Weiskittel, and **R.G. Wagner**. 2017. A three decade assessment of climate-associated changes in forest composition across the north-eastern USA. *Journal of Applied Ecology* 54(6): 1592-1604. doi:10.1111/1365-2664.12917.

Castle, M., A. Weiskittel, **R.G. Wagner**, M. Ducey, J. Frank, and G. Pelletier. 2017. Variation in stem form and risk of four commercially important hardwood species in the Acadian Forest: Implications for potential sawlog volume and tree classification systems. *Canadian Journal of Forest Research* 47(11): 1457-1467. dx.doi.org/10.1139/cjfr-2017-0182.

Bose, A.K., A.R. Weiskittel, and **R.G. Wagner**. 2017. Occurrence, pattern of change, and factors associated with American beech-dominance in stands of the northeastern USA forest. *Forest Ecology & Management* 392: 202-212. <http://dx.doi.org/10.1016/j.foreco.2017.03.003>.

- Bose, A.K., A.R. Weiskittel, **R.G. Wagner**, and C. Kuehne. 2016. Assessing the factors influencing natural regeneration patterns in the diverse, multi-cohort, and managed forests of Maine, USA. *Journal of Vegetation Science* 27(6): 1140-1150.
- Hiesl, P., M.S. Crandall, A. Weiskittel, J.G. Benjamin, and **R.G. Wagner**. 2016. Evaluating the long-term influence of alternative commercial thinning regimes and harvesting systems on projected net present value of precommercially thinned spruce–fir stands in northern Maine. *Canadian Journal of Forest Research* 47(2): 203-214.
- Nelson, A.S., **R.G. Wagner**, M.E. Day, I.J. Fernandez, A.R. Weiskittel, and M.R. Saunders. 2016. Light absorption and light-use efficiency of juvenile white spruce trees in natural stands and plantations. *Forest Ecology & Management* 376: 158–165.
- Kuehne, C., A.R. Weiskittel, **R.G. Wagner**, and B.E. Roth. 2016. Development and evaluation of individual tree- and stand-level approaches for predicting spruce-fir response to commercial thinning in Maine, USA. *Forest Ecology & Management* 376: 84–95.
- Nelson, A.S., **R.G. Wagner**, M.E. Day, A.R. Weiskittel, and M.R. Saunders. 2015. Effects of species composition, management intensity, and shade tolerance on vertical distribution of leaf area index in juvenile stands in Maine, USA. *European Journal of Forest Research* 134 (2): 281-291.
- Nelson, A.S., Weiskittel, A.R., **R.G. Wagner**, and M.R. Saunders. 2014. Development and evaluation of aboveground small tree biomass models for naturally regenerated and planted species in eastern Maine, U.S.A. *Biomass and Bioenergy* 68: 215-227.
- Nelson, A.S., and **R.G. Wagner**. 2014. Spatial coexistence of American beech and sugar maple regeneration in post-harvest northern hardwood forests. *Annals of Forest Science* 71: 781–789.
- Rice, B., A.R. Weiskittel, and **R.G. Wagner**. 2014. Efficiency of alternative forest inventory methods in partially harvested stands. *European Journal of Forest Research* 133(2): 261-272.
- Nelson, A.S., A.R. Weiskittel, and **R.G. Wagner**. 2014. Development of branch, crown, and vertical distribution leaf area models for contrasting hardwood species in Maine, USA. *Trees* 28(1): 17-30.
- Olson, M.G., S.R. Meyer, **R.G. Wagner**, and R.S. Seymour. 2014. Commercial thinning stimulates natural regeneration in spruce–fir stands. *Canadian Journal of Forest Research*. 44(3): 173-181.
- Bataineh, M.M., **R.G. Wagner**, M.G. Olson, E.K. Olson. 2014. Midrotation response of ground vegetation to herbicide and precommercial thinning in the Acadian Forest of Maine, USA. *Forest Ecology & Management* 313: 132–143.
- Bataineh, M.M., L. Kenefic, A.R. Weiskittel, **R.G. Wagner**, and J. Brissette. 2013. Influence of partial harvesting and site factors on the abundance and composition of natural regeneration in the Acadian Forest of Maine, USA. *Forest Ecology & Management* 306: 96–106.
- Bataineh, M.M., **R.G. Wagner**, A.R. Weiskittel. 2013. Long-term response of spruce-fir stands to herbicide and precommercial thinning: Observed and projected growth, yield, and financial returns in central Maine, USA. *Canadian Journal of Forest Research* 43(4): 385-395.

- Nelson, A.S., **R.G. Wagner**, M.R. Saunders, and A.R. Weiskittel. 2013. Influence of management intensity on the productivity of young early successional Acadian stands in eastern Maine. *Forestry* 86 (1): 79-89.
- Nelson, A.S., M.R. Saunders, **R.G. Wagner**, and A.R. Weiskittel. 2012. Early stand production of hybrid poplar and white spruce in mixed and monospecific plantations in eastern Maine. *New Forests* 43(4): 519-534.
- Olson, M.G. and **R.G. Wagner**. 2012. Forty years of spruce-fir stand development following herbicide application and precommercial thinning in northern Maine, USA. *Canadian Journal of Forest Research* 42:(1) 1-11.
- Hennigar, C.R., J.S. Wilson, D.A. MacLean, and **R.G. Wagner**. 2011. Applying a spruce budworm decision support system to Maine: Projecting spruce-fir volume impacts under alternative management and outbreak scenarios. *Journal of Forestry* 9: 332-342.
- Nelson, A.S., and **R.G. Wagner**. 2011. Improving the composition of beech-dominated northern hardwood understories in northern Maine. *Northern Journal of Applied Forestry* 28(4): 186-193.
- Briedis, J.I., J.S. Wilson, J.G. Benjamin, and **R.G. Wagner**. 2011. Logging residue volumes and characteristics following integrated roundwood and energy-wood whole-tree harvesting in central Maine. *Northern Journal of Applied Forestry* 28(2): 66-71.
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- Saunders, M.R., S. Fraver, and **R.G. Wagner**. 2011. Nutrient concentration of down woody debris in mixedwood forests in central Maine, USA. *Silva Fennica* 45(2): 197-210.
- Hoeping, M.K., **R.G. Wagner**, J. McLaughlin, and D.G. Pitt. 2011. Timing and duration of herbaceous vegetation control in northern conifer plantations: 15th-year tree growth and soil nutrient effects. *Forestry Chronicle* 87(3): 398-413.
- Briedis, J.I., J.S. Wilson, J.G. Benjamin, and **R.G. Wagner**. 2011. Biomass retention following whole-tree, energy wood harvests in central Maine: Adherence to five state guidelines. *Biomass and Bioenergy* 35: 3551-3559.
- Olson, M.G. and **R.G. Wagner**. 2011. Factors affecting species richness of tree regeneration in mixedwood stands of central Maine. *Journal of Vegetation Science* 22(2): 300-311.
- Olson, M.G. and **R.G. Wagner**. 2010. Long-term compositional dynamics of Acadian mixedwood stands under different silvicultural regimes. *Canadian Journal of Forest Research* 40: 1993-2002.
- Amos-Binks, L.J., D.A. MacLean, J.S. Wilson, and **R.G. Wagner**. 2010. Temporal changes in species composition of mixedwood stands in northwest New Brunswick: 1946-2008. *Canadian Journal of Forest Research* 40: 1-12.

- Thomas, S.L., R.G. Wagner, and W.A. Halteman. 2009. Influence of harvest gaps and coarse woody material on click beetles (Coleoptera: Elateridae) in Maine's Acadian forest. *Biodiversity and Conservation* 18(9): 2405-2420.
- Greenwood, M.S., C.L. O'Brien, J.D. Schatz, C.A. Diggins, M.E. Day, G.L. Jacobson, A.S. White and **R.G. Wagner**. 2008. Is early life cycle success a determinant of the abundance of red spruce and balsam fir. *Canadian Journal of Forest Research*. 38: 2295-2305.
- Miller, K.M., R.G. Wagner, and S.A. Woods. 2008. Arboreal arthropod associations with epiphytes following gap harvesting in the Acadian forest of Maine. *The Bryologist* 111(3): 424-434.
- Saunders, M.R. and **R.G. Wagner**. 2008. Height-diameter models with random coefficients and site variables for tree species of central Maine. *Annals of Forest Science* 65(2): 203.
- Saunders, M.R. and **R.G. Wagner**. 2008. Long-term spatial and structural dynamics in Acadian mixedwood stands managed under various silvicultural systems. *Canadian Journal of Forest Research* 38: 498-517.
- Miller, K.M., R.G. Wagner, and S.A. Woods. 2007. Effect of gap harvesting on epiphytes and bark-dwelling arthropods in the Acadian forest of central Maine. *Canadian Journal of Forest Research* 37: 2175-2187.
- Wagner, R.G.**, and A.P. Robinson. 2006. Critical period of interspecific competition for four northern conifers: Ten-year growth and associated vegetation dynamics. *Canadian Journal of Forest Research* 36: 2474-2485.
- Little, K.M., I. Willoughby, **R.G. Wagner**, P. Adams, H. Frochot, J. Gava, S. Gous, R.A. Lautenschlager, G. Örlander, K.V. Sankaran and R.P. Wei. 2006. Towards reduced herbicide use in forest vegetation management. *Southern African Forestry Journal* 207: 63-80.
- Etheridge, D.A., D.A. MacLean, **R.G. Wagner**, and J.S. Wilson. 2006. Effects of intensive forest management on stand and landscape characteristics in northern New Brunswick, Canada (1945–2027). *Landscape Ecology* 21: 509–524.
- Wagner, R.G.**, K.M. Little, B. Richardson, and K. McNabb. 2006. The role of vegetation management for enhancing productivity of the world's forests. *Forestry* 79(1): 57-79.
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- Randolph, K.C., R.S. Seymour, and **R.G. Wagner**. 2005. Developing optimal commercial thinning prescriptions: A new graphical approach. *Northern Journal of Applied Forestry* 22(3):170-174.
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- Fraver, S., **R.G. Wagner**, and M. Day. 2002. Dynamics of down woody debris following gap harvesting in the Acadian forest of central Maine, USA. *Canadian Journal of Forest Research* 32: 2094-2105.
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- Noland, T.L., G.H. Mohammed, and **R.G. Wagner**. 2001. Morphological characteristics associated with tolerance to competition from herbaceous vegetation for jack pine, black spruce, and white pine seedlings. *New Forests* 21: 199-215.
- Robinson, D.E., **R.G. Wagner**, F.W. Bell, and C.J. Swanton. 2001. Photosynthesis, nitrogen-use efficiency, and water-use efficiency of jack pine seedlings in competition with four boreal forest plant species. *Canadian Journal of Forest Research* 31: 2014-2025.
- Shropshire, C., **R.G. Wagner**, F.W. Bell, and C.J. Swanton. 2001. Light attenuation by early successional plant species of the boreal forest. *Canadian Journal of Forest Research* 31: 812–823.
- Wagner, R.G.** 2000. Competition and critical-period thresholds for vegetation management in young conifer stands. *Forestry Chronicle* 76(6): 961-968.
- Bell, F.W., M.T. Ter-Mikaelian, and **R.G. Wagner**. 2000. Relative competitiveness of nine early-successional species of boreal forest plants associated with seedlings of jack pine and black spruce. *Canadian Journal of Forest Research* 30: 790-800.
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- Pitt, D.G., M.T. Dumas, R.E. Wall, D.G. Thompson, L. Lanteigne, W. Hintz, G. Sampson, and **R.G. Wagner**. 1999. *Chondrostereum purpureum* as a biological control agent in forest vegetation management. I. Efficacy on speckled alder, red maple, and aspen in eastern Canada. *Canadian Journal of Forest Research* 29: 841–851.
- Sullivan, T.P., R.A. Lautenschlager, and **R.G. Wagner**. 1999. Clearcutting and burning of northern spruce-fir forests: implications for small mammal communities. *Journal of Applied Ecology* 36(3): 327-344.
- Wagner, R.G.**, and M.T. Ter-Mikaelian. 1999. Comparison of biomass component equations for four species of northern coniferous tree seedlings. *Annals of Forest Science* 56: 193-199.
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- forest vegetation management alternatives in Ontario. *Forestry Chronicle* 74(5): 720-727.
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- Sullivan, T.P., C. Nowotny, R.A. Lautenschlager, and **R.G. Wagner**. 1998. Silvicultural use of herbicide in sub-boreal spruce forest: implications for small mammal population dynamics. *Journal of Wildlife Management* 62(4): 1196-1206.
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- Sullivan, T.P., D.S. Sullivan, E.J. Hogue, R.A. Lautenschlager, and **R.G. Wagner**. 1998. Population dynamics of small mammals in relation to vegetation management in orchard agroecosystems: Compensatory responses in abundance and biomass. *Crop Protection* 17(1): 1-11.
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- Wagner, R.G.** and S.R. Radosevich 1988. Interspecific competition indices for vegetation management decisions in young Douglas-fir stands. *In* Vegetation Competition and Responses: Proceedings of the Third Annual British Columbia Vegetation Management Workshop. B.C. Ministry of Forests and

Lands and University of British Columbia. FRDA Report 026.

Wagner, R.G. 1988. Competition thresholds and determining the need for vegetation treatments in young forest plantations. *In* Forest Vegetation Management Workshop Notebook. Department of Forest Science, College of Forestry, Oregon State University, Corvallis. 23 p.

Wagner, R.G. 1986. Thresholds of interspecific competition in young forest plantations: the implications for mechanical, manual, fire, and chemical tools. *In* Vegetation Management Symposium Proceedings. Association of British Columbia Professional Foresters and Southern Interior Silviculture Committee, Kamloops and Vancouver, British Columbia, Canada.

Kelpsas, B.R. and **R.G. Wagner**. 1984. Calibrating sprayers for forest vegetation management. *In* Forest Vegetation Management Workshop Notebook. Department of Forest Science, College of Forestry, Oregon State University, Corvallis. 14 p.

Wagner, R.G. 1984. Ground surveys for vegetation management decisions in young forest plantations. *In* Forest Vegetation Management Notebook. Department of Forest Science, College of Forestry, Oregon State University, Corvallis. 4 p.

Wagner, R.G. 1982. A system to assess weed severity in young forest plantations for making vegetation management decisions. *In* Forest Vegetation Management Notebook. Department of Forest Science, College of Forestry, Oregon State University, Corvallis, OR. 13 p.

Kelpsas, B.R. and **R.G. Wagner**. 1982. Concepts of spray equipment calibration. *In* Forest Vegetation Management Workshop Notebook. Department of Forest Science, College of Forestry, Oregon State University, Corvallis, OR. 12 p.

RESEARCH GRANTS

Career Total:	
As PI and Co-PI	\$ 16,454,881
As Director of Research Programs	\$ 24,809,957
University of Maine's Center for Research on Sustainable Forests (CRSF)	\$ 1,589,661
University of Maine's Cooperative Forestry Research Unit (CFRU)	\$ 8,220,296
Ontario's Vegetation Management Alternatives Program (VMAP)	\$ 15,000,000
Career Total Research Funds Received	\$ 41,264,838

2015-16 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$178,585.

2014-15 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$350,906.

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- 2014-19 **Wagner, R.G.** and A.R. Weiskittel. 2013. Phase 2 - UMaine Membership in I/UCRC Center for Advanced Forestry Systems. National Science Foundation. \$300,000.
- 2013-18 **Wagner, R.G.** Barbara Wheatland Professorship of Geospatial Innovation, Maine Timberlands Charitable Trust. \$250,000.
- 2013-18 **Wagner, R.G.** and J.C. Brissette. Assessing Carbon and Climate Dynamics in the Acadian Forest. 2013-2018 Joint Venture Agreement between US Forest Service, Northern Research Station and University of Maine, School of Forest Resources. \$358,380.
- 2012 **Wagner, R.G.** Barbara Wheatland Geospatial Analysis Laboratory Excellence Fund, Maine Timberlands Charitable Trust, \$200,000.
- 1999-2016 **Wagner, R.G.**, Director, Cooperative Forestry Research Unit, University of Maine. Annual contributions from member organizations: FY99-00 \$387,662; FY00-01 \$322,334; FY01-02 \$432,059; FY02-03 \$391,235; FY03-04 \$403,060; FY04-05 \$320,905; FY05-06 \$415,812; FY06-07 \$575,800; FY07-08 \$454,283; FY08-09 \$479,433; FY09-10 \$383,206; FY10-11 \$490,001, FY11-12 \$492,791; FY12-13 \$500,107; FY13-14 \$506,022; FY14-15 \$505,249; FY15-16 \$508,239. **Total \$7,570,296.**
- 2013-14 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$384,665.
- 2012-13 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$414,571.
- 2011-12 **Wagner, R.G.** Northeastern States Research Cooperative, Theme 3: Forest Productivity and Forest Products. USDA Forest Service, Northern Research Station. External competitive research funds received as Director of Center for Research on Sustainable Forests. \$260,934.
- 2011-13 Weiskittel, A., B. Rice, **R.G. Wagner**, and J. Wilson. Improved sampling methods and growth & yield models for partially harvested stands. Cooperative Forestry Research Unit. \$36,024.
- 2011-14 **Wagner, R.G.**, A. Weiskittel, and A. Nelson. Incorporating Young Hardwood Stand Responses to Various Levels of Silviculture and Stand Composition into New CFRU Growth & Yield Models. Cooperative Forestry Research Unit. \$67,871.
- 2011-14 **Wagner, R.G.**, J. Benjamin, A. Weiskittel, R. Seymour, and B. Roth. Austin Pond Study: Third Wave of Treatments to Assess Rotation-Length Outcomes for Silvicultural Options in Maine's Northern Forest. Cooperative Forestry Research Unit. \$121,258.

ROBERT G. WAGNER

- 2011-16 **Wagner, R.G.** Effects of Gap Harvesting, Commercial Thinning, and Silvicultural Intensity on Stand Development and Productivity. Maine Agricultural & Forest Experiment Station, University of Maine, Orono, ME.
- 2010-13 Matthew G. Olson, **R.G. Wagner**, A.R. Weiskittel, M.R. Saunders, and A.S. Nelson. Role of silvicultural intensity and species composition objectives on the growth, dynamics, and carbon balance of Northeastern forest stands. USDA Northeastern States Research Cooperative - Theme 3. \$71,808.
- 2010-12 Nelson, A.S., **R.G. Wagner**, M.E. Day, and I.J. Fernandez. Silvicultural effects on environmental conditions and resulting above-ground productivity and carbon sequestration of northeastern mixedwood forests. USDA Northeastern States Research Cooperative - Theme 3. \$40,000.
- 2010-12 Rice, B., A. Weiskittel, J. Wilson, and **R.G. Wagner**. Effects of nonselective partial harvesting in Maine's working forests. USDA Northeastern States Research Cooperative - Theme 3. \$41,704.
- 2010-11 Olson, M., S. Meyer, **R.G. Wagner**, and R.S. Seymour. Response of tree regeneration to commercial thinning in spruce-fir stands of northern Maine: first-decade results from the CFRU's Commercial Thinning Research Network. USDA Northeastern States Research Cooperative - Theme 3. \$11,044.
- 2010-11 Olson, M., S. Meyer, **R.G. Wagner**, and R.S. Seymour. Response of tree regeneration to commercial thinning in spruce-fir stands of northern Maine: first-decade results from the CFRU's Commercial Thinning Research Network. Cooperative Forestry Research Unit. \$11,044.
- 2010 **Wagner, R.G.** and A.R. Weiskittel. Application for Supplemental Funding to Support a Research Experience for Undergraduates (REU) for the I/UCRC Center for Advanced Forestry Systems. National Science Foundation. \$7,500.
- 2009-14 **Robert G. Wagner**, John C. Brissette, Laura S. Kenefic, and Matthew G. Olson. Predicting the effects of traditional and emerging forestry practices on regeneration, productivity, and dynamics of the Acadian forest. 2009-2014 Joint Venture Agreement between the U.S. Forest Service, Northern Research Station and University of Maine. \$332,375.
- 2009-13 **Robert G. Wagner** and Aaron R. Weiskittel. University of Maine Proposal For Joining The NSF Center For Advanced Forestry Systems (CAFS). National Science Foundation, Industry/University Cooperative Research Centers Program (I/UCRC). \$350,000.
- 2009 Pendse, H., M. Bilodeau, D. Donahue, A. Halog, D. Hutto, D. Neivandt, J. Rubin, S.M. Shaler, **R.G. Wagner**, P. Walsum, A. Weiskittel, and C. Wheeler. Intent to Plan for Forest Bioproducts Research Institute (FBRI), University of Maine, Orono, ME.

ROBERT G. WAGNER

- 2008-12 Spencer Meyer, **Robert G. Wagner**, Robert S. Seymour, and Aaron Weiskittel. CFRU Commercial Thinning Research Network: Continued Measurements and New Opportunities, Cooperative Forestry Research Unit, University of Maine. \$187,613.
- 2008-11 Aaron Weiskittel, John Kershaw, John Brissette, Robert Wagner, Jeff Gove, and Chad Keyser. Development of an Acadian Variant of the FVS individual tree growth model. USDA Agenda 2020 Program. \$81,933.
- 2008-11 **Robert G. Wagner** and Andrew Nelson. Improving the Species Composition of Understory Hardwood Regeneration on Beech-Dominated Sites: Continued Measurement. Cooperative Forestry Research Unit, University of Maine. \$39,509.
- 2008-11 Aaron Weiskittel, **Robert G. Wagner**, and Robert S. Seymour. Refinement of the FVS-NE individual tree growth model. Cooperative Forestry Research Unit, University of Maine. \$86,055.
- 2008-09 **Robert G. Wagner**. Management of Data from Long-Term Silvicultural Research, USDA Forest Service, Northern Research Station. \$18,500.
- 2007-10 Wiersma, B. S., Sader, **R.G. Wagner**, R.S. Seymour, and S. Meyer. Maine ForCAST Initiative: Forecasting Maine's Future Forest. Cooperative Forestry Research Unit, University of Maine. \$30,000.
- 2007-09 Wilson, J., J. Leahy, J. Benjamin, **R. Wagner**. Conservation Landowners in the Northern Forest: An Interdisciplinary Land Management Needs Assessment of Land Trusts & Conservation Easement Holder. Northeastern States Research Cooperative: Theme 1. \$50,990.
- 2007-09 Benjamin, J.S. and **R.G. Wagner**. Evaluation of biomass harvest systems for improvement of low quality beech-dominated hardwood stands in Maine. Cooperative Forestry Research Unit, University of Maine. \$44,176.
- 2007-09 Saunders, M.R., R.S. Seymour, and **R.G. Wagner**. Productivity and financial viability of natural-disturbance-based management in the Acadian Forest. Northeast States Research Coop Theme 1. \$53,095.
- 2007-08 Meyer, S.R. and **R.G. Wagner**. Capturing the Value of 30 Years of Research: Long-term CFRU Data Management. Cooperative Forestry Research Unit, University of Maine. \$44,880.
- 2006-09 Eckardt, M.J., H. Pendse, S.M. Shaler, **R.G. Wagner**, and A. vanHeiningen. Investing in Maine Research Infrastructure: Sustainable Forest Bioproducts. National Science Foundation EPSCoR Program. \$6.9 million and \$3.45 million Maine Economic Improvement Fund. Total \$10.35 million.
- 2006-09 **Wagner, R.G.**, R. Lemin, and M. McCormack. Post-harvest strategy for improving the composition of hardwood regeneration on beech-dominated sites in Maine. Cooperative Forestry Research Unit, University of Maine. \$16,189.

ROBERT G. WAGNER

- 2006-08 Wilson, J.S., **R.G. Wagner**, R.S. Seymour, and D.A. MacLean. Assessing the risk and impact of future spruce budworm outbreaks in Maine Forests. Cooperative Forestry Research Unit, University of Maine. \$64,055.
- 2006-08 Seymour, R.S. and **R.G. Wagner**. Protocols for Assessing the Silvicultural Aspects of Timber Harvests in Maine. Maine Forest Service. \$75,945.
- 2006-08 **Wagner, R.G.**, and M.G. Olson. Spatial and Temporal Patterns of Tree Regeneration in the Acadian Forest of East-Central Maine. Northern States Research Cooperative: Theme 3 Northern Forest Scholars Program. \$40,000.
- 2006-07 **Wagner, R.G.**, D. Pitt, J. McLaughlin, B. Parker, and A. Stinson. 15-Year growth and yield from Ontario critical period of vegetative competition study. Forestry Futures Trust Ontario - Enhanced Forest Productivity Science (EFPS) Program. \$29,500 CDN.
- 2006-07 **Wagner, R.G.**, R.S. Seymour, and S. Meyer. Maine Commercial Thinning Research Network: Analysis of 5th-year growth & yield responses. Cooperative Forestry Research Unit, University of Maine. \$24,736.
- 2005-10 **Wagner, R.G.**, Forest Ecosystem Research Program (FERP): Gap expansion and spatial hypotheses. Maine Agricultural & Forest Experiment Station. Total \$404,442.
- 2005-08 **Wagner, R.G.**, and R.S. Seymour. Commercial Thinning Research Network: Growth & yield model development and continued measurement of network sites. Cooperative Forestry Research Unit, University of Maine. Total FY05-06 \$36,182; FY06-07 \$38,285; FY07-08 \$38,222. Total \$112,689.
- 2005-08 **Wagner, R.G.**, and R.F. Keefe. Influence of Precommercial Thinning on Long-term Stand Growth and Financial Returns in Northeastern Spruce-fir Stands. Cooperative Forestry Research Unit, University of Maine. Total \$41,400.
- 2005-08 **Wagner, R.G.**, and R.F. Keefe. Influence of Precommercial Thinning on Long-term Stand Growth and Financial Returns in Northeastern Spruce-fir Stands. USFS Agenda 2020 Program. Total \$132,000.
- 2005-08 **Wagner, R.G.** Hardwood silviculture research. Cooperative Forestry Research Unit, University of Maine. Total \$24,000.
- 2005-08 MacLean, D., M. Béland, T. Erdle, G. Forbes, K. Frego, M. Roberts, C. Samson, M. Villard, **R. Wagner**, and J. Wilson. Management implications of forest dynamics, succession, and habitat relationships under differing levels of silviculture in New Brunswick forests. Sustainable Forest Management Network (SFMN), Canadian Forest Service, Total \$433,000 CDN (received by University of New Brunswick).
- 2005 **Wagner, R.G.**, I.J. Fernandez, M.S. Greenwood, D.J. Harrison, G.L. Jacobson, Jr., S.A. Sader, S.M. Shaler, G.B. Wiersma, and J.S. Wilson.

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- Intent to Plan for Center for Research on Sustainable Forests, University of Maine, Orono.
- 2003-08 **Wagner, R.G.**, and J.C. Brissette. Effect of current and emerging silvicultural practices on forest productivity and ecosystem dynamics in the Acadian forest. Joint Venture Agreement between the USDA Forest Service, Northeastern Research Station, and The University of Maine. Total \$220,029.
- 2003-06 **Wagner, R.G.**, J.C. Brissette, M.R. Saunders, and R. Dionne. Influence of silvicultural intensity and composition objectives on the productivity of regenerating forest stands in Maine. USFS Agenda 2020 Program. Total \$113,056.
- 2003-05 **Wagner, R.G.**, and D.J. McConville. Growth response and economic return from fertilization of pre-commercially thinned spruce-fir stands: Remeasurement of CFRU and IP study sites. Cooperative Forestry Research Unit. Total \$40,049.
- 2002-05 Minocha, R., J. Aber, S.C. Minocha and **R.G. Wagner**. Effects of various silviculture treatments on physiological stress, carbon and nitrogen metabolism in trees and their relationship to forest productivity. USFS Agenda 2020 Program. Total \$110,340 (received by USFS Northeastern Research Station).
- 2002 **Wagner, R.G.**, and D.A. MacLean. Eastern CANUSA Forest Science Conference. Irving Woodlands (\$3,000), U. Maine College of NSFA (\$3,000), Cooperative Forestry Research Unit (\$2,000), U. Maine Green Endowment Fund (\$1,500). Total \$9,500.
- 2001 Noland, T.L. and **R.G. Wagner**. 10-year Re-measurement of Critical Period Experiment at Searchmont. Agricultural Research Institute of Ontario, Guelph, Ontario. \$12,510 CDN (received by Ontario Forest Research Institute).
- 2000-05 **Wagner, R.G.**, R.S. Seymour, M.L. Hunter, S.A. Woods, J.C. Brissette, A.S. White, I.J. Fernandez, and M.S. Greenwood. Forest Ecosystem Research Program (FERP): Ecological effects of alternative harvesting practices in the Acadian forest. Maine Agricultural & Forest Experiment Station. Total \$100,000.
- 2000-03 Wagner R.G., M.L. Hunter, S.A. Woods, and S.R. Fraver. Role of canopy gaps and downed woody material in maintaining biodiversity in the Acadian forest of central Maine. USDA-CSREES National Research Initiative Competitive Grants Program (NRICGP). Total \$260,000.
- 2000-02 MacLean, D., **R.G. Wagner**, I. Methven, and K. Porter. Spatial and temporal patterns of natural and man-caused forest disturbance on the J.D. Irving, Ltd. Black Brook District: Past, present, and future. Sustainable Forest Management Network (SFMN), Canadian Forest Service, FY2000-2002.

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Total \$271,000 CDN (received by University of New Brunswick).

- 1999-05 **Wagner, R.G.**, and R.S. Seymour. Commercial Thinning Research Network. Cooperative Forestry Research Unit. FY 1999-00 (\$64,535), FY00-01 (\$101,352), FY01-02 (\$53,234), FY02-05 (\$209,695). Total \$428,816.
- 1999-00 **Wagner, R.G.**, and R.S. Seymour. Identifying the most productive areas of silviculture research for enhancing the wood supply of Maine. FY99-00 shared funding by Maine Forest Service (\$15,000), Cooperative Forestry Research Unit (\$35,000), and NSFA College R&D Funds (\$10,000) for FY1999-2000. Total \$60,000.
- 1998-01 **Wagner, R.G.** Austin Pond 2000 Plus: Long-term effects of herbicide application and pre-commercial thinning on the development of young spruce-fir forest. Cooperative Forestry Research Unit, FY1998-99 (\$35,431), FY99-00 (\$16,568), FY00-01 (\$18,559). Total \$70,558.
- 1998-00 **Wagner, R.G.** Forest Ecosystem Research Program. Maine Agricultural and Forest Experiment Station, FY 1998-99 \$20,000, FY99-00 \$20,000. Total \$40,000.
- 1998-00 **Wagner, R.G.** and S.J. Colombo. Seasonal tolerance of red spruce and balsam fir to glyphosate, imazapyr, and triclopyr applications in Maine. Cooperative Forestry Research Unit, FY 1998-99 \$1,250, FY99-00 \$2,500. Total \$3,750.
- 1995 **Wagner, R.G.** and D.G. Pitt. Use of remote sensing for forest vegetation management: a national workshop and problem analysis. Abitibi-Price Inc., Thunder Bay, Ontario. \$5,000.
- 1991-95 **Wagner, R.G.** Vegetation Management Alternatives Program (VMAP). This research, education, and field delivery program developed alternatives to forest herbicide use and a better understanding of forest ecosystems. Ontario Legislature through a Cabinet Submission for 1991-1995. \$15,000,000 CDN
- 1989 **Wagner, R.G.** and K. Cromack. Nutrient dynamics under different forest vegetation management regimes. Department of Forest Science, intra-faculty grant program, Oregon State University. \$3,000.
- 1988 **Wagner, R.G.** CLUMP: Competition losses using maple projections system -- Software development. Washington Department of Natural Resources. \$5,000.
- 1987-90 Opalach, D., S.R. Radosevich, M. Newton, **R.G. Wagner**, and T.B. Harrington. A diagnostic tool for predicting the effects of interspecific competition on the growth and yield of young Douglas-fir stands. COPE (Coastal Oregon Productivity Enhancement Program) and CRAFTS (Coordinated Research for Alternative Forestry Treatments and Systems). 8/1/87 to 8/1/90. \$161,425.
- 1987 **Wagner, R.G.** Development of a forest vegetation management decision-support system. Department of Forest Science, Oregon State University.

\$6,000.

- 1984-88 S.R. Radosevich, D.E. Hibbs, M. Newton, and **R.G. Wagner**. Interference between Douglas-fir and red alder in the Pacific Coast Range. USDA - NAPIAP (National Agricultural Pesticide Impact Assessment Program). 9/1/83 to 9/1/88. \$155,848.
- 1983-89 **Wagner, R.G.** and S.R. Radosevich. Interspecific competition indices for vegetation management decisions in young Douglas-fir stands on the USDA, Siuslaw National Forest. Siuslaw National Forest, Corvallis, OR. 1/1/84 to 1/1/89. \$172,108.

COURSES TAUGHT

Introduction to Forestry & Natural Resources Programs (AGR 119) – 0.5 Credits, Purdue University. Offered annually.

Description: Introduction to the academic programs offered in the Department of Forestry and Natural Resources (FNR), as well as an introduction to natural resources careers that are available after earning a degree in FNR. Topics include undergraduate programs, faculty expertise, facilities, courses, experiential programs, internships, student organizations, academic policies, scholarships, student services, career development, and career opportunities.

Introduction to Forest Resource Professions (SFR 103) - 3 Credits, U. Maine. Offered annually.

Description: Introduction and overview of global, North American, and Maine forest resources; current and historical use by humans; overview of forest regulation and policy, stewardship and land ethics; measurement and economics of forest resources; history and development of forest resource professions such as private and public foresters, park rangers, conservation managers, forest products specialists, and scientists.

Forest Regeneration (SFR 410) - 3 Credits, U. Maine. Offered alternate years.

Description: Provides students with an overview of the principles and practices associated with the successful regeneration of forestlands in North America. Topics include natural and artificial regeneration, seed collection and handling, forest tree nurseries, site preparation, seedling quality and handling, genetics, disease, vegetation management, animal damage protection, early stand management, and ecological considerations.

Research Methods (SFR 521) - 3 Credits, U. Maine. Offered every year. (Co-taught with A. White)

Description: Provides graduate students with the fundamental research skills needed to successfully complete their graduate thesis research and introduce them to professional careers in research. Students learn how to plan, write, and critique scientific research proposals. Instruction focuses on direct, hands-on learning by writing a research proposal that can serve as your graduate thesis research proposal. Learning objectives include

understanding the: scientific method, research planning process, components of a research proposal, use of critical thinking to develop and review research proposals, importance of objectivity and scientific ethics, and publication process.

Managing Forest Succession (FES 435/535) - 3 Credits, U. Maine. Offered alternate years.

Description: Explores ecological theories, scientific methods, technologies, social issues, and practical applications associated with managing the succession of forest vegetation for purposes of wood production, wildlife habitat, aesthetics, biodiversity, and ecological restoration.

Other Courses / Sessions:

Forest Regeneration Module (SFR 300, Forestry Summer Camp) – One-day module taught to undergraduate forestry students on forest regeneration ecology and management (Spring 2014).

Special Study (FTY 345) – 1 credit, U. Maine. Special study on *Managing Forest Succession* (Ian Foertsch) (Spring 2010).

Special Study (FTY 345) – 1 credit, U. Maine. Special study on *Prosopis juliflora* as an invasive exotic in east Africa for a foreign student (Ibrahim Abukar) (Spring 2009).

Forestry Seminar (FES 620) – 1 credit, U. Maine. Organized weekly departmental seminars and discussion sessions (Spring 2001, Fall 2005).

GRADUATE STUDENTS & COMMITTEES

As Advisor: Post-Docs = 4, PhD = 7, MS = 10, MF = 2

As Committee Member = PhD = 4, MS = 12, MF = 3

<u>Student</u>	<u>Degree</u>	<u>Major</u>	<u>University</u>	<u>Date Completed</u>
<i>Advisor:</i>				
Jon Doty	MF	Forest Management	U. Maine	July 2016
Thesis:	<i>Doty, J. 2016. Outcome-Based Forestry: A case study of the first private landowner's implementation of an alternative to Maine's Forest Practices Act. M.F. thesis, University of Maine, Orono.</i>			
Cody Lachance	MS	Forest Management	U. Maine	June 2016
Thesis:	<i>Lachance, C. 2016. Influence of logging disturbance on tree growth, species composition, and residual stand damage following harvesting in two Maine spruce-fir stands. M.S. thesis, University of Maine, Orono.</i>			
Andrew Nelson	PhD	Silviculture	U. Maine	July 2013
Thesis:	<i>Nelson, A.S. 2013. Production ecology and stand dynamics of young Acadian forest stands in response to silvicultural intensity and compositional objectives. PhD thesis, University of Maine, Orono.</i>			
Patrick Clune	MS	Silviculture	U. Maine	August 2013

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	Thesis:	<i>Clune, P.M. 2013. Growth and development of Maine spruce-fir forests following commercial thinning. M.S. thesis, University of Maine, Orono.</i>			
Matt Olson	PhD	Forest Ecology	U. Maine	December 2009	
	Thesis:	<i>Olson, M.G. 2009. Spatial and temporal patterns of tree regeneration in the Acadian forest of central Maine. Ph.D. thesis, University of Maine, Orono.</i>			
Andrew Nelson	MS	Silviculture	U. Maine	December 2009	
	Thesis:	<i>Nelson, A.S. 2009. Spatial ecology and compositional management of American beech and sugar maple regeneration in Maine. M.S. thesis, University of Maine, Orono.</i>			
Shelly Thomas	PhD	Ecology & Env. Sci.	U. Maine	May 2007	
	Thesis:	<i>Thomas, S.L. 2007. Effects of forest management on click beetle (Coleoptera: Elateridae) assemblages in the Acadian forest of Maine. Ph.D. thesis, University of Maine, Orono.</i>			
Kathryn Miller	MS	Ecol. & Env. Sci.	U. Maine	May 2006	
	Thesis:	<i>Miller, K.M. 2006. Arboreal arthropod associations with epiphytes and the effects of gap harvesting in the Acadian forest of central Maine. M.S. thesis, University of Maine, Orono.</i>			
Mike Saunders	PhD	Silviculture	U. Maine	January 2006	
	Thesis:	<i>Saunders, M.R. 2006. Dynamics of forest structure under different silvicultural regimes in the Acadian forest. Ph.D. thesis, University of Maine, Orono.</i>			
Keith Kanoti	MS	Forest Ecology	U. Maine	September 2005	
	Thesis:	<i>Kanoti, K.G. 2005. Factors influencing the germination, emergence, and early survival of boreal, temperate and exotic Acadian forest tree species in central Maine. M.S. thesis, University of Maine, Orono.</i>			
Dawn Opland	MF	Silviculture	U. Maine	December 2004	
	Thesis:	<i>Opland, D.M. 2004. Projected response of spruce-fir forests to commercial thinning in Maine. M.F. Thesis, University of Maine, Orono.</i>			
Darci Schofield	MS	Forest Ecology	U. Maine	December 2003	
	Thesis:	<i>Schofield, D.A. 2003. Vegetation dynamics and tree radial growth response in harvest gaps, natural gaps, and closed canopy conditions in Maine's Acadian forest. M.S. thesis, University of Maine, Orono.</i>			
Howard Daggett	MS	Silviculture	U. Maine	July 2003	
	Thesis:	<i>Daggett, R.H. 2003. Long-term effects of herbicide and precommercial thinning treatments on species composition, stand structure, and net present value in spruce-fir stands in Maine: The Austin Pond Study.</i>			
Darren Robinson	PhD	Weed Science	U. Guelph, Ontario	September 1999	
	Thesis:	<i>Robinson, D.E. 1999. Nitrogen and water use by jack pine and competing boreal forest plant species. PhD thesis, University of Guelph, Ontario.</i>			
Christy Shropshire	MS	Weed Science	U. Guelph, Ontario	June 1999	
	Thesis:	<i>Shropshire, C. 1999. Patterns of light attenuation by early successional plant species of the boreal forest. MS thesis, University of Guelph, Ontario.</i>			
Ben Rice	PhD	Silviculture	U. Maine	2010-14 (N/C)	
John Davidson	MS	Silviculture	U. Maine	2002 (N/C)	

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Shawn Fraver	PhD	Forest Ecology	U. Maine	1998-99 (N/C)
Ruth Kermish	MS	Forest Ecology	U. Maine	1999-00 (N/C)

Post-Doctoral Research Fellows:

Dr. Arun Kantibose	Modeling effects of commercial thinning and beech dynamics in Northeast USA forests	2015-2016
Dr. Mohammad Bataineh	Factors affecting natural regeneration in long-term silvicultural experiments in the Acadian Forest	2011-2014
Dr. Mathew Olson	40-year stand dynamics following herbicide and PCT treatments	2009-2010
Dr. Michael Saunders	Modeling thinning responses in spruce-fir stands	2007-2008

Committee Member:

Mark Castle	MS	Forest Modeling	U. Maine	May 2017
Mike Quartuch	PhD	Social Sciences	U. Maine	May 2014
Matt Russell	PhD	Forest Modeling	U. Maine	Jun 2012
Baburam Rijal	MS	Forest Modeling	U. Maine	Jan 2012
Joe Pekol	MS	Forest Modeling	U. Maine	July 2011
Andrea Burke	MS	Soils	U. Maine	April 2011
Kate Zellers	MS	Silviculture	U. Maine	Aug 2010
Chuck Coup	MS	Forest Operations	U. Maine	Dec 2009
Luke Amos-Binks	MS	Silviculture	U. New Brunswick	Dec 2009
Julia Breidis	MF	Forest Ecology	U. Maine	Dec 2009
Dina Alberto	MF	Silviculture	U. Maine	July 2009
Cullen Wilson	MS	Soils	U. Maine	April 2008
Jennifer D'Appollonio	MS	Forest Ecology	U. Maine	July 2006
David Etheridge	MS	Silviculture	U. New Brunswick	Apr 2005
Spencer Meyer	MS	Silviculture	U. Maine	Dec 2004
Justin DeRose	MS	Silviculture	U. Maine	Dec 2004
Carol Strojny	MS	Wildlife Ecology	U. Maine	Sep 2004
Jacob Metzler	MS	Forest Mgmt.	U. Maine	Jan 2004
Ben Dow	MF	Silviculture	U. Maine	May 2003
SuzhongTian	PhD	Forest Pathology	U. Maine	Dec 2001
Vishakha Maskey	MS	Ag. Resource Econ.	U. Maine	Sep 2001
Michael Irvine	PhD	Weed Science	U. Guelph, Ontario	Apr 1999

Honors Thesis Committees:

Kersi Contractor	BS	Forestry	UMaine	May 2007
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External Thesis Examiner:

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Guillaume Sainte-Marie	PhD	Silviculture	U. Quebec	Jan 2016
Nelson Thiffault	PhD	Silviculture	Laval U.	Sep 2003
Paul Adams	PhD	Silviculture	U. Tasmania	Nov 2003

Exchange Students:

Patricia Raymond	PhD	Silviculture	Laval U., Quebec	Spring 2000
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UNIVERSITY COMMITTEES

2016 - Present	Chair, Primary Promotions Committee, Department of Forestry & Natural Resources, College of Agriculture, Purdue University
2016 - Present	Member, Area Promotions Committee, College of Agriculture, Purdue University
2016 - Present	Dean's Academic Council, College of Agriculture, Purdue University
2015	Chair, University Indirect Costs Distribution Policy Task Team, University of Maine under Vice President for Research
2015	Search Committee for forest operations professorial position, School of Forest Resources, University of Maine
2014	Signature Research Area Proposal Group. Co-authored Signature Research Area on Sustainable Forests & Forest-Based Economy, School of Forest Resources, University of Maine
2014	Search Committee for Barbara Wheatland Geospatial professorial position, School of Forest Resources, University of Maine
2013	Search Committee for Forest Ecosystems – Carbon & Climate professorial position, School of Forest Resources, University of Maine
2013	Search Committee for Forest Landscape Management professorial position, School of Forest Resources, University of Maine
2010 - 2016	Research Council, University of Maine
2008 - 2013	Executive Committee, College of NSFA, University of Maine
2008 - 2013	Marketing & Alumni Affairs Committee, School of Forest Resources, University of Maine
2008 - 2013	Undergraduate Programs Committee, School of Forest Resources, University of Maine
2008 - 2013	Graduate Program Committee, School of Forest Resources, University of Maine
2008 - 2011	Curriculum Revision Committee (Chair), School of Forest Resources, University of Maine

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2012	Team Leader, Director performance review, George Mitchell Center, University of Maine
2008 - 2011 2003 - 2005	Peirce-Webber Awards Committee, College of NSFA, University of Maine
2011	Director performance review, Advanced Engineered Wood Composites Laboratory (AEWC), University of Maine
2010-11	Chair, Search Committee for CFRU Associate Director, University of Maine
2010-11	Chair, Search Committee for Small Woodlot Management Extension position, School of Forest Resources, University of Maine
2010-11	Chair, Search Committee for Post-Doctoral Research Fellow in Silviculture and Forest Ecology, School of Forest Resources, University of Maine
Spring 2008	Search Committee Chair, post-doctoral position in life cycle analysis, School of Forest Resources
2007-08	Climate Change Institute, Maine Climate Change Assessment Team, University of Maine
Fall 2007	Search Committee Chair, faculty position in industrial ecology and life cycle analysis, School of Forest Resources, University of Maine
Spring 2007	Search Committee Chair, faculty position in forest biometrics and modeling, School of Forest Resources, University of Maine
2007	Curtis Hutchins Professor of Forest Resources Chair Committee, School of Forest Resources, University of Maine
2006 – 2016	Forest BioProduct Research Program, Executive Committee & Leader of Theme 1: Forest BioProduct Sustainability, University of Maine
2006 – 2016	Policy Advisory Committee, School of Forest Resources, University of Maine
2006 – 2016	Advisory Committee, Center for Research on Sustainable Forests, University of Maine
2003 – 2007	Pierce-Webber Awards Committee, College of NSFA, University of Maine
2002 – 2016	College Forest Resource Advisory Committee, University of Maine
1998 – 2016	FERP Steering Committee (Chair), School of Forest Resources, University of Maine
1998 – 2016	PEF Research Operations Team, School of Forest Resources, University of Maine
2006 – 2007	Chair, Forest Biometrician Faculty Selection Committee, School of Forest Resources, University of Maine
2005	Chair, Planning Committee, Center for Research on Sustainable Forests, University of Maine

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- 2005 Planning Committee, Development of School of Forest Resources, University of Maine
- 2003 – 2005 Chair, Peer Committee, Department of Forest Ecosystem Science, University of Maine
- 2003 – 2004 Environmental Policy Roundtable, University of Maine
- 1999 – 2006 NSFA College Committee of Five, University of Maine
- 1998 – 1999 Maine / New Brunswick Research Center Steering Committee, University of Maine
- 1998 – 1999 Program Committee, Second North American Forest Ecology Workshop. University of Maine, Orono, June 27 –30, 1999.
- 1998 – 1999 CFRU Re-structuring Team, University of Maine

HONORS & AWARDS

- 2014 Outstanding Public Service Award, Awarded by College of Natural Sciences, Forestry, and Agriculture; University of Maine for the advancement of knowledge about forest management that has directly benefitted the owners and managers of Maine’s forestlands.
- 2013 Abby Holman Public Service Award. Presented by Maine Forest Products Council for outstanding service to Maine’s forest products industry through leadership of UMaine’s forest research and education programs. Award presented annually to an individual (or individuals) that have demonstrated passion, loyalty, and dedication to Maine’s forest products industry, to good government, and a robust economy.
- 2007 58th Distinguished Forest Industry Lecturer. Presentation: Forest Regeneration Trends in Canada: The Role of Dinosaurs, Political Correctness, and Emerging Pressures. Myer Horowitz Theater, University of Alberta, Edmonton, AB. November 8, 2007.
- 2007 Outstanding Researcher in Forest Resources 2006-2007, G. Pierce and Florence Pitts Webber Award, University of Maine.
- 2004-2016 Endowed Chair: Henry W. Saunders Distinguished Professor in Forestry
- 2003-06 Honorary Research Associate, Faculty of Forestry and Environmental Management, University of New Brunswick, Fredericton, NB, Canada.
- 2002 Outstanding Researcher in Forest Resources 2001-2002, G. Pierce and Florence Pitts Webber Award, University of Maine.
- 1999 Visiting Scientist, Centre de recherche en biologie forestière, Université Laval, Québec, Canada.
- 1995-99 Adjunct Professor, Department of Crop Science, University of Guelph,

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Guelph, Ontario, Canada.

- 1995 Visiting Scientist, Purdue University, West Lafayette, IN. Invited to present as series of lectures for Continuing Forestry Education Series and university classes, on alternatives to forest herbicides and public attitudes about forest vegetation management.
- 1989 Outstanding Research Program Award, Presented to the CRAFTS Research Cooperative at Oregon State University by the Oregon State Society of American Foresters.
- 1988 Oregon State University Outstanding Research Assistant Award nomination, Department of Forest Science faculty nomination for outstanding performance.
- 1979 Xi Sigma Pi (University of Washington, alpha chapter)
- 1978-79 Graduate Fellowships, University of Washington College of Forest Resources, A. H. Anderson and J. H. Bloedel Fellowships awarded during four consecutive quarters for scholastic achievement.

EXTERNAL PANELS, BOARDS, CONSULTING, & TESTIMONY

- 2017 - Present Member, Board of Directors, The Akaka Foundation for Tropical Forests, Hawaii, <http://akakaforests.org>
- 2016 - Present Trustee, Fred M. van Eck Forest Foundation for Purdue University. Board oversees forest management on ~ 9,000 acres in western Oregon and northern California. <https://www.pacificforest.org/conservation-project/van-eck-forests/>
- 2018 Leader, Society of American Foresters Accreditation Team for University of Missouri Forestry program. Columbia, MO.
- 2018 Consultant, Nova Scotia Forest industry, Government of Nova Scotia independent review of provincial forestry practices. Prepared white paper on forest policy history in State of Maine.
- 2016 Society of American Foresters Accreditation Team for University of Idaho Forestry program. Moscow, ID.
- 2013 – 2015 Leader, Maine Spruce Budworm Task Force, Joint Statewide Task Force to develop an assessment and preparation plan for the next spruce budworm outbreak led by University of Maine, Maine Forest Service, and Maine Forest Products Council. Assembled 65 authorities on spruce budworm and forest management to complete a comprehensive strategic plan for the state of Maine.
- 2011 – 2016 Outcome-Based Forestry Technical Panel, State of Maine, Department of Conservation. (Appointed by Governor LePage)

ROBERT G. WAGNER

- 2010 – 2016 Member of Management Advisory Team (MAT) for Plum Creek’s Moosehead Lake Conservation Easement, Forest Society of Maine, Bangor, ME.
- 1998 – 2016 Member of Scientific Advisory Committee, JD Irving, LLC, Saint John, New Brunswick, Canada.
- 2009 – 2016 Reviewer for intensive silviculture of white spruce project, JD Irving, LLC, Saint John, New Brunswick, Canada.
- 2012 Herbicides in Forest Management: Importance, Public Perceptions, & Consequences of Loss. Four workshops delivered in northern Alberta communities for Alberta Sustainable Resource Development (ASRD)
- 2010 – 2012 Museum Board of Directors, Maine Forest and Logging Museum, Bradley, ME
- 2010 Expert Reviewer of Nova Scotia’s 2010 Natural Resources Strategy reports for the Forest Products Association of Nova Scotia, Truro, NS.
- 2009 Reviewer for Wildlands and Woodlands: A Vision for the New England Landscape, Harvard University.
- 2009 External Assessor for Professor of Silviculture position at Swedish University of Agricultural Sciences in Alnarp, Sweden.
- 2007-09 Atlantica Bioenergy Task Force, A consortium of regional government, industry, federal and regional organizations and post-secondary institutions in the Atlantic Canadian Provinces and Maine that examined opportunities in the area of wood-based BioProducts. The result of this effort was a technical report (<http://www.atlanticabioenergy.com/>)
- 2007-08 Expert witness for Plum Creek Timber’s Comprehensive Plan for the Moosehead Lake Region. Written and oral testimony presented to Maine Land Use Regulatory Commission, Augusta, ME.
- 2006 Oral and written testimony to Maine Board of Pesticides Control regarding proposed rule change to Chapter 22, Section 2. B. IV. prohibiting the aerial application of agricultural pesticides. (March 30, 2006)
- 2006 Climate Plan Forest Management Implementation Group, Department of Environmental Protection, Maine State Government, Augusta, ME (Provided 2006 report with recommendations for Maine’s Climate Action Plan)
- 2005 Proposal reviewer for Swedish Research Council for Environment, Agricultural Sciences, and Spatial Planning.
- 2004 Reforestation and vegetation management survey development, CanFor, Grande Prairie, Alberta, Canada.

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- 2003 Team Leader, Sustainable Forestry Initiative (SFI) Verification Oversight Panel review of Robbins Lumber Company
- 2002 - 2003 Outcome-Based Forestry Panel, Department of Conservation, Maine Forest Service.
- 2002 Panel Member, Managed Ecosystems Program, USDA-CSREES National Research Initiative Competitive Grants Program (NRICGP)
- 2001 Team Leader, Sustainable Forestry Initiative (SFI) Verification Oversight Panel review of Maine Bureau of Parks and Lands
- 2001 Team member, Sustainable Forestry Initiative (SFI) Verification Oversight Panel review of Mead Corp., Maine forestlands
- 2000-08 Sustainable Forestry Initiative (SFI) Verification Oversight Panel. Maine SFI Program
- 1999 – 2003 Forest Biodiversity Information Exchange, Manomet Center for Conservation Sciences, Brunswick, ME.
- 1998 Review of forest vegetation management program for The Pacific Lumber Company, Scotia, CA.
- 1996 Organizing forest science research to better serve Ontario forest industry. Invitation by Ontario Forest Industries Association Board, Toronto, Ontario.
- 1995 - 1998 Referee for the Foundation for Research, Science and Technology, Wellington, NZ on the 1996-98 program on Environmentally Sustainable Management of Forest Vegetation at the New Zealand Forest Research Institute Ltd.
- 1995 - 1996 Scientific reviewer for Weed Science Program of the USDA's National Research Initiative Competitive Grants Program (NRICGP), Washington DC
- 1994 - 1995 Scientific authority on the development of bialaphos and glufosinate-ammonium as silvicultural herbicides, Canadian Forest Service - Ontario Region, Sault Ste. Marie, Ontario
- 1994 - 1998 Scientific reviewer for National Engineering and Research Council of Canada (NSERC), Ottawa.
- 1994 Review Panel for Canadian Forest Service, Forest Pest Management Institute, Vegetation Management Research Program (Project FP300) for the period 1988-1994. Sault Ste. Marie, Ontario.
- 1992 Expert witness for Ontario Ministry of Natural Resources at Ontario Class Environmental Assessment Hearings. Provided expert testimony on herbicide use, forest vegetation management, and silviculture. Sudbury, Ontario

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- 1991 Development of vegetation management research component for federal Green Plan Model Forest proposal from Boise Cascade Canada Ltd., Fort Frances, Ontario.
- 1988 Review of timber growth and yield analysis in the USFS Pacific Northwest Region Draft Environmental Impact Statement on Managing Competing and Unwanted Vegetation
- 1986 Review of forest vegetation management and reforestation practices in the Prince George Forest Region, British Columbia, Canada. Provided 6 one-day training sessions for district personnel and a report for the B.C. Ministry of Forests.
- 1985 Review of forest vegetation management and reforestation practices in the Kamloops Forest Region, British Columbia, Canada. Provided five one-day training sessions and a final report for the B. C. Ministry of Forests.

CONTRIBUTIONS TO SCIENTIFIC JOURNALS

Associate Editor:

- 2017-2018 Guest Associate Editor, New Forests special issue, IUFRO Conference on Forest Regeneration in Changing Environments
- 2010-2017 Forests (ISSN 1999-4907) Editorial Board. Open Access International and cross-disciplinary scholarly journal of forestry and forest ecology.
- 2007-09 Associate Editor, Canadian Journal of Forest Research
- 1999-00 Guest Associate Editor, Forest Ecology and Management, Special issue for Proceedings of the Second North American Forest Ecology Workshop.
- 1998-99 Guest Co-Editor, Canadian Journal of Forest Research, Special issue for Proceedings of the Third International Conference on Forest Vegetation Management. Volume 29, Number 7, July 1999, pp. 841-1181. ISSN 1208-6037.

INTERNATIONAL SCIENTIFIC ORGANIZATIONS

Conference Chair, IUFRO 1.01.04 international conference on *Forest Regeneration in Changing Environments*, Corvallis, OR (July 11-13th, 2017).

International Union of Forest Research Organizations (IUFRO), 1.01.04 - Forest Establishment & Early Growth Dynamics
Coordinator, (2014 - Present)

ROBERT G. WAGNER

Organizing Committee, Eastern CANUSA Forest Science Conference, Rimouski, Quebec (October 16-18, 2014).

Organizing Committee, Eastern CANUSA Forest Science Conference, Durham, New Hampshire, (November 1-3, 2012).

Scientific Committee for international conference on *Spruce in the Context of Global Climate Change* held August 31-September 3, 2009 in Halmstad, Sweden. Produced special issue of *Scandinavian Journal of Forest Research* on Ecology and Silviculture of Spruce, 2011. 26 (Suppl 11) with 8 articles (96 pp.)

Organizing Committee, Eastern CANUSA Forest Science Conference, Edmunston, New Brunswick, (October 14-16, 2010).

Organizer and Chair, Eastern CANUSA Forest Science Conference, Orono, Maine. (October 17-18, 2008).

Organizing Committee, Eastern CANUSA Forest Science Conference, Quebec, (October 19-21, 2006).

Organizing Committee, Eastern CANUSA Forest Science Conference, Fredericton, New Brunswick (October 15-16, 2004).

Scientific Committee, 5th International Conference on Forest Vegetation Management: Useable Science, Practical Outcomes and Future Needs, A IUFRO Research Group 1.13.00 conference organized by Oregon State University, Corvallis, OR. June 20-24, 2005.

Organizer and Chair, Eastern CANUSA Forest Science Conference, Orono, Maine. (October 19-20, 2002).

International Union of Forest Research Organizations (IUFRO), P1.13.00 Forest Vegetation Management

Coordinator, (1998 - 2002)

Deputy Coordinator, (1996 - 1998)

Scientific Committee, Fourth International Conference on Forest Vegetation Management: Technical, Environmental and Economic Challenges, A IUFRO Research Group 1.13.00 conference organized by INRA Nancy, France. June 17-21, 2002.

Organizing Committee, Second North American Forest Ecology Workshop, Orono, ME, June 27-30, 1999, Society of American Foresters, Forest Ecology Working Group.

Organizer and Co-Chair of Third International Conference on Forest Vegetation Management, Sault Ste. Marie, Ontario. August 24-28, 1998 (177 scientific papers presented from 28 countries).

ROBERT G. WAGNER

Organizing Committee, Second International Conference on Forest Vegetation Management, Rotorua, New Zealand. March 20-24, 1995.

NATIONAL SCIENTIFIC & PROFESSIONAL ORGANIZATIONS

National Association of University Forest Resources Programs (NAUFRP)

Member-at-Large (2017 – present)

National Extension Chair (2011-15)

Northeastern Regional Chair (2010-11)

Society of American Foresters (1978 - present)

Maine Division – Chair of Harvest Classification System Task Force 2006; Past-Chair 2006; Division Chair 2005; Chair-Elect 2004.

Oregon Marys Peak Chapter – Chair 1988-89; Chair-Elect 1987-88; Secretary-Treasurer 1986-87.

Canadian Institute of Forestry (1990 - 2000)

Council Member, Central Ontario Chapter 1992-94

Northeastern Weed Science Society (1991 - 2003)

Chair-elect, Industry, Forestry & Conservation Section (1999-2000)

Chair, Industry, Forestry & Conservation Section (2000-2001)

Weed Science Society of America (1986 - 2003)