

Curriculum vitae
G. Richard Strimbeck
Department of Biology
Norwegian University of Science and Technology
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- Education** 1992-1997. Ph.D. School of Natural Resources, University of Vermont, Burlington, VT. Ecophysiology and pollutant effects on *Picea rubens*. Dissertation: "Cold Tolerance and Winter Injury in Montane Red Spruce". Advisor: D.H. DeHayes
- 1985-1987. M.Sc. Department of Botany, University of Vermont, Burlington, VT. Field Naturalist Option. Integrative analysis of natural systems. Final project: "Fire, Flood, and Famine: Pattern and Process in a Lakeside Bog".
- 1975-78. B.Sc. Department of Botany, University of New Hampshire, Durham, NH. Emphasis in plant ecophysiology.
- 1973-74. Prescott College, Prescott, AZ. Liberal arts.
- Experience Work** 2002-present. Associate Professor, Department of Biology, Norwegian Science and Technical University, Trondheim, Norway.
- 1999-2002. Associate Professor, Department of Environmental and Health Science, Johnson State College, Johnson, VT.
- 1991-1999. Graduate fellow and adjunct lecturer, School of Natural Resources, University of Vermont, Burlington, VT. Research on role of calcium in winter injury and decline of *Picea rubens* (under D.H. DeHayes).
- 1991-1996. Adjunct lecturer, Trinity College, Burlington, VT.
- 1988-1991. Field research manager, Department of Geology, University of Pennsylvania, Philadelphia, PA. Experiments to determine effects of exclusion of ozone and acid precipitation on tree health; winter field studies on winter injury in red spruce (under A.H. Johnson).
1987. Research assistant. Maple Research Lab, University of Vermont, Burlington, VT.
- 1981-1985. Director, Lost River Interpretive Center. Society for the Protection of New Hampshire Forests, Concord, NH.
- 1978-80. Backcountry ranger. Fiordland National Park, New Zealand.
- 1976-78. University of New Hampshire. Horticultural and research assistant.
- Experience Other** 2000-2001. Faculty member. Governor's Institutes of Vermont, Science and Technology Institute.
- 1998-2002. Consulting ecologist. National Wildlife Federation, Northeast SmartWood Certification Program.
- 1986-1994. Field assistant, University of Pennsylvania, Philadelphia, PA. Occasional short-term projects in forest ecology and biogeochemistry in Costa Rica, Puerto Rico, Chile. (under D.H. Janzen, A.H. Johnson).
- Member: American Society of Plant Biologists, Scandinavian Plant Physiology Society
Reviewer: Tree Physiology, Trees: Structure and Function, Protoplasma, Plant Science

Publications*Journal Articles*

- Kjellsen, T.D., L. Shiryayeva, W.P. Schröder and G.R. Strimbeck 2010. Proteomics of extreme freezing tolerance in Siberian spruce (*Picea obovata*). *Journal of Proteomics* 73:965-975.
- Strimbeck, G.R. and T.D. Kjellsen 2010. First frost: Effects of single and repeated freezing events on acclimation in *Picea abies* and other boreal and temperate conifers. *For. Ecol. Manag.* 259:1530-1535.
- Strimbeck, G.R., T.D. Kjellsen, P.G. Schaberg and P.F. Murakami 2008. Dynamics of low-temperature acclimation in temperate and boreal conifer foliage in a mild winter climate. *Tree Physiol.* 28:1365-1374.
- Strimbeck, G.R., T.D. Kjellsen, P.G. Schaberg and P.F. Murakami 2007. Cold in the common garden: comparative low-temperature tolerance of boreal and temperate conifer foliage. *Trees: Structure and Function* 21:557-567.
- Strimbeck, G. R. 2002. Natural communities and ecological processes in the mountain landscape. *Vermont Law Review* 26:663-687
- Schaberg, P. G., D. H. DeHayes, G. J. Hawley, P. F. Murakami, G. R. Strimbeck and S. G. McNulty. 2002. Effects of chronic N fertilization on foliar membranes, cold tolerance, and carbon storage in montane red spruce. *Can. J. For. Res.* 32: 1351-1359.
- Strimbeck, G.R., and D.H. DeHayes. 2000. Rapid freezing injury in red spruce: seasonal changes in sensitivity and effects of temperature range. *Tree Phys.* 20:187-194.
- Schaberg, P.G., D.H. DeHayes, G.J. Hawley, G.R. Strimbeck, J.R. Cumming, P.F. Murakami, and C.H. Borer. 2000. Acid Mist and Soil Ca and Al alter the mineral nutrition and physiology of red spruce. *Tree Physiol.* 20:73-85.
- DeHayes, D.H., P.G. Schaberg, G.J. Hawley, and G.R. Strimbeck. 1999. Acid Rain Impacts on Calcium Nutrition and Forest Health. *BioScience* 49: 789-800.
- Schaberg, P.G., G.R. Strimbeck, G.J. Hawley, D.H. DeHayes, J.B. Shane, P.F. Murakami, T.D. Perkins, J.R. Donnelly, and B.L. Wong. 1999. Cold Tolerance and photosystem function in a montane red spruce population: physiological relationships with foliar carbohydrates. *J. Sust. For* 10:173-180.
- Schaberg, P.G., J.B. Shane, P.F. Cali, J.R. Donnelly, and G.R. Strimbeck. 1998. Photosynthetic capacity of red spruce during winter. *Tree Physiol.* 18: 271-276.
- Vann, D. R., P. A. Palmiotto, and G.R. Strimbeck. 1998. Allometric equations for two South American conifers: Test of a non-destructive method. *For. Ecol. and Man.* 106: 55-71.
- DeHayes, D. H., P. G. Schaberg, G.J. Hawley, C. Borer, J.R. Cumming, and G.R. Strimbeck. 1997. Physiological implications of seasonal variation in membrane-associated calcium in red spruce mesophyll cells. *Tree Physiol.* 17: 687-695.
- Schaberg, P.G., J.B. Shane, G.J. Hawley, G.R. Strimbeck, P.F. Cali, J.R. Donnelly, D.H. DeHayes. 1996. Physiological changes in red spruce seedlings during a simulated winter thaw. *Tree Physiol.* 16:567-574.
- Strimbeck, G.R., P.G. Schaberg, D.H. DeHayes, J.B. Shane, and G.J. Hawley. 1995. Midwinter dehardening of montane red spruce during a natural thaw. *Can. J. For. Res.* 25: 2040-2044.
- Vann, D.R., G.R. Strimbeck, and A.H. Johnson. 1995. Effects of mist acidity and ambient ozone removal on montane red spruce. *Tree Physiol.* 15: 639-647.
- Strimbeck, G.R., A.H. Johnson and D.R. Vann 1993. Midwinter needle temperature and winter injury of montane red spruce. *Tree Physiol.* 13: 131-144.
- Berlyn, G.P., A.O. Anoruro, A.H. Johnson, D.R. Vann, G.R. Strimbeck, R.L. Boyce and W.L. Silver 1993. Effects of filtered air and misting treatments on cuticles of red spruce needles on Whiteface Mountain, N.Y. *J. Sustainable Forestry* 1: 25-47.
- Vann, D.R., G.R. Strimbeck, and A.H. Johnson. 1992. Effects of ambient levels of airborne chemicals on freezing resistance of red spruce foliage. *For. Ecol. and Man.* 51:69-79.
- Strimbeck, G.R., D.R. Vann and A.H. Johnson. 1991. *In situ* experimental freezing produces symptoms of winter injury in red spruce foliage. *Tree Physiol.* 9: 359-367.

Book Chapters

- Strimbeck, G.R., Schaberg, P.G., 2009. Going to extremes: Low-temperature tolerance and acclimation in temperate and boreal conifers. In: Gusta, L.V., Wisniewski, M., Tanino, K.K. (Eds.), Plant Cold Hardiness: From the Laboratory to the Field. CABI, Oxfordshire, UK, pp. 226-239.
- Strimbeck, G.R. 2009. Plant Communities and Vegetation Processes in the Mountain Landscape. In: J.A. Milne, J. Lemense and R.A. Virginia. (Eds.) Mountain Resorts: Ecology and the Law Eds. Ashgate, Aldershot, UK.
- DeHayes, D.H., Schaberg, P.G., and G.R. Strimbeck. 2001. Red Spruce Hardiness and Freezing Injury Susceptibility. In: F. Bigras, ed. Conifer Cold Hardiness. Kluwer Academic Publishers, the Netherlands.
- Sutinen, M., R.Arora, E. Ashworth, J.P. Palta, G.R. Strimbeck, and M. Wisniewski. 2001. Mechanisms of frost survival. In: F. Bigras, ed. Conifer Cold Hardiness. Kluwer Academic Publishers, the Netherlands.
- Johnson, A.H., A.J. Friedland, E.K. Miller, J.J. Battles, T.G. Huntington, D.R. Vann, and G.R. Strimbeck. 1992. Regional evaluation of acid deposition effects on forests -- eastern spruce-fir. In: D.W. Johnson and S.E. Lindberg, eds. Atmospheric Deposition and Forest Nutrient Cycling Springer-Verlag, New York.