

- Adams, M.J. 1995. Seed shelters improve black spruce establishment and survival on upland cutovers. *Can. For. Serv. Frontline Tech Note No 47*. 4 pp.
- Adams, M.J., A. Groot, G.W. Crook, R.L. Fleming and F.F. Foreman. 2001. Direct seeding black spruce and jack pine: A field guide for Northern Ontario. *Nat. Res. Can., Can. For. Serv., Sault Ste. Marie, Ont.*
- Adler, P.B., S.A. Raff and W.K. Lauenroth. 2001. The effect of grazing on the spatial heterogeneity of vegetation. *Oecologia* 128: 465-479.
- Aksamit, S.E. and F.D. Irving. 1984. Prescribed burning for lowland black spruce regeneration in northern Minnesota. *Can. J. For. Res.* 14: 107-113.
- Alban, D.H., D.A. Perala, and B.E. Schlaegel. 1978. Biomass and nutrient distribution in aspen, pine, and spruce stands on the same soil type in Minnesota. *Can. J. For. Res.* 8: 290-299.
- Alexander, M.E. and D.L. Euler. 1981. Ecological role of fire in the uncut boreal mixedwood forest. pp. 42-64 in *Boreal mixedwood symposium*. R.D. Whitney and K.M. McClain, co-chairs. Thunder Bay, Ont., 16-18 September 1980. Canadian Forest Service, Great Lakes Forestry Research Centre, Sault Ste. Marie, Ont. COJFRC Symposium Proc. 0-P-9. 278 pp.
- American Ornithologist Union. 1998. Check-list of North American Birds, The species of birds of North America from the Arctic through Panama, Including the West Indies and Hawaiian Islands. American Ornithologists' Union 829 pp.
- Anderson, R.L. 1964. Hypoxylon canker on aspen. *Phytopathology* 54: 253-257.
- Anderson, R.P. 1944. The relation between host condition and attacks by the bronzed birch borer. *J. Econ. Entomol.* 37: 588-596.
- Anderson, G.W. and M.P. Martin. 1981. Factors related to incidence of Hypoxylon cankers in aspen and survival of cankered trees. *For. Sci.* 3: 461-476.
- Anderson, G.W. and R.L. Anderson. 1968. Relationship between density of quaking aspen and incidence of Hypoxylon canker. *Forest Science* 14: 107-112.
- Anderson, H.W., E.P. Boysen, D.C. Dey and J.A. Rice. 2001. Natural regeneration of hardwoods. pp. 393-421 in *Regenerating the Canadian forest: principles and practice for Ontario*. R.G. Wagner and S.J. Colombo, eds. Fitzhenry & Whiteside, Markham, Ont. 650 pp.
- Anderson, P.J., D.W. Gilmore, L.S. Yount and J.C. Zasada. 2001. Effects of blow-down and salvage/fuel reduction activity on forest succession pathways in northern Minnesota. Poster Abstract. pp. 496-500 in *Proc. of the Soc. Amer. Foresters National Convention, Washington, D.C.* SAF Publication 01-02.
- Andison, D.W. and J.P. Kimmins. 1999. Scaling up to understand British Columbia's boreal mixedwoods. *Environ. Rev.* 7: 19-30.
- Archibald, D.J. and R.W. Arnup. 1993. The management of black spruce advance growth in northeastern Ontario. *Ont. Min. Natur. Resour., NE Sci. and Technol.* TR-008. VMAP Rep. No. 93-05, 32 pp.
- Archibald, D.J., W.B. Wiltshire, D.M. Morris and B.D. Batchelor. 1997. Forest management guidelines for the protection of the physical environment. Version 1.0. *Ont. Min. Nat. Resour., Queen's Printer for Ontario*, 42 pp.
- Archibald, D.J. and W.D. Baker. 1989. Prescribed burning for black spruce regeneration in northwestern Ontario. *Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont.* TR-14. 21 pp.
- Archibald, D.J., A.B. Luke and W.C. Coneybeare. 1994. Early summer prescribed fire in Northern Ontario. *Ont. Min. Nat. Resour., NEST, Timmins, Ont.* TN-010. 11 pp.



- Arévalo, J.R., J.K. DeCoster, S.D. McAlister and M.W. Palmer. 2000. Changes in two Minnesota forests during 14 years following catastrophic windthrow. *Journal of Vegetation Science* 11: 833-840.
- Armson, K.A. 1988. Management and utilization of northern mixedwoods. P 13-17. *in* Management and utilization of Northern Hardwoods: Proceedings of a symposium. CFS Northern Forestry Centre. Info. Report NOR-X-296. 163 pp.
- Arnup, R. 1989. Growth response in black spruce – Mechanical site preparation versus prescribed burning. pp. 6-7 in *On-Line to Northern Forest Developments*. Nor. For. Development Gp., Ont. Min. Nat. Resour., Timmins, Ont. Vol. 5, No. 1.
- Arnup, R.W. 1996a. Predicting the abundance of advance growth in black spruce forests in northeastern Ontario: an aerial photograph interpretive key. *Ont. Min. Nat. Resour., Nat. Resour. Can., Can. For. Serv. NODA Note No. 23*. 4 pp.
- Arnup, R.W. 1996b. Site and stand factors influencing the abundance and distribution of coniferous advance growth in northeastern Ontario. *Ont. Min. Nat. Resour., Nat. Resour. Can. Can. For. Serv. NODA Note No. 26*. 6 pp.
- Arnup, R.W. 1996c. Stand and site conditions associated with the abundance and distribution of black spruce and balsam fir advance growth in northeastern Ontario. *NODA/NFP Technical Report TR-29*. 25 p.
- Arnup, R.W., B. Dowsley, L. Buse and F.W. Bell. 1994. Pocket guide to autecology of selected crop trees and competitor species in northeastern Ontario. *Ont. Min. Nat. Resour., NEST, Timmins, Ont.* 134 pp.
- Arseneault, D. 2001. Impact of fire behavior on post fire forest development in a homogeneous boreal landscape. *Canadian Journal of Forest Research* 31: 1367-1374.
- Attiwill, P.M. 1994. The disturbance of forest ecosystems: the ecological basis for conservative management. *For. Ecol. Manage.* 63: 247-300.
- Aubin, I. and C. Messier. 1999. Effects of understory vegetation on light dynamics in the south-eastern boreal forest of Québec: Implications for forest management. pp. 472-475 in S.T. Veeman, D.W. Smith, B.G. Purdy, F.J. Salkie and G.A. Larkin. eds. *Proc. 1999 Sustainable Forest Management Network Conference. Science and practice: Sustaining the boreal forest*. Sust. For. Man. Net., Univ. of Alberta, Edmonton, Alta. 816 pp.
- Aubin, I., M. Beaudet and C. Messier. 2000. Light extinction coefficients specific to the understory vegetation of the southern boreal forest, Québec. *Canadian Journal of Forest Research* 30: 168-177.
- Balch, R.E. and J.S. Prebble. 1940. The bronze birch borer and its relation to the dying of birch in New Brunswick forests. *For. Chron.* 16: 179-201.
- Baldwin, D.J.B., J. R. Desloges and L.E. Band. 2000. Physical geography of Ontario. *in* Ecology of a managed terrestrial landscape: Patterns and processes of forest landscapes in Ontario. in A.H. Perera, D.L. Euler and I. D. Thompson. *Ecology of a managed terrestrial landscape in Ontario*, UBC Press and the Ontario Ministry of Natural Resources 330 pp.
- Baldwin, K.A. and R.A. Sims. 1997. Field guide to the common forest plants in northwestern Ontario. *Ont. Min. Nat. Resour., NWST, Thunder Bay, Ont. FG-04*. 359 pp.
- Ball, W. J. and N.R. Walker. 1995. Natural regeneration of white spruce after partial cutting and strip scarification in mature mixed white spruce-aspen stands, Manitoba. *Partnership Association, For. Can. and For. Branch, Manitoba Nat. Resour.* 46 pp.
- Ball, W. J. and N.R. Walker. 1997. Stand development after partial cutting of mature mixed stands of white spruce and aspen in Manitoba. *Nat. Resour. Can., Can. For. Serv., North. For. Res. Cent. Inf. Rep. NOR-X-353*. 43 pp.



- Ballard, T.M. and B.C. Hawkes. 1989. Effects of burning and mechanical site preparation on growth and nutrition of planted white spruce. For. Can. Pac. For. Cent. Rep. BC-X-309. 19 pp.
- Banfield, A.W.F. 1977. The mammals of Canada. National Museum of Natural Sciences, National Museums of Canada, University of Toronto Press. 438 pp.
- Barbour, M.G., J.H. Burk and W.D. Pitts. 1987. Terrestrial ecology. The Benjamin/Cummings Publ. Co. Inc., Menlo Park, CA.
- Barnes, B.V., D.R. Zak, S.R. Denton and S.H. Spurr. 1998. Forest ecology. 4th ed. John Wiley & Sons, Inc., New York, 774 pp.
- Basham, J.T. 1982a. Effects of herbicide treatment on the internal pathological quality of surviving aspen suckers. Envir. Can., Can. For. Serv. Info. Rep. OX334. 26 pp.
- Basham, J.T. 1982b. Scarification of 3-year-old aspen suckers: 4 and 6 year effects on, and a preliminary forecast of the internal pathological quality of the survivors. Dep. Environ., Can. For. Serv., Sault Ste. Marie, Ont. Info. Rep. OX341. 26 pp.
- Basham, J.T. 1988. Decay and stain 10 years later in aspen suckers subjected to scarification at age 3. Can. J. For. Res. 18: 1507-1521.
- Basham, J.T. 1991. Stem decay in living trees in Ontario's forests: A users' compendium and guide. For. Can., Ont. Reg., Sault Ste. Marie, Ont. Inf. Rep. O-X-408. 64 pp.
- Basham, J.T. 1992. Stem decay in living trees in Ontario's forests: A user's compendium and guide. Can. For. Serv., Great Lakes Forestry Centre, Sault Ste. Marie, Ont. Inf. Rep. O-X-421.
- Basham, J.T. 1993. Trembling aspen quality in Northern Ontario – Various aspects of decay and stain studies and their management implications. For. Can., Ont. Reg., Sault Ste. Marie, Ont. Inf. Rep. O-X-421. 47 pp.
- Basham, J.T. and S. Navratil. 1975. An assessment of the pathological quality of aspen suckers established on cutovers in Ontario. Dep. Environ., Can. For. Serv., Sault Ste. Marie, Ont. Inf. Rep. OX236. 23 pp.
- Bates, P.C., C.R. Blinn and A.A. Alm. 1993. Harvesting impacts on quaking aspen regeneration in northern Minnesota. Canadian Journal of Forest Research 23: 2403-2412.
- [BCMoF] British Columbia Ministry of Forests. 2000. Mixedwood management in the boreal forest using cluster planting of white spruce. Forest Practices Branch, BCMOF, 14 pp.
- Beatty, S.W. and E.L. Stone. 1986. The variety of soil microsites created by tree falls. Canadian Journal of Forest Research 16: 539-548.
- Bedford, L. and A. MacKinnon. 1996. Mechanical site preparation for vegetation management in northeastern British Columbia. in Integrated forest vegetation management options and applications. Proc. of 5th B.C. Forest Vegetation Management Workshop, 29-30 Nov. 1993, Richmond, B.C.
- Bell, F.W. 1991. Critical silvics of conifer crop species and selected competitive vegetation in northwestern Ontario. For. Can. Ont. Region, Sault Ste. Marie, Ont. Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont. COFRDA Rep. 3310/NWOFTDU TR-19. 177 pp.
- Bell, F.W. 2001. Extensive vs. intensive management of mixedwoods – What are the implications? pp. 106-108 in Bernier, D., R.A. Campbell and D. Cloutier, eds. Proceedings of the 2001 Expert Committee on Weeds National Meeting, Vegetation Management in Boreal Mixedwoods Workshop, Nov. 27-28, 2001, Québec City, Québec, 118 pp.
- Bell, F.W. and M. Kershaw. In prep. Autecology of selected competitive plant species in northern Ontario. NODA Project No. 4108.



- Bell, F.W. and S.G. Newmaster. 1998. Fallingsnow ecosystem project: floral richness, abundance and diversity. Pp. 45-47 in Wagner, R.G. and D.G. Thompson, eds. Third int. conf. on forest vegetation management: popular summaries. Ont. For. Res. Inst. For. Res. Inf. Pap. No. 141. 508 pp.
- Bell, F.W. and S.G. Newmaster. 2002. The effects of silvicultural disturbances on the diversity of seed-producing plants in the boreal mixedwood forest. *Can. J. For. Res.* 32:1180-1191
- Bell, F.W., A.J. Willcocks and J. Kavanagh. 1990a. Preliminary variable density yield tables for four Ontario conifers. *Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont.* TR-50. 80 pp.
- Bell, F.W., J. Kerley, and M. McLaughlan. 1992. Vegetation management alternatives: A preliminary guide to opportunities. Internal paper, presented in Timmins, Ont. Sept. 3, 1992. 24 pp.
- Bell, F.W., W.D. Baker and R.Vassov. 1990. Influence of initial spacing on jack pine wood yield and quality: a literature review. *Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont.* TR-10, 23 pp.
- Bell, F.W., R.A. Lautenschlager, R.G. Wagner, D.G. Pitt, J.W. Hawkins and K.R. Ride. 1997a. Motor-manual, mechanical, and herbicide release affect early successional vegetation in northwestern Ontario. *For. Chron.* 73: 61-68.
- Bell, F.W., M.S. McLaughlan and L.J. Buse. 1996. Vegetation management techniques for mixedwoods. pp. 134-137 in Smith, C.R. and G.W. Crook, eds. *Advancing Boreal Mixedwood Management in Ontario. Proceedings of a Workshop, Oct. 17-19, 1995, Sault Ste. Marie, Ontario, Can. For. Serv. And Ont. Min. Nat. Res.*, 238 pp.
- Bell, F.W., D.G. Pitt and C. Hollstedt. 2000. Seasonal susceptibility of boreal plants to glyphosate. I. Blue-joint grass and black spruce. *North. J. Appl. For.* 17(4): 41-148.
- Bell, F.W., D.G. Pitt, A.E. Morneault and S.M. Pickering. 1999. Response of immature trembling aspen to season and height of cut. *Northern Journal of Applied Forestry* 16: 108-114.
- Bell, F.W., K.R. Ride, M.L. St-Amour and M. Ryans. 1997b. Productivity, cost, efficacy, and cost effectiveness of motor-manual, mechanical and herbicide release of boreal spruce plantations. *For. Chron.* 73: 39-46.
- Bella, I.E. and J.P. DeFranceschi. 1972. The effect of logging practices on the development of new aspen stands, Hudson Bay, Saskatchewan. *Can. For. Serv., North. For. Res. Cen., Edmonton, Alta. Inf. Rep. NOR-X-33*, 20 pp.
- Bella, I.E. and J. Gal. 1995. Development of white spruce trembling-aspen stands following shelterwood cutting in Riding Mountain Manitoba. *Nat. Resour. Can., Can. For. Serv., Man. Dist. Off., Winnipeg, Manitoba. Canada-Manitoba Partnership Agreement in Forestry Report.* 28 pp.
- Benoit, P. 1985. *Nomenclatura insectorum Canadensium/Noms d'insectes au Canada/Insect names in Canada.* Laurentian Forest Research Center, Canadian Forestry Service. 286 pp.
- Bentley, C. and F. Pinto. 1994. Autecology of selected understorey vegetation in central Ontario. *Ont. Min. Nat. Resour., CRST, North Bay, Ont.* CRST Tech. Rep. No. 31/VMAP Tech. Rep. No. 93-08. 142 pp.
- Bergeron, Y. and B. Harvey. 1998. Boreal mixedwood silviculture should emulate natural ecosystem dynamics. *Nat. Resour. Can., Can. For. Serv., Laurentian For. Cent., Sainte-Foy, Que. Research Notes No. 6.* 4 pp.
- Bergeron, Y., B. Harvey, A. Leduc and S. Gauthier. 1999. Forest management guidelines based on natural disturbance dynamics: Stand- and forest-level considerations. *The Forestry Chronicle* 75: 49-54.



- Bergeron, Y., A. Leduc, B.D. Harvey and S. Gauthier. 2002. Natural fire regime: A guide for sustainable management of the Canadian boreal forest. *Silva Fennica* 36: 81-95.
- Berube, J.A. and M.Dessureault. 1998. Morphological characterization of *Armillaria ostoyae* and *Armillaria sinapina* sp.nov. *Can. J. Bot.* 66: 2027-2034.
- Bidwell, P.K., B. Turner, D.J. Archibald and N. Maurer. 1996. An approach to preharvest silviculture prescriptions in boreal Ontario. OMNR, Northwest Science and Technology TN-34. Northeast Science and Technology TN-014. 12 pp.
- Binkley, D. 1995. The influence of tree species on forest soils: processes and patterns. *in* D.J. Mead and I.S. Cornforth (eds.), *Proceedings of the tree and soil workshop*. Pp. 1-33, Lincoln University Press, Canterbury.
- Biring, B.S. and W. Hays-Byl. 2001. Ten-year stand level impacts of vegetation management in boreal mixedwoods. Pp. 117-118 in Bernier, D., R.A. Campbell and D. Cloutier., eds. *Proceedings of the 2001 Expert Committee on Weeds National Meeting, Vegetation Management in Boreal Mixedwoods Workshop*, Nov. 27-28, 2001, Québec City, Québec, 118 pp.
- Blais, J.R. 1983. Trends in the frequency, extent, and severity of spruce budworm outbreaks in eastern Canada. *Can. J. For. Res.* 13: 539-547.
- Blais, J.R. 1985. The ecology of the eastern spruce budworm: A review and discussion. *in* C.J. Sanders, R.W. Starks, E.J. Mullins, and J. Murphy (eds.). *Recent advanced in spruce budworm research*. Pp: 49-59. *Can. For. Serv., Ottawa, ON.* 527 pp.
- Boring, L.R., C.D. Monk, and W.T. Swank. 1981. Early regeneration of a clear-cut southern Appalachian forest. *Ecology* 62: 1244-1253.
- Bormann, B.T., H. Spaltenstein and M.H. McClellan. 1995. Rapid soil development after windthrow disturbance in pristine forests. *Journal of Ecology* 83: 747-757.
- Bowling, C. and B. Goble. 1994. Cone loading for natural seeding following full-tree and tree-length harvesting in jack pine stands. *Ont. Min. Nat. Resour., NWST, Thunder Bay, Ont.* TN-25. 15 pp.
- Boyd, R.J. 1982. Chemical site preparation treatments for herbaceous plant communities. pp. 49-53 in Baumgartner, D.M., ed. *Site preparation and fuels management on steep terrain*. *Sympos. Proc., Coop. Ext., Washington State Univ., Pullman, WA.*
- Boyle, T.J.B. 1985. Range wide provenance tests of black spruce in Ontario. *Can. For. Serv. Inf. Rep.* PI-X-57, 36 pp.
- Brady, N.C. and R.R. Weil. 1999. *The nature and properties of soils*. 12th ed. Prentice Hall, New Jersey, 88 pp.
- Brand, D.G. 1992. The use of vegetation management in Canadian forest regeneration programs. pp. 113-124 in *Proc. conf. on vegetation management in forestry, amenity and conservation areas; Aspects of Appl. Biol.* 29, 7-9 April 1992. *Assn. Appl. Biol.*
- Brandtberg, P.-O., H. Lundkvist, and J. Bengtsson. 2000. Changes in the forest-floor chemistry caused by a birch admixture in Norway spruce stands. *For. Ecol. Manage.* 130: 253-264.
- Bridge, S.R.J. 2001. Spatial and temporal variations in the fire cycle across Ontario. *Ont. Min. Nat. Resour., Northeast Sci. Technol. NEST Tech. Rep.* TR-043. 36 pp.
- Brinkman, K.A. and E.I. Roe. 1975. Quaking aspen: silvics and management in the Lake States. *USDA For. Serv. Washington, D.C. Agric. Handb. No.* 486, 52 pp.
- Brunck, R.I. and P.D. Manion. 1980. Interacting environmental factors associated with the incidence of hypoxylon canker on trembling aspen. *Canadian Journal of Forest Research* 10: 17-24.



- Bruederle, L.P. and F.W. Stearns. 1985. Ice storm damage to a southern Wisconsin mesic forest. *Bulletin of the Torrey Botanical Club* 112: 167-175.
- Bryson, T. and L. Van Damme. 1994. A comparison of five common artificial regeneration methods for jack pine in northwestern Ontario. *Ont. Min. Nat. Res. NWST, Thunder Bay, Ont. TR-80*. 1 p + appendices.
- Burdon, J.J. 1991. Fungal pathogens as selective forces in plant populations and communities. *Australian Journal of Ecology* 16: 423-432.
- Burns, R.M. and B.H. Honkala, tech. coord. 1990. *Silvics of North America. Volume 2, Hardwoods*. U.S. Dep. Agric., For. Serv. Agric. Washington, DC. *Handb.* 654. 877 pp.
- Busby, J.A. 1965. Studies on the stability of conifer stands. *Scottish For.* 19: 86-102.
- Buse, L.J. and W.D. Baker. 1991. Determining necessity and priority for tending in young spruce plantations in northwestern Ontario. *Ont. Min. Nat. Resour., NWOFTDU Tech. Note TN-08*. 4 pp.
- Buse, L.J. and F.W. Bell. 1992. Critical silvics of selected crop and competitor species in northwestern Ontario. *Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont.* 134 pp.
- Buse, L.J. and J. Farnsworth. 1995. Black spruce advance growth: Its potential in northwestern Ontario. *Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont.* 134 pp.
- Cameron, D.A., I.K. Morrison, K.A. Baldwin and D.P. Kreuzweiser. 1999. Black Sturgeon Boreal Mixedwood Research Project. *For. Chron.* 75: 427-430.
- Campbell, R.A. 1981. Implications of silvicultural strategies on future weed populations in northern conifers. in *Proc. of the 1981 John S. Wright Conf., Weed control in forest management*, Purdue Univ., West Lafayette, Indiana. pp. 72-80.
- Campbell, R.A., J.E. Wood, D.G. Thompson and E. Iskra. 2001. Site preparation – chemical. pp. 221-242 in Wagner, R.G. and S.J. Colombo, eds. *Regenerating the Canadian forest: Principles and practice for Ontario*. Fitzhenry & Whiteside Ltd., Markham, Ont, Can., 650 pp.
- Canham, C.D., A.R. Berkowitz, V.R. Kelly, G.M. Lovett, S.V. Ollinger and J. Schnurr. 1996. Biomass allocation and multiple resource limitation in tree seedlings. *Canadian Journal of Forest Research* 26: 1521-1530.
- Carlson, D.W. and A. Groot. 1997. Microclimate of clear-cut, forest interior, and small openings in trembling aspen forest. *Agricultural and Forest Meteorology* 87: 313-329.
- Carrow, J.R. 1985. Spruce budmoth - A case history: Opportunities. *For. Chron.* 61: 247-251.
- Carruthers, M.E. and W.D. Towill. 1988. A literature review of site preparation and conifer release treatments using 2,4-D, glyphosate or hexazinone – Part A: Timing of application. *Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont. TR-18*. 15 pp.
- Cayford, J.H., ed. 1974. *Direct seeding symposium*. *Envir. Can., Can. For. Serv., Ottawa, Publ. No.* 1339, 178 pp.
- [CFSFA] *Crown Forest Sustainability Act. 1994, Bill 171, An Act to revise the Crown Timber Act to provide for the sustainability of Crown forests in Ontario, R.S.O. Ch. 25.* 37 pp.
- Chambers, B.A., B. Naylor, J. Nieppola, B. Merchant, and P. Uhlig. 1997. *Field guide to the forest ecosystems of central Ontario, SCSS Field Guide FG-01*. *Ont. Min. Nat. Res.* 208 pp.
- Chambers, B., K. Legasy and C.V. Bentley. 1996. *Forest plants of central Ontario*. *Ont. Min. Nat. Resour. Central Region Science and Technology and Northeast Science and Technology*. Lone Pine Publishing and Queen's Printer for Ontario. 448 pp.



- Chapeskie, D.J., D.F. Galley, J.R. Mihell, N.W. Quinn and H.H. Struik. 1989. A silvicultural guide for the white pine and red pine working groups in Ontario. Ont. Min. Nat. Resour. For. Resour. Group, Sci. and Technol. Series, Vol. 6. Queen's Printer, Toronto, Ont. 102 pp.
- Chen, H.Y.H. and R.V. Popadiouk. 2002. Dynamics of North American boreal mixedwoods. *Environmental Reviews* 10: 137-166.
- Chen, J., S.C. Saunders, T.R. Crow, R.J. Naiman, K.D. Brosofske, G.D. Mroz, B.L. Brookshire and J.F. Franklin. 1999. Microclimate in forest ecosystem and landscape ecology. *Bioscience* 49: 288-297.
- Chen, J.M., P.D. Blanken, T.A. Black, M. Guilbeault and S. Chen. 1997. Radiation regime and canopy architecture in a boreal aspen forest. *Agricultural and Forest Meteorology* 86: 107-125.
- Childs, S.W. and L.E. Flint. 1987. Effect of shade cards, shelterwoods, and clearcuts on temperature and moisture environments. *Forest Ecology and Management* 18: 205-217.
- Chrosciewicz, Z. 1976. Burning for black spruce regeneration on a lowland cutover site in southeastern Manitoba. *Can. J. For. Res.* 6: 179-186.
- Churchill, G.B., Duncan, H.H, Duncan, D.P., Hodson, A.C. 1964. Long-term effects of defoliation of aspen by the forest tent caterpillar. *Ecology* 45: 630-633.
- Claveau, Y., C. Messier, P.G. Comeau and K.D. Coates. 2002. Growth and crown morphological responses of boreal conifer seedlings and saplings with contrasting shade tolerance to a gradient of light and height. *Canadian Journal of Forest Research* 32: 458-468.
- Coates, D. and S. Haeussler. 1989. A guide to the use of mechanical site preparation equipment in north central British Columbia. 2nd ed. Can. For. Serv. and B.C. Min. of Forests and Lands, Victoria, B.C. For. Res. Dev. Agree Handbook 002. 64pp.
- Coates, K.D. and P.J. Burton 1997. A gap-based approach for development of silvicultural systems to address ecosystem management objectives. *Forest Ecology and Management* 99: 339-356.
- Collins, B.S., K.P. Dunne and S.T.A. Pickett. 1985. Responses of forest herbs to canopy gaps. pp. 217-234 in *The ecology of natural disturbance and patch dynamics*. S.T.A. Pickett and P.S. White, eds. Academic Press, Orlando.
- Colombo, S.J. 1997. The role of operational frost hardiness testing in the development of container stock hardening regimes in Ontario. *New. For.* 13: 49-467.
- Colombo, S.J., D.P. Webb and C. Glerum. 1984. Frost hardiness testing: an operational manual for use with extended greenhouse culture. Ont. Min. Nat. Resour., Toronto. For. Res. Rep. 110.
- Comeau, P. 2001. Relationships between stand parameters and understory light in boreal aspen stands B.C. *Journal of Ecosystems and Management* 1: 1-8.
- Comeau, P.G. 2000. Spatial influence of aspen on light. B.C. Min. For. Research Branch, Unpublished Report, 8 pp.
- Comeau, P.G., F. Gendron and T. Letchford. 1998. A comparison of several methods for estimating light under a paper birch mixedwood stand. *Can. J. For. Res.* 28: 1843-1850.
- Comeau, P., J. Wang, T. Letchford and D. Coopersmith. 1999. Effects of spacing paper birch-mixedwood stands in central British Columbia. British Columbia Ministry of Forests Research Program, Extension Note #29. 7 pp.
- Conn, J.S. and Farris, M.L. 1987. Seed viability and dormancy of 17 weed species after 21 months in Alaska. *Weed Sci.* 35: 524-529.
- Constabel, A.J. and V.J. Lieffers 1996. Seasonal patterns of light transmission through boreal mixedwood canopies. *Can. J. For. Res.* 26: 1008-1014.



- Cook, F.R. 1984. Introduction to Canadian Amphibians and Reptiles. National Museums of Canada. ISBN 0-660-10755-4. 200 pp.
- Copony, J.A. and B.V. Barnes 1974. Clonal variation in the incidence of Hypoxylon canker on trembling aspen. *Can. J. Bot.* 52: 1475-1481.
- Corbett, P.M. 1992. Bartt precision seeder trial. Ont. Min. Nat. Res., NWOFTDU, Thunder Bay, Ont. TN-12. 4 pp.
- Cormier, D. 1989. Comparative evaluation of brushsaw-mounted scarifiers. FERIC Technical Note TN-139. 8 pp.
- Corns, I.G.W. 1988. Compaction by forestry equipment and effects on coniferous seedling growth on four soils in the Alberta foothills. *Can. J. For. Res.* 18: 75-84.
- Corriveau, A., J. Beaulieu and G. Daoust. 1991. Heritability and genetic correlations of wood characters of Upper Ottawa Valley white spruce populations grown in Québec. *For. Chron.* 67: 698-705.
- Crins, W.J. and P. Gray. In prep. The ecozones and ecoregions of Ontario. Ont. Min. Nat. Res.
- Cumming, S.G., F.K.A. Schmiegelow and P. Burton. 2000. Gap dynamics in boreal aspen stands: is the forest older than we think? *Ecol. Appl.* 10: 744-759.
- David, A.J., J.C. Zasada, D.W. Gilmore and S.M. Landhäuser. 2001. Current trends in the management of aspen and mixed aspen forests for sustainable production. *For. Chron.* 77(3): 525-532.
- Davidson, P. 1992. Bartt Mark IV and TTS Sigma precision seeders. Ont. Min. Nat. Res., For. Technol. Dev. Unit. TN-11. 12 pp.
- Davidson, R.W., R.C. Atkins, R.D. Fry, G.D. Racey and D.H. Weingartner. 1988. A silvicultural guide for the poplar working group in Ontario. Ont. Min. Nat. Resour., Toronto. Ont. Sci. and Tech. Series, Vol. 5. 67 pp.
- Davies, R.J. 1987. Sheet mulches: Suitable materials and how to use them. Arboriculture Research Note 72/87/ARB. Forestry Commission.
- Day, M.W. and F.C. Strong. 1959. A study of Hypoxylon canker on aspen. *Mich. State Univ. Agric. Exp. Stn. Q. Bull.* 41(4): 870-877.
- Day, R.J. and E.M. Harvey. 1981. Forest dynamics in the boreal mixedwood. pp. 29-41 in *Boreal mixedwood symposium*. R.D. Whitney and K.M. McClain, co-chairs. Thunder Bay, Ont., 16-18 September 1980. Canadian Forest Service, Great Lakes Forestry Research Centre, Sault Ste. Marie, Ont. COJFRC Symposium Proc. 0-P-9. 278 pp.
- de Groot, P. 1995. Yellowheaded spruce sawfly, IN: J.A. Armstrong and W.G.H. Ives (eds.). *Forest insect pests in Canada*. Pp: 241-244. *Nat. Res. Can., Can For. Serv., Ottawa, ON.* 732 pp.
- Delong, C. 1989. Predicting vegetation management problems. in Scrivener, B.A. and MacKinnon, J.A., eds. *Learning from the past - looking to the future*. Proc. Northern Silviculture Committee's 1988 Winter Workshop, Feb. 2-3, 1988, Prince George, B.C. FRDA Rep. 030. pp. 108-109.
- DeLong, H.B., V.J. Lieffers and P.V. Blenis. 1997. Microsite effects on first-year establishment and overwinter survival of white spruce in aspen-dominated boreal mixedwoods. *Canadian Journal of Forest Research* 27: 1452-1457.
- Delong, S.C., R.M. Sagar, D. Tanner, V. Sit and A. Eastham. 2000. Performance of white spruce seedlings in relation to microclimate under 40-80-year old aspen canopies and in clearcuts. *Can. J. For. Res.* In press.
- Desrochers, F.E. and J. Dunnigan. 1991. Mobile sprayers for ground application of herbicides. *For. Eng. Res. Inst. Can. (FERIC), Pointe-Claire, PQ. Spec. Rep. No. SR-79*, 30 pp.



- Dey, D.C. and G.B. MacDonald. 2001. Overstorey manipulation. pp. 157-175 in Wagner, R.G. and S.J. Colombo, eds. *Regenerating the Canadian forest: Principles and practice for Ontario*. Fitzhenry & Whiteside Ltd., Markham, Ont, Can., 650 pp.
- Dobbyn, J. 1994. *Atlas of Mammals of Ontario*. Federation of Ontario Naturalists, Don Mills, Ontario. 119 pp.
- Dominy, S.W.J. and J.E. Wood. 1986. Shelter spot seeding trials with jack pine, black spruce and white spruce in northern Ontario. *For. Chron.* 62: 446-450.
- Doucet, R. 2000. Effect of long-term thinning and fertilizing on the growth of natural poplar stands. *Note de Recherche Forestière, Direction de la Recherche Forestière du Québec, No. 108*. 9 pp.
- Drouin, J.A. and H.R. Wong. 1975. Biology, damage and chemical control of the Poplar borer (*Saperda calcrate*) in the junction of the root and stem of balsam poplar in western Canada. *Can. J. For. Res.* 5: 433-439.
- Duchesneau, R., I. Lesage, C. Messier and H. Morin. 2001. Effects of light and intraspecific competition on growth and crown morphology of two size classes of understory balsam fir saplings. *Forest Ecology and Management* 140: 215-225.
- Dumas, M.T., J.E. Wood, E.G. Mitchell and N.W. Boyonowski. 1997. Control of stump sprouting of *Populus tremuloides* and *P. grandidentata* by inoculation with *Chondostereum purpureum*. *Biol. Control* 10: 37-41.
- Dyck, J.R. 1994. Converting aspen stands to white spruce-aspen mixedwoods by planting and seeding. Manitoba, Nat. Res. Can. For. Serv. Man. Dist. Office, Winnipeg, Manitoba. Canada-Manitoba Partnership Agreement in Forestry Rep. 28 pp.
- Dyrness, C.T. 1973. Early stages of plant succession following logging and burning in the western Cascades of Oregon. *Ecology* 54: 57-69.
- Everham, E.M. and N.V.L. Brokaw. 1996. Forest damage and recovery from catastrophic wind. *Botanical Review* 62: 113-185.
- Falk, S.P., D.H. Griffin and P.H. Manion. 1989. Hypoxylon canker incidence and mortality in naturally occurring clones. *Plant Disease* 73: 394-397.
- Farmer, R.E. 1996. *Seed ecophysiology of temperate and boreal zone forest zones*. St. Lucie Press, Delray Beach, Florida. 253 pp.
- Farnden, C. 1992. *Cost and efficacy variation of forest vegetation management treatments in British Columbia*. Industrial For. Serv. Ltd., Prince George, B.C. 63 pp.
- Farr, D.F., G.F. Bills, G.P. Chamuris and A.Y. Rossman. 1989. *Fungi on plants and plant products in the United States*. APS Press. St. Paul, Minnesota. 1252 pp.
- Ferguson, D.E. 1984. *Needed: guidelines for defining acceptable advance regeneration*. USDA For. Serv. Intermountain For. Range Exp. Stn. Res. Note INT-341.
- Fisher, R.F. and D. Binkley. 2000. *Ecology and management of forest soils*. 3rd ed. John Wiley & Sons, Inc. 489 pp.
- Fleming, R., A. Groot, M. Adams, L. van Damme and F. Foreman. 2001. Direct seeding. pp. 351-373 in *Regenerating the Canadian forest: Principles and practice for Ontario*. R.G. Wagner and S.J. Colombo, eds. Fitzhenry & Whiteside, Markham, Ont. 650 pp.
- Fleming, R.A., A.A. Hopkin and Jean-Noël Candau. 2000. Insect and disease disturbance regimes in Ontario's forests. pp. 141-162 in *Ecology of a managed terrestrial landscape: Patterns and processes of forest landscapes in Ontario*. A.H. Perera, D.L. Euler and I.D. Thompson, eds. UBC Press, Vancouver, BC. 336 pp.



- Fleming, R.L. and D.S. Mossa. 1995. Results of aerial seeding black spruce on coarse textured soils. *Nat. Res. Can., Can. For. Serv. Ont. Tech Note No. 46*. 4 pp.
- Fleming, R.L. and D.S. Mossa. 1996. Seed release from black spruce cones in logging slash. *Can. J. For. Res.* 26: 266-276.
- Flesch, T.K. and J.D. Wilson. 1998. Quantifying extreme wind in experiments aimed at reducing wind damage to released white spruce understories. *Manning Diversified Forest Products Research Trust Fund FDRP9/95, Final Report*.
- Flesch, T.K. and J.D. Wilson. 1999a. Wind and remnant tree sway in forest cutblocks. II. Relating measured tree sway to wind statistics. *Agricultural and Forest Meteorology* 93: 243-258.
- Flesch, T.K. and J.D. Wilson. 1999b. Wind and remnant tree sway in forest cutblocks. III. A windflow model to diagnose spatial variation. *Agricultural and Forest Meteorology* 93: 259-282
- Flesch, T.K. and J.D. Wilson. 1999c. missing info?
- Fogal, W.H. and G. Larocque. 1992. Development of flowers, cones, and seeds in relation to insect damage in two white spruce communities. *For. Ecol. Manage.* 47: 335-348.
- Ford, W.M., A.S. Johnson and P.S. Hal. 1993. Availability and use of spring and summer woody browse by deer in clearcut and uncut forests of the southern Appalachians. *Southern Journal of Applied Forestry* 17: 116-119.
- Foreman, F.F. and L.F. Riley. 1979. Jack pine seed distribution using the Brohm seeder/Piper PA-18A aircraft combination. *For. Can., Greta Lakes For. Res. Cen., Sault Ste. Marie, Ont. Rep. O-X-294*.
- Foster, R.F. 1998. Grazing animals for forest vegetation management. *Northwest Sci. and Tech. Note TN-40*, in Bell, F.W., M. McLaughlan and J. Kerly, comp. *Vegetation management alternatives – A guide to opportunities*. Ont. Min. Natur. Resour., Thunder Bay, Ont.
- France, E.A., D. Binkley, and D. Valentine. 1989. Soil chemistry changes after 27 years under four tree species in southern Ontario. *Can. J. For. Res.* 19: 1648-1650.
- Franklin, J.F., D. Rae Berg, D.A. Thornburgh and J.C. Tappeiner. 1997. Alternative silvicultural approaches to timber harvesting: variable retention harvest systems. pp. 111-139 in *Creating a forestry for the 21st century*. K.A. Kohm and J.F. Franklin, eds. Island Press. 475 pp.
- Frelich, L.E. and P.B. Reich. 1995. Spatial patterns and succession in a Minnesota southern-boreal forest. *Ecol. Monog.* 65: 325-346.
- Fye, R.E. and J.B. Thomas. 1963. Regeneration of balsam fir and spruce about 15 years after release by spruce budworm attack. *For. Chron.* 39: 385-397.
- Galipeau, C., D. Kneeshaw and Y. Bergeron. 1997. White spruce and balsam fir colonization of a site in the southeastern boreal forest as observed 68 years after fire. *Canadian Journal of Forest Research* 27: 139-147.
- Gardiner, L.M. 1975. Insect attack and value loss in wind-damaged spruce and jack pine stands in Northern Ontario. *Canadian Journal of Forest Research* 5: 387-398.
- Gill, D. 1974. Snow damage to boreal mixedwood stands in northern Alberta. *The Forestry Chronicle* 50: 70-73.
- Gilles, C. 1997. Feathered- and serrated-edge treatments to manage windthrow: Research trials in T.F.L. 6, Vancouver Island. *FERIC Field Note General-57*. 2 pp.
- Gilles, C. 2001. Aerial top pruning and manual basal pruning to promote wind stability: One- and three-year results. *FERIC Advantage* 2(32): 1-4.
- Gordon, A.G. 1985. Budworm! What about the forest? IN: Schmitt, D. (ed.). *Spruce-fir management and spruce budworm*. Pp. 3-29. *USDA For. Serv., NE For. Exp. Sta., Bromall, PA. Gen. Tech. Rep. GTR-NE-99*. 217 pp.



- Gore, A.J.P. 1983. Mires: Swamp, bog, fen, and moor. General studies. Elsevier Scientific Publishing Company, New York. 440 pp.
- Graham, S.A. and R.P. Harrison. 1954. Insect attacks and hypoxylon infections in aspen. *J. For.* 52: 741-743.
- Graham, S.A. and R.R. Mason. 1958. Influence of weather on poplar borer number. *Michigan Forestry No. 20*. 3 pp.
- Greene, D.F., D.D. Kneeshaw, C. Messier, V. Lieffers, D. Cormier, R. Doucet, G. Grover, K.D. Coates and C. Calogeropoulos. 2000. An analysis of silvicultural alternatives to clearcutting and planting in southern boreal mixedwood stand (aspen/white spruce/balsam fir). SFMN Working Paper 2000-3, 35 pp.
- Greene, D.F., D.D. Kneeshaw, C. Messier, V. Lieffers, D. Cormier, R. Doucet., K.D. Coates, A. Groot, G. Grover and C. Calogeropoulos. 2002. Modelling silvicultural alternatives for conifer regeneration in boreal mixedwood stands (aspen/white spruce/balsam fir). *For. Chron.* 78 (2): 281-295.
- Greene, D.F., J.C. Zasada, L. Sirois, D. Kneeshaw, H. Morin, I. Charron and M.-J. Simard. 1999. A review of the regeneration dynamics of North American boreal forest tree species. *Canadian Journal of Forest Research* 29: 824-839.
- Gregory, R.A. 1966. The effect of leaf litter upon establishment of white spruce beneath paper birch. *The Forestry Chronicle* 42: 251-255.
- Greifenhagen, S. 2001. Disease consideration in unmanaged boreal mixedwood forests of Ontario. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note. 8 pp.
- Grime, J.P. 1977. Evidence for the existence of three primary strategies in plants and its relevance to ecological and evolutionary theory. *Am. Nat.* 111: 1169-1194.
- Groot, A. 1987. Silvicultural consequences of forest harvesting on peatlands: Site damage and slash conditions. Can. For. Serv., Sault Ste. Marie, Ont. Inf. Rep. O-X-384, 20 pp.
- Groot, A. 1995. Harvesting method affects survival of black spruce advance growth. *North. J. Appl. For.* 12: 8-11.
- Groot, A. 1999. Effects of shelter and competition on the early growth of planted white spruce (*Picea glauca*). *Canadian Journal of Forest Research* 29: 1002-1014.
- Groot, A. and D.W. Carlson. 1996. Influence of shelter on night temperatures, frost damage and bud break of white seedlings. *Can. J. For. Res.* 26: 1531-1538.
- Groot, A., D.W. Carlson and J.E. Wood. 1996. Microclimatic influences of small forest openings on white spruce and trembling aspen regeneration. pp. 106-108 in *Proceedings: Advancing Boreal Mixedwood Management in Ontario*. C.R. Smith and G.W. Crook, comp. Sault Ste. Marie, Ont., 17-19 Oct. 1995. Can. For. Serv. and Ont. Min. Nat. Resour., Sault Ste. Marie, Ont. 239 pp.
- Groot, A., D.W., Carlson, R.L. Fleming, and J.E. Wood. 1997. Small openings in trembling aspen forest: Microclimate and regeneration of white spruce and trembling aspen. *Can. For. Serv. and Ont. Min. Nat. Resour., NODA/NFP Tech Rep. TR-47*. 25 pp.
- Groot, A., J.K. Jeglum and W. Brown. 2001. Natural regeneration of conifers. pp. 375-392 in Wagner, R.G. and S.J. Colombo, eds. *Regenerating the Canadian forest: Principles and practice for Ontario*. Fitzhenry & Whiteside Ltd., Markham, Ont, Can. 650 pp.
- Gross, H.L. and J.T. Basham 1981. Diseases of aspen suckers in northern Ontario. *Dep. Environ., Can. For. Serv., Sault Ste. Marie, Ont. Inf. Rep. 0-X-329*. 16 pp.
- Haack, R.A. and J.W. Byler. 1993. Insects and pathogens: Regulators of forest ecosystems. *J. For.* 91: 32-37.
- Haddon, B.D., *ed.* 1988. *Forest inventory terms in Canada*. For. Can. 109 pp.



- Haeussler, S. 1991. Prescribed fire for forest vegetation management. Synopsis, B.C. Min. For., Victoria, B.C., FRDA Memo No. 198, 19 pp.
- Haeussler, S. and D. Coates. 1986. Autecological characteristics of selected species that compete with conifers in British Columbia: a literature review. B.C. Min. Forests, Victoria, B.C. FRDA Rep. No. 1. 180 pp.
- Haeussler, S., Coates, D. and Mather, J. 1990. Autecology of common plants in British Columbia: a literature review. B.C. Min. Forests, Victoria, B.C., FRDA Rep. No. 158. 272 pp.
- Halpern, C.B. 1989. Early successional patterns of forest species: interactions of life history traits and disturbance. *Ecology* 70: 704-720.
- Hare, F.K. 1950. Climate and zonal divisions of the boreal forest formation in eastern Canada. *Geogr. Rev.* 40:615-635.
- Hardy, B.T.T. 1989. Manual of plant species suitability for reclamation in Alberta. 2nd ed. Alberta Land Conservation and Reclamation Council, Alberta Environment, Edmonton. Rep. RRTAC 89-4.
- Harmon, M.E., J.F. Franklin, F.J. Swanson, P. Sollins, S.V. Gregory, J.D. Lattin, N.H. Anderson, S.P. Cline, N.G. Aumen, J.R. Sedell, G.W. Lienkaemper, K. Cromack Jr. and K.W. Cummins. 1986. Ecology of coarse woody debris in temperate ecosystems. *Advances in Ecological Research* 15: 133-302.
- Harper, G.J., P.G. Comeau, W. Hintz, R.E. Wall., R. Prasad and E.M. Becker. 1999. *Chondrostereum purpureum* as a biological control agent in forest vegetation management. II. Efficacy on Sitka alder and aspen in western Canada. *Can. J. For. Res.* 29: 852-858.
- Harrington, C.A. 1984. Factors influencing initial sprouting of red alder. *Can. J. For. Res.* 12: 108-111.
- Harvey, B.D. and Y. Bergeron. 1989. Site patterns of natural regeneration following clear-cutting in northwestern Québec. *Canadian Journal of Forest Research* 19: 1458-1469.
- Harvey, B.D., A. Leduc, S. Gauthier and Y. Bergeron. 2002. Stand-landscape integration in natural disturbance-based management of the southern boreal forest. *For. Ecol. and Man.* 155: 369-385.
- Harvey, E.M., F.W. Bell and J.O. Boateng. 1998. Manual, motor-manual and mechanical brushing tools for conifer release. Northwest Sci. & Technol. Tech. Note TN-42, in Bell, F.W., M. McLaughlan and J. Kerly, comp. Vegetation management alternatives – A guide to opportunities. Ont. Min. Natur. Resour., Thunder Bay, Ont.
- Hauer, R.J., W. Wang and J.O. Dawson. 1994. Ice storm damage to urban trees. *J. Arboric.* 19: 187-193.
- Hayden, J., J. Kerley, D. Carr, T. Kenedi and J. Hallarn. 1995. Ontario Forest Growth and Yield Program field manual for establishing and measuring permanent sample plots. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. 84 pp. plus appendices.
- Hearnden K.W., S.V. Millson and W.C. Wilson, 1992, A report on the status of forest regeneration by the Ontario Independent Forest Audit Committee. Queen's Printer for Ontario. 117 pp.
- Heilman, P. 1966. Change in distribution and availability of nitrogen with forest succession on north slopes in interior Alaska. *Ecology* 47: 825-831.
- Heimbürger, C.C. and A.W. McCallum. 1940. Balsam fir butt rot in relation to some site factors. *Pulp and Paper Magazine of Canada.* 41: 301-303.
- Heineman, J.L., L. Bedford and D. Sword. 1999. Root system development of 12-year-old white spruce (*Picea glauca* (Moench) Vos) on a mounded subhygic-mesic site in northern interior British Columbia. *For. Ecol. and Manage.* 123: 167-177.
- Haeussler, S. and D. Coates. 1986. Autecological characteristics of selected species that compete with conifers in British Columbia: a literature review. B.C. Min. For., Victoria, B.C., Land Manage. Rep. No. 33. 180 pp.



- Hidalh, V. and W.A. Reeks. 1960. Outbreaks of the forest tent caterpillar, *Malacosoma disstria* Hübner, and their effects on stands of trembling aspen in Manitoba and Saskatchewan. *Canadian Entomologist* 92: 199-209
- Hills, G.A. 1959. A ready reference to the description of the land of Ontario and its productivity. (a compendium of maps, charts, tables and brief comments). Ont. Dep. Lands For. Internal Rep. 142 pp.
- Hills, G.A. 1966. The ecological basis for land-use planning, Ontario Dep. Lands and Forests, Res. Br., Res. Rep. 46, (reprint of 1962 edition with revised site region map and chart).
- Hills, G. A. 1976. Mapping the site regions and landscape districts of Ontario 1944-1975, introducing the 1975 version. Ontario Ministry of Natural Resources, Toronto, Canada. (Unpublished draft).
- Horn, H.S. 1971. The adaptive geometry of trees. Princeton University Press, Princeton, New Jersey. 144 pp.
- Horton, K.W. and E. J. Hopkins. 1963. Influence of fire on aspen suckering. Can. Dept. of For., For. Res. Branch, Ottawa, Ont. Dep. For. Publ. No. 1095. 23pp.
- Horton, K.W. and E.J. Hopkins. 1965. Influence of fire on aspen suckering. Can. Dep. For. Res. Br. Publ. No. 1095.
- Horton, K.W. and J.S. Maini. 1964. Aspen reproduction: its characteristics and control. Can. Dept. For., For. Res. Br. Rep. 64-0-12. 85 pp.
- Howse, G.M. 1981. Losses from and control of spruce budworm and other insects in the boreal mixedwood forest. In: R.D. Whitney and K.M. McClain (co-chairs), Boreal Mixedwood Symposium, September 16-18, 1980, pp 239-251. Canadian Forest Service, Sault Ste. Marie, Ontario. COJFRC Symposium Proceedings O-P-9. 278 pp.
- Howse, G.M. 1995. Forest insect pests in the Ontario region. IN: J.A. Armstrong and W.G.H. Ives (eds.). Forest insect pests in Canada. Pp: 41-57. Nat. Res. Can., Can For. Serv., Ottawa, ON. 732 pp.
- Hughes, E.L. 1967. Studies in stand and seedbed treatment to obtain spruce and fir reproduction on the mixedwood slope type of northwestern Ontario. Can. Dept. For. and Rural Develop., For. Branch Depart. Publ. No. 1189. 138 pp.
- Humble, L.M., N. Humphreys, and G.A. Van Sickle. 1994. Distribution and hosts of the white pine weevil, *Pissodes strobi* (Peck), in Canada. IN: Alfaro, R.I., G. Kiss, and R.G. Fraser (eds.). The white pine weevil: Biology, damage and management. Pp: 68-75. Canada-British Columbia Partnership Agreement on Forest Resource Development: FRDA II, Queen's Printer for BC, Victoria, BC. 311 pp.
- Ishizuka, M., H. Toyooka, A. Osawa, H. Kushima, Y. Kanazawa and A. Sato. 1998. Secondary succession following catastrophic windthrow in a boreal forest in Hokkaido, Japan: The timing of tree establishment. *Journal of Sustainable Forestry* 6: 367-388.
- Jaciw, P. 1969. Conifer development ten years after aerial application of silvicides in MNR Central Ontario. Ont. Min. Nat. Resour., Toronto, Ont.
- Janas, P.S. and D.G. Brand. 1988. Comparative growth and development of planted and natural stands of jack pine. *For. Chron.* 64: 320-328.
- Jarvis, J.M. 1966. Project Ms-228: shelterwood cutting and mechanical seedbed treatment in white spruce-trembling aspen stands to induce white spruce regeneration, Manitoba and Saskatchewan. In: Review of silvicultural research of white spruce and trembling aspen cover types, mixedwood forest section, boreal forest region. Alberta-Saskatchewan-Manitoba. Jarvis, J.M., Steneker, G.A., Waldron, R.M. and Lees, J.C. Eds. Can. For. Serv., Forestry Branch, Ottawa, Publ. No. 1156 p. 183 pp.



- Jeglum, J.K. 1984. Strip cutting in shall-soil upland black spruce near Nipigon, Ontario. IV. Seedling-seedbed relationships. Can. For. Serv., Great Lakes For. Res. Cen., Sault Ste. Marie, Ont. Inf. Rep. 0-X-359, 26 pp.
- Jeglum, J.K. and J. Dierichson. 1996. Aspen-mixedwood silviculture in the boreal forest of Ontario, Canada. Norwegian Journal of Agriculture Sciences. Supplement No. 24: 29-44.
- Jeglum, J., H.M. Kershaw, D.M. Morris and D.A. Cameron. in press. Best forestry
- Jeglum, J.K. and D.J. Kennington. 1993. Strip clearcutting in black spruce: A guide for the practicing forester. For. Can., Gt. Lks. For. Cen., Sault Ste. Marie, Ont. 102 pp.
- Jobidon, R. 1994. Light threshold for optimal black spruce (*Picea mariana*) seedling growth and development under brush competition. Can. J. For. Res. 24: 1629-1635.
- Jobidon, R. 1998. Comparative efficacy of biological and chemical control of the vegetative reproduction in *Betula papyrifera* and *Prunus serotina*. Biol. Control. 11: 22-28.
- Johnson, E.A. 1992. Fire and vegetation dynamics: Studies from the North American boreal forest. Cambridge University Press, New York. 129 pp.
- Johnson, H.J. 1986. The release of white spruce from trembling aspen overstoreys: A review of available information and silvicultural guidelines. Can. For. Serv. and Man. Nat. Resour. For. Branch. 109 pp.
- Johnston, M. 1996. The role of disturbance in boreal mixedwood forests of Ontario. pp. 33-40 in Proceedings: Advancing boreal mixedwood management in Ontario. C.R. Smith and G.W. Crook, comp. Sault Ste. Marie, Ont., 17-19 October 1995. Canadian Forest Service, Great Lakes Forestry Research Centre, Sault Ste. Marie, Ont. 239 pp.
- Johnston, W.F. 1971. Broadcast burning slash favors black spruce reproduction on organic soil in Minnesota. For. Chron. 47: 1-3.
- Jones, J.R. and N.V. DeByle. 1985. Soils. IN: N.V. DeByle and R.P. Vinokur (Eds.). Aspen: Ecology and management in the western United States. Pp. 65-70. USDA For. Serv., Rocky Mountain For. Range Exp. Sta., Fort Collins, Colorado. Gen. Tech. Rep. RM-119.
- Joyal 1976 Missing info
- Joyce, D. 2002. Ont. For. Res. Inst., Ont. Min. Nat. Resour., in personal communication with L. Palmer.
- Joyce, D., P. Nitschke and A. Mosseler. 2001. Genetic resource management. pp. 141-154 in Wagner, R.G. and S.J. Colombo, eds. Regenerating the Canadian forest: Principles and practice for Ontario. Fitzhenry & Whiteside Ltd., Markham, Ont, Can. 650 pp.
- Kabzems, R. 1996. Boreal long term soil productivity study. B.C. Min. For., Prince George Forest Region, Prince George, B.C. Research Note PG-06. 4 pp.
- Kabzems, R. 1998. Regenerating boreal mixedwoods: Initial results of a group shelterwood silviculture system in trembling aspen-white spruce stands. B.C. Min. For., Prince George For. Reg., Victoria, B.C. Forest Resources and Practices Team Note #PG-15. 6 pp.
- Kabzems, R. and J.D. Lousier. 1992. Regeneration, growth and development of *Picea glauca* under *Populus* spp. canopy in the boreal white and black spruce zone. For. Can. and B.C. Min. For., FRDA Rept. No. 176. 35 pp.
- Kayahara, G.J. In prep (a). Insect considerations in boreal mixedwood forests of Ontario. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note.
- Kayahara, G.J. In prep (b). Physical, chemical, and biological properties of soils in boreal mixedwoods. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note..



- KBM Forestry Consulting. 2002. Handle with care. Keys to successful container stock handling. Thunder Bay, Ont. 2 pp.
- Keizer, A.J. and S. Melbourne. 2002. Forest health conditions in the Northeast Region of Ontario 2001. Nat. Resour. Can., Can. For. Serv., Great Lakes Forestry Centre, Sault Ste. Marie, Ont. 38 pp. plus appendices.
- Kelly, C., C. Messier and Y. Bergeron. 2001. Mechanisms of intolerant deciduous tree recruitment between catastrophic disturbance in the southern boreal mixedwoods of Québec. In prep.
- Kemperman, J.A. 1977. Aspen clones: development, variability, and identification. Ont. Min. Nat. Resour., For. Div. For. Res. Inf. Pap. 101. 11 pp.
- Kennedy, F.D. 1988. Report on site preparation in Ontario. pp. 278-421 in the body of the Environmental Assessment Act (R.S.O. 1980, c. 140), as amended. Statement of Evidence Panel XI, Renewal. Vol. I. Ont. Min. Nat. Resour., Toronto, Ont. 421 pp.
- Khalil, M.A.K. 1985. Genetic variation in eastern white spruce (*Picea glauca* (Moench) Voss) populations. Can. J. For. Res. 15: 444-452.
- Kimmins, J.P. 1997. Forest ecology: a foundation for sustainable management. 2nd ed.
- Klinger, L.F. 1996. The myth of the classic hydrosere model of bog succession. Arctic Alpine Res. 28: 1-9.
- Klinger, L.F. and S.K. Short. 1996. Succession in the Hudson Bay Lowland, Northern Ontario, Canada. Arctic Alpine Res. 28: 172-183.
- Kneeshaw, D.D. and Y. Bergeron. 1996. Ecological factors affecting the abundance of advance regeneration in Québec's southwestern boreal forest. Canadian Journal of Forest Research 26: 888-898.
- Kneeshaw, D.D. and Y. Bergeron. 1998. Canopy gap characteristics and tree replacement in the southeastern boreal forest. Ecology 79: 783-794.
- Kneeshaw, D.D. and Y. Bergeron. 1999. Spatial and temporal patterns of seedling and sapling recruitment within canopy gaps caused by spruce budworm. Ecoscience 6: 214-222.
- Kneeshaw, D.D., C. Messier, Y. Bergeron and D. Greene. 1999. Tree seedling and shrub interactions in closed forest vs. budworm gap understories: Implications for forest management. pp. 494-499 in Veeman, S.T., D.W. Smith, B.G. Purdy, F.J. Salkie, and G.A. Larkin., eds. Proc. 1999 Sustainable Forest Management Network Conference. Science and practice: Sustaining the boreal forest. Sust. For. Man. Net., Univ. of Alberta, Edmonton, Alta. 816 pp.
- Kneeshaw, D.D., H. Williams, E. Nikinmaa and C. Messier. 2002. Patterns of above- and below-ground response of understory conifer release 6 years after partial cutting. Can. J. For. Res. 32: 255-265.
- Kobe, R.K., S.W. Pacala, J.A. Silander Jr. and C.D. Canham 1995. Juvenile tree survivorship as a component of shade tolerance. Ecological Applications 5: 517-532.
- Kobe, R.K. and K.D. Coates. 1997. Models of sapling mortality as a function of growth to characterize interspecific variation in shade tolerance of eight tree species of northwestern British Columbia. Canadian Journal of Forest Research 27: 227-236.
- Krajina, V.J. 1969. Ecology of forest trees in British Columbia. Ecology of Western North America 2: 1-146.
- Kramer, N.B. and F.D. Johnson. 1987. Mature forest seed banks of three habitat types in central Idaho. Can. J. Bot. 65: 1961-1966.
- Landhäuser, S.M. and V.J. Lieffers. 1998. The effect of understory scarification or overstory removal on the composition and early development of understory vegetation. pp. 148-150 in Wagner, R.G. and D.G. Thompson, eds. Third int. conf. on forest vegetation management: popular summaries. Ont. For. Res. Inst. For. Res. Inf. Pap. No. 141. 508 pp.



- Landhäusser, S.M. and Lieffers, V.J. 1999. Rhizome growth of *Calamagrostis canadensis* into mounds created for tree seedling establishment. *New Forests* 18: 245-262.
- Landhäusser, S.M., K.J. Stadt and V.J. Lieffers. 1997. Photosynthetic strategies of summergreen and evergreen understory herbs of the boreal mixedwood forest. *Oecologia* 112: 173-178.
- Lautenschlager, R.A. 1995. Competition between forest brush and planted white spruce in North-Central Maine. *North. J. Appl. For.* 12(4): 163-167.
- Lautenschlager, R.A. 1999. Environmental resource spruce. *Can. J. For. Res.* 29:906-916.
- Lautenschlager, R.A. and T.P. Sullivan. 2002. Effects of herbicide treatments on biotic components in regenerating northern forests. *For. Chron.* 78: 695-731.
- Lautenschlager, R.A., S. Basher, W. Cook, S. Pickering, B. Richard, H. Smith, J. Martin, K. Wilson and I. Barker. 1993. Guidelines for the use of domestic sheep for forest vegetation management on Crown land in Ontario. *Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont.* 14 pp.
- Lavertu, D., Y. Mauffett and Y. Bergeron. 1994. Effects of stand age and litter removal on the regeneration of *Populus tremuloides*. *Journal of Vegetation Science* 5: 561-568.
- Lee, P. and K. Sturgess. 2001. The effects of logs, stumps, and root throws on understory communities within 28-year-old aspen-dominated boreal forests. *Canadian Journal of Botany* 79: 905-916.
- Lees, J.C. 1963. Partial cutting with scarification in Alberta spruce-aspen stands. *Can. Dept. For., Forest Res. Br., Dept. For. Publ. No. 1001.* 18 pp.
- Lees, J.C. 1964. A test of harvest cutting methods in Alberta's spruce-aspen forest. *Can.*
- Lees, J.C. 1964. A test of harvest cutting methods in Alberta's spruce-aspen forest. *Can. Dept. For., For. Res. Br., Dept. For. Publ. No. 1042.* 19 pp.
- Lees, J.C. 1966. Release of white spruce from aspen competitors in Alberta's spruce-aspen forest. *Can. Dep. For., For. Res. Br. Publ.* 1163.
- Lees, J.C. 1970. Natural regeneration of white spruce under spruce-aspen shelterwood, B-18a Forest Section, Alberta. *Can. For. Serv. Publ. No. 1274.* 14 pp.
- Lefort, P., B. Harvey, J. Parton and G.K.M. Smith. 2002. Synthesizing knowledge of the Claybelt to promote sustainable forest management. *The Forestry Chronicle* 78: 665-671.
- Lemon, P.C. 1961. Forest ecology of ice storms. *Bulletin of the Torrey Botanical Club* 88: 21-29.
- Lieffers, V.J. 1995. Ecology and dynamics of boreal understorey species and their role in partial-cut silviculture. pp. 33-39 *in* Bamsey, C.R. (ed.). *Symp. Proc., Innovative silviculture systems in boreal forests*, Edmonton, Alta, Oct. 2-8, 1994. *Can. For. Serv., Nat. Res. Can. and International Union of For. Res. Organizations.* 106 pp.
- Lieffers, V.J. and K.J. Stadt 1994. Growth of understory *Picea glauca*, *Calamagrostis canadensis*, and *Epilobium angustifolium* in relation to overstorey light transmission. *Canadian Journal of Forest Research* 24: 1193-1198.
- Lieffers, V.J., B.D. Pinno and K.J. Stadt. 2002. Light dynamics and free-to-grow standards in aspen-dominated mixedwood forests. *For. Chron.* 78: 137-145.
- Lieffers, V.J., S.E. Macdonald and E.G. Hogg. 1993. Ecology of and control strategies for *Calamagrostis canadensis* in boreal forest sites. *Can. J. For. Res.* 23: 2070-2077.
- Lieffers, V.J., R.B. Macmillan, D. MacPherson, K. Branter and J.D. Stewart. 1996. Semi-natural and intensive silvicultural systems for the boreal mixedwood forest. *For. Chron.* 72: 286-292.



- Lieffers, V.J., R.Z. Man, D. MacPherson. and P. Blenis. 1999. Productivity of aspen and white spruce in single species and mixed stands. pp. 482-487 in Veeman, S.T., D.W. Smith, B.G. Purdy, F.J. Salkie. and G.A. Larkin, eds. Proc. 1999 Sustainable Forest Management Network Conference. Science and practice: Sustaining the boreal forest. Sust. For. Man. Net., Univ. of Alberta, Edmonton, Alta. 816 pp.
- Lieffers, V.J., K.J. Stadt and S. Navratil. 1996. Age structure and growth of understory white spruce under aspen. Canadian Journal of Forest Research 26: 1002-1007.
- Louter, J.H., M. Kershaw and A.M. Gordon. 1993. The autecology of competing non-crop vegetation on old field sites in southern Ontario. Ont. Min. Nat. Resour., STTU, Brockville, Ont. 143 pp.
- Luke, A.B., D.J. Scarlett and D.J. Archibald. 1993. Roadside slash pile burning in northeastern Ontario. Ont. Min. Nat. Resour., NEST, Timmins, Ont. TN-002. 8 pp.
- Luke, A.B. and S. Vasiliasukas. 1998. Sheep as a vegetation management tool in northeastern Ontario. pp. 437-439 in Wagner, R.G. and D.G. Thompson, eds. Third int. conf. on forest vegetation management: Popular summaries. Ont. For. Res. Inst. For. Res. Inf. Pap. No. 141. 508 pp.
- Lundmark, T. and J.E. Hallgren. 1987. Effects of frost on shaded and exposed spruce and pine seedlings planted in the field. Can. J. For. Res. 17: 1197-1201.
- Lussier, Jean-Martin. 2001. Effects of commercial thinning on stand yield and value in eastern Canada; what have we learned so far? Pp.42 in Kofman, P. and J.-F. Gingras., (eds). Thinnings: A valuable forest management tool. Conference Documentation, IUFRO Conference, Québec City, Sept. 9-14, 2001. 68 pp.
- Lux, S. 1998. Thinning aspen results 45+ years later. pp. 77-83 in Proceedings: Stand density management: Planning and implementation, 6-7 Nov. 1997, Edmonton, Alta. C.R Bamsey, ed. Alberta Environ. Prot.
- Lyon, N.F. and F.C. Robinson. 1977. White spruce seed tree system with mechanical seedbed preparation. Ont. Min. Nat. Resour., Silvicultural Note No 13. 15 pp.
- MacDonald, G.B. 1995. The case for boreal mixedwood management: An Ontario perspective. For. Chron. 71:725-733.
- MacDonald, G.B. 1996. Mixedwood management research and practice in Ontario. Pp.102-113. In Comeau, P.G. and Thomas, K.D. (eds.). Silviculture of temperate and boreal broadleaf-conifer mixtures. B.C. Ministry of Forests, Forestry Division Services Branch, Victoria, BC. Canada. 163pp.
- MacDonald, G.B. 2000. Harvesting boreal mixedwood stands to favour conifer regeneration: Project establishment and early results. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. For. Res. Rep. 157. 20 pp.
- MacDonald, G.B. and D.H. Weingartner. 1995. Definition of the boreal mixedwood forest. Ont. Min., Nat. Resour., Ont. For. Res. Inst. Boreal Mixedwood Note No. 2. 6 pp.
- MacDonald, G.B. and D.J. Thompson. *In press*. Responses of planted conifers and natural hardwood regeneration to harvesting, scalping, and weeding on a boreal mixedwood site. Forest Ecology and Management.
- Macey, D.E. and R.S. Winder. 2001. Biological control and the management of *Calamagrostis canadensis* (blue-joint grass). Pacific For. Cent., Can. For. Serv. Tech. Transfer Note No. 25. 6 pp.
- MacKinnon, A. and R.G. McMinn. 1988. Response of vegetation to mechanical site preparation treatments in British Columbia. in Hamilton, E. and S. Watts, comp. Vegetation competition and responses: Proceedings, 3rd annual vegetation management workshop. 15-17 Feb. 1988. Vancouver, B.C. For. Can. and B.C. Min. For., Victoria, B.C. 85 pp.



- MacLean, D.A. 1980. Vulnerability of fir-spruce stands during uncontrolled spruce budworm outbreaks: A review and discussion. *For. Chron.* 56: 213-221.
- MacLean, D.A. 1996. Forest management strategies to reduce spruce budworm damage in the Fundy model forest. *For. Chron.* 72: 399-405.
- MacLean, D.W. 1959. Five-year progress report on Project RC-17. Pulp and Paper Res. Inst. of Canada, Woodlands Research Index No. 112.
- MacLean, D.W. 1960. Some aspects of the aspen-birch-spruce-fir type in Ontario. *Can. Dept. For., For. Res. Divisional Tech. Note TN-94.* 24 pp.
- Maini, J.S. 1967. Variation in the vegetative propagation of *Populus* in natural populations. *Bull. Ecol. Soc. Am.* 48(2): 75-76.
- Maini, J.S. and K.W. Horton 1966. Vegetative propagation of *Populus* spp. I. Influence of temperature on formation and initial growth of aspen suckers. *Canadian Journal of Botany* 44: 1183-1189.
- Mallik, A.U., G.W. Peterson and F.W. Bell. 1996. Vegetative and seedling regeneration of pin cherry (*Prunus pensylvanica*): Efficacy of herbicide treatment. *NODA Note No. 21.* 4 pp.
- Mallik, A.U. and D. Hu. 1997. Soil respiration following site preparation treatments in boreal mixedwood forest. *For. Ecol. and Man.* 97: 265-275.
- Mallik, A.U., K. Wood, C. Hollstedt and M.S. McLaughlan. 1997. Cut stump herbicide treatments to reduce resprouting and root suckering. TN-39 in Bell, F.W., M.S. McLaughlan and J. Kerley, comp. *Vegetation management alternatives – A guide to opportunities.* Ont. Min. Natur. Resour., Thunder Bay, Ont. 12 pp.
- Man, R. and V.J. Lieffers. 1999. Effects of shelterwood and site preparation on microclimate and establishment of white spruce seedlings in a boreal mixedwood forest. *For. Chron.* 75: 837-844.
- Manion, P.D. 1991. *Tree disease concepts.* 2nd ed. Prentice-Hall, Inc. Englewood Cliffs, N.J. 402 pp.
- Marks, P.L. 1974. The role of pin cherry (*Prunus pensylvanica* L.) in the maintenance of stability in northern hardwood ecosystems. *Ecol. Monogr.* 44: 73-88.
- Marsden, B.J., V.J. Lieffers and J.J. Zwiazek 1996. The effect of humidity on photosynthesis and water relations of white spruce seedlings during the early establishment phase. *Canadian Journal of Forest Research.* 26: 1015-1021.
- Maxwell, J. 1989. Silviculture site preparation equipment study. B.C. Min. For., Silviculture Branch, Victoria, B.C. pp. 27-57.
- Maycock, P.F. and J.T. Curtis 1960. The phytosociology of the boreal conifer-hardwood forests of the Great Lakes Region. *Ecol. Mono.* Vol 30 1:1-35.
- Maynard, C. 1996. Forest genetics glossary. www.esf.edu/for/maynard/GENE-GLOSSERY.html.
- Maynard, D.G. 1997. Soil nutrient dynamics in a boreal mixedwood cutover following the application of hexazinone. *Ecol. Appl.* 7(2): 416-430.
- McClain, K.M. 1981. Site types in the boreal mixedwood forest in Ontario. Pp. 5-9 in R.D. Whitney and K.M. McClain, eds. *Boreal mixedwood symposium. Proc. Symp., Sept. 16-18, 1980, Thunder Bay, ON.* Can. For. Serv., Sault Ste. Marie, ON COJFRC Symp. Proc. O-P-9.
- McClain, K.M. and A.J. Willcocks, eds. 1988. *Aspects of planting: Biology and practice.* Ont. Min. Nat. Res., FTDU. TWR-1. 114 pp.
- McClintock, T.F. 1954. Factors affecting wind damage in selectively cut stands of spruce and fir in Maine and northern New Hampshire. *USDA For. Serv. Northeastern For. Exp. Stn. Pap.* 70. 17 pp.
- McCulligh, L.J. and W.D. Towill. 1994. *White spruce seed trees: a potential silvicultural tool.* Northwestern Ont. Technol. Dev. Unit. Draft Rep.



- McKinnon, L.M. and G.J. Kayahara. In review.
Ecology and management of microclimate in boreal mixedwoods. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note.
- McLaughlan, M.S., D. Myketa and F.W. Bell. 1996
Managing vegetation with herbicides: a review of glyphosate, 2,4-D, hexazinone, triclopyr and simazine. Northwest Sci. & Technol. TN-37 in Bell, F.W., M. McLaughlan and J. Kerley, comp. Vegetation Management Alternatives – A Guide to Opportunities. Ont. Min. Natur. Resour., Thunder Bay, Ont. 12 pp.
- McLaughlin, J. 2001. Managing disease in boreal mixedwood stands. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note. 8 pp.
- McLaughlin, J.A., and Dumas, M.T. 1996.
Pathological implications of partial cutting in boreal mixedwood stands. pp. 167-169 in Advancing boreal mixedwood management in Ontario: proceedings of a workshop. C.R. Smith, and G.W. Crook, comp. Nat. Res. Can., Can. For. Serv., Sault Ste. Marie, Ont. 239 pp.
- McLean, A. 1969. Fire resistance of forest species as influenced by root systems. *J. Range Manage.* 22: 120-122
- McMinn, R.G. and I.K. Hedin. 1990. Site preparation: Mechanical and manual. pp. 150-163 in Lavender, D.P., R. Parish, C.M. Johnson, G. Montgomery, A. Vyse, R.A. Willis and D. Winstrom, eds. Regenerating British Columbia's Forests. For. Can. And B.C., Min. For., Univ. B.C. Press, Vancouver, B.C., pp. 150-163.
- McNicol, J.G. 2001. Influences of wildlife on regenerating forests. pp. 503-517 in Regenerating the Canadian forest: Principles and practice for Ontario. R.G. Wagner and S.J. Colombo eds. Fitzhenry and Whiteside, Markham, Ont. 650 pp.
- McRae, D.J. 1980. Preliminary fuel consumption guidelines for prescribed burning in Ontario slash fuel complexes. Dep. Environ., Can. For. Serv., Sault Ste. Marie, Ont. Inf. Rep. 0-X-316. 25 pp.
- McRae, D.J. 1985a. Prescribed burning of boreal mixedwood slash in the Ontario Clay Belt Region. Can. For. Ser., Sault Ste. Marie, Ont. Inf. Rep. O-X-367. 18 pp.
- McRae, D.J. 1985b. Regeneration success as a measure of site preparation effectiveness: Prescribed fire versus scarification. Pp. 92-97 in Stocks, B.J., R.G. Elliot and J.D. Walker, eds. Forest fire management symposium. Symp. Proc., Sept. 15-18, 1984, Sault Ste. Marie, Ont. COJFRC Symp. Proc. O-P-13. 125 pp.
- McRae, D.J. 1995. Prescribed burning on black spruce sites can assist regeneration efforts. Can. For. Ser. Frontline Technical Note No. 37. 4 pp.
- McRae, D.J. 1986. Soil nutrient effects from prescribed burning. Paper presented at 1985-1986 Ont. Min. Nat. Resour. Client Group Prescribed Burn seminars. Unpubl. Rep.
- McRae, D.J. 1996. Prescribed fire in boreal mixedwood management. pp. 130-133 in Advancing boreal mixedwood management in Ontario. Proceedings of a workshop. Nat. Resour. Can., Can. For. Serv., Ont. Min. Nat. Resour., Sault Ste. Marie, Ont. 239 pp.
- McRae, D.J., L.C. Duchesne, B. Freedman, T.J. Lynham, and S. Woodley. 2001a. Comparisons between wildfire and forest harvesting and their implications in forest management. *Environ. rev.* 9: 223-260.
- McRae, D.J., M.G. Weber and P.C. Ward. 2001b. Site preparation prescribed fire. pp. 201-218 in Regenerating the Canadian forest: Principles and practice for Ontario. R.G. Wagner and S.J. Colombo, eds. Fitzhenry & Whiteside, Markham, Ont. 650 pp.
- Merrill, D.F and M.E. Alexander. 1987. Glossary of forest fire management terms. Can. Cmm. on For. Fire Control. Nat. Res. Counc. Can., Ottawa, Ont. NRCC No. 26516.



- Messier, C., S. Parent and Y. Bergeron. 1998. Effects of overstory and understory vegetation on the understory light environment in mixed boreal forests. *Journal of Vegetation Science* 9: 511-520.
- Methven, I.R. and W.G. Murray. 1974. Using fire to eliminate understory balsam fir in pine management. *For. Chron.* 50: 77-79.
- Miller, J.H. 1988. Soil spot herbicides for single-stem hardwood control. *S. J. Appl. For.* 12(3): 199-203.
- Miller, J.H. 1990. Streamline basal application of herbicide for small-stem hardwood control. *South. J. Appl. For.* 14: 161-165.
- Mitchell, S.J. 1995. The windthrow triangle: A relative windthrow hazard assessment procedure for forest managers. *The Forestry Chronicle* 71: 446-450.
- Mitchell, S.J., T. Hailemariam and Y. Kulis. 2001. Empirical modeling of cutblock edge windthrow risk on Vancouver Island, Canada, using stand level information. *Forest Ecology and Management* 154: 117-130.
- Mitchell, S.J. and W.J. Beese. 2002. The retention system: Reconciling variable retention with the principles of silvicultural systems. *For. Chron.* 78: 397-403.
- Moore, J.M. and R.W. Wein. 1977. Viable seed populations by soil depth and potential site recolonization after disturbance. *Can. J. Bot.* 55: 2408-2412.
- Morash, R. and B. Freedman. 1989. The effects of several herbicides on the germination of seeds in the forest floor. *Can. J. For. Res.* 19:347-350.
- Morgenstern, E.K. 1978. Range-wide genetic variation of black spruce. *Can. J. For. Res.* 8: 463-473.
- Morin, H. 1994. Dynamics of balsam fir forests in relation to spruce budworm outbreaks in the boreal zone, Québec. *Canadian Journal of Forest Research* 20: 1753-1758.
- Morris, D.M. In prep. Elemental storage and cycling in boreal mixed woods. *Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note.*
- Morris, D.M., M. Rose and G.B. MacDonald. 1988. Stand structure, species composition, and growth of the boreal mixedwood forest in Northern Ontario: A comparison of natural stands and plantations. OMNR, NWOFTDU, Technical Report 22. 21 pp.
- Mullin, T.J. and S. Bertrand. 1999. Forest management impacts on genetics of forest tree species. *Ont. Min. Nat. Res., Southcentral Science Section, Tech. Rep.* 113, 37 pp.
- Murray G. and D.A. Skeates 1984. Variation in height of white spruce provenances after 10 and 20 years in five field tests. pp. 82-89 in Demeritt, E.M., ed. *Proc. 29th Northeastern For. Tree Impr. Conf.* 18-20 July 1995, Morgantown, W.Va., USDA For. Serv., Durham, N.H.
- Navratil, S. 1991. Regeneration challenges. pp. 15-38 in Navratil, S. and Chapman, P.B. (eds.). *Aspen management for the 21st century.* Proc. symp. Nov. 20-21, 1990, Edmonton, Alta. For. Can. Northwest Reg., North. For. Cent. And Poplar Council Can., Edmonton, Alta.
- Navratil, S. 1995. Minimizing wind damage in alternative silviculture systems in boreal mixedwoods. *Can. For. Serv. and Alberta Land For. Serv. Fo42-91/124-1995E.*
- Navratil, S. 1996. Silvicultural systems for managing deciduous and mixedwood stands with white spruce understorey. pp. 35-46 in *Silviculture of temperate and boreal broadleaf-conifer mixtures.* P.G. Comeau and K.D. Thomas, eds. B.C. Min. For., Forestry Division Services Branch, Victoria, BC. 163 pp.
- Navratil, S., L.G., Brace, E.A. Sauder and S. Lux. 1994. Silvicultural and harvesting options to favor immature white spruce and aspen regeneration in boreal mixedwoods. *Can. For. Serv. Inf. Rep. NOR-X-337.*



- Needham, T., J.A. Kershaw, Jr., D.A. MacLean, and Q. Su. 1999. Effects of mixed stand management to reduce impacts of spruce budworm defoliation on balsam fir stand-level growth and yield. *Northern J. Appl. For.* 16: 19-24.
- Negrave, R. and R. Kabzems. 1996. Use of replacement vegetation for control of competing vegetation in spruce plantations in the BWBS. pp. 127– 29 in Comeau, P.G., G.J. Harper, M.E. Blanche, J.O. Boateng and L.A. Gilkeson, eds. *Integrated forest vegetation management options and applications*. Proc. of 5th B.C. Forest Vegetation Management Workshop, Nov. 29-30, 1993, Richmond, B.C. FRDA Rep. 251. 146 pp.
- Newmaster, S., A. Lehela, P.W.C. Uhlig, S. McMurray and M.J. Oldham. 1998. Ontario plant list. *Ont. Min. Nat. Resour., Ont. For. Res. Inst, Sault Ste. Marie, Ont. Inf. Paper* 123.
- Newton, M., E.C. Cole, R.A. Lautenschlager, D.E. White and M.L. McCormack. 1989. Browse availability after conifer release in Maine's spruce-fir forests. *Journal of Wildlife Management* 53: 643-649.
- Nguyen-Xuan, T., Y. Bergeron, D. Simard, J.W. Fyles and D. Pare. 2000. The importance of forest floor disturbance in the early regeneration patterns of the boreal forest of western and central Québec: As wildfire versus logging comparison. *Canadian Journal of Forest Research* 30: 1353-1364.
- Nienstaedt, H. and A. Teich. 1972. The genetics of white spruce. *U.S. For. Serv. Wash. Off. Res. Pap.* WO-15.
- Nienstaedt, H. and J.C. Zasada. 1990. White spruce. pp. 204-226 in Burns, R.M and B.H. Honkala, eds. *Silvics of North America*. Vol. 1. Conifers. USDA For. Serv., Ag. Handbook 654.
- Nilsson, U. and G. Örlander. 1995. Effects of some regeneration methods on drought damage of newly planted Norway spruce seedlings. *Can. J. For. Res.* 25: 790-802.
- Norokorpi, Y. 1981. Lakimetsien rajaamisen perusteita. *Metsäntutkimuslaitoksen tiedonantoja* 24: 59-65. As cited in Nykänen et al. 1997.
- Norokorpi, Y. 1994. Havumetsärajan sijainnin määräytyminen Suomessa. in *Metsänraja tutkimuksen kohteena*. M. Varmola and M. Niemi, eds. *Metsäntutkimuslaitoksen tiedonantoja* 24: 59-65. As cited in Nykänen et al. 1997.
- Noss, R. F. 1990. Indicators for monitoring biodiversity: a hierarchical approach. *Conser. Biol.* 4: 355-364
- Noste, N.V., E.D. Reinhardt and R.A., jr. Wilson. 1987. Fire effects on *Amelanchier alnifolia* shrubs during phenological development stages. Paper presented at Symposium on Shrub Ecophysiology and Biotechnology. June 30-July 2, 1987. Logan, UT. 6 pp.
- Nowacki, G.J. and M.G. Kramer. 1998. The effects of wind disturbance on temperate rain forest structure and dynamics of southeast Alaska. *USDA Pacific Northwest Res. Sta. Gen. Tech. Rep.* PNW-GTR-421. 25 pp.
- (NRC) Natural Resources Canada. 1995. *Silvicultural terms in Canada*, 2nd ed. Policy and Economic Directorate Canada, Ottawa, Ont. 109 pp.
- Nykänen, M.-L., H. Peltola, C. Quine, S. Kellomäki and M. Broadgate. 1997. Factors affecting snow damage of trees with particular reference to European conditions. *Silva Fennica* 31: 193-213.
- Nystrand, O. and A. Granstrom. 2000. Predation on *Pinus sylvestris* seeds and juvenile seedlings in Swedish boreal forest in relation to stand disturbance by logging. *Journal of Applied Ecology* 37: 449-463.
- Oliver, C.D. and B.C. Larson. 1990. *Forest stand dynamics*. McGraw Hill Inc., New York, N.Y. 467 pp.
- Oliver, C.D. and B.C. Larson. 1996. *Forest stand dynamics: update edition*. John Wiley & Sons Inc., New York, 520 pp.



- [OMNR] Ontario Ministry of Natural Resources. 1977 (revised). *Manual of Seed Collecting*. O.M.N.R., Forest Resources Branch.
- [OMNR] Ontario Ministry of Natural Resources. 1987. *Tree improvement master plan for Ontario*. Ontario Ministry of Natural Resources, Queen's Printer for Ontario, Toronto, Ont. 81 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1991a. *Aerial spraying for forest management*. Queen's Printer for Ontario, Toronto, Ont. 14 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1991b. *Directions '90s*. Queen's Printer for Ontario, Toronto Ont., 14 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1995a. *Directions '90s – Moving Ahead 1995*, Queen's Printer for Ontario, Toronto, Ont. 18 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1995b. *Forest Operations and Silviculture Manual*. Queen's Printer for Ontario, Toronto, Ont. 64 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1995c. *Policy Framework for Sustainable Forests*, Queen's Printer for Ontario, Toronto, Ont. 6 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1996. *Forest management planning manual for Ontario's Crown forests*. Queen's Printer for Ontario, Toronto, Ont. 452 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1997a. *Prescribed burn planning manual*. Aviation, Flood and Fire Management Branch, Sault Ste. Marie, Ont. AFFMB Publ. No. 313.
- [OMNR] Ontario Ministry of Natural Resources. 1997b. *Seed transfer policy*. Sault Ste. Marie Ont.
- [OMNR] Ontario Ministry of Natural Resources. 1997c. *Silviculture Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Forest Ecosites in Ontario, Version 1.1*, Ont. Min. Nat. Resour. Queen's Printer for Ontario, Toronto, Ont, 3 books, 822 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1998a. *A silvicultural guide for the tolerant hardwood forest in Ontario*. Queen's Printer for Ontario, Toronto, Ont. 500 pp.
- [OMNR] Ontario Ministry of Natural Resources. 1998b. *A silvicultural guide for the Great Lakes-St. Lawrence conifer forest in Ontario*. Ont. Min. Nat. Resour. Queen's Printer for Ontario, Toronto, Ont. 424 pp.
- [OMNR] Ontario Ministry of Natural Resources. 2000a. *Boreal Mixedwood Notes*, Queen's Printer for Ontario, Toronto, Ont.
- [OMNR] Ontario Ministry of Natural Resources. 2000b. *Beyond 2000*, Queen's Printer for Ontario, Toronto, Ont. 20 pp.
- [OMNR] Ontario Ministry of Natural Resources. 2001a. *Forest information manual*. Queen's Printer for Ontario, Toronto, Ont. 400 pp.
- [OMNR] Ontario Ministry of Natural Resources. 2001b. *Forest management guide for natural disturbance pattern emulation. Version. 3.1*. Ont. Min. Nat. Resour., Queen's Printer for Ontario, Toronto, Ont. 40 pp.
- [OMNR] Ontario Ministry of Natural Resources. 2001c. *Silvicultural Effectiveness Monitoring Manual for Ontario*, Queen's Printer for Ontario, Toronto, Ont. 60 pp.
- [OMNR] Ontario Ministry of Natural Resources. 2002. *Draft forest fire management strategy*. AFFMB, 35 pp.
- [OMOE] Ontario Ministry of Environment and Energy. 1994. *Decision and reasons for decision, class environmental assessment by the Ministry of Natural Resources for timber management on Crown lands in Ontario*, Report of the Environmental Assessment Board, EA-87-01. 561 pp.
- [OMOE] Ontario Ministry of Environment and Energy. 1994. *Reasons for decision. Class environmental assessment by the Ministry of Natural Resources for timber management on Crown lands in Ontario* Environ. Assessment Board, Toronto, Ontario, No. EA-87-02, 561 pp.



- Örlander, G.P., P. Gemmel and J. Hunt. 1990. Site preparation: A Swedish overview. Forestry Canada and BC Min. of Forests, Victoria, BC. FRDA Report 105. 57 pp.
- Örlander, G.P., U. Nilsson and J. -E. Hällren, J.-E. 1996. Competition for water and nutrients between ground vegetation and planted *Picea abies*. *N. Z. J. For. Sci.* 26: 790-802.
- Ostry, M.E., L.F. Louis, H.S. McNabb Jr. and L.M. Lincoln. 1988. A guide to insect, disease, and animal pests of poplars. USDA For. Serv., Washington D.C. Agric. Handb. 677. 118 pp.
- Otchere-Boateng, J., and G. Ackerman. 1990. A guide to vegetation control equipment. For. Can., Pac. For. Cent., Victoria, BC/B.C. Min. For., Victoria, B.C. For. Res. Dev. Agreement (FRDA) Handb. 005.
- Päätälä, M.-L., H. Peltola and S. Kellomäki. 1999. Modelling the risk of snow damage to forests under short-term snow loading. *Forest Ecology and Management* 116: 51-70.
- Paré, D. and Y. Bergeron. 1995. Above-ground biomass accumulation along a 230-year chronosequence in the southern portion of the Canadian boreal forest. *Journal of Ecology* 83: 1001-1007.
- Parker, W.H. and A. van Niejenhuis. 1996. Regression-based focal point seed zones for *Picea mariana* from northwestern Ontario. *Can. J. Bot.* 74(8): 1227-1235.
- Parker, W.H., A. van Niejenhuis and P. Charrette. 1994. Adaptive variation in *Picea mariana* from northwestern Ontario determined by short-term common environment tests. *Can. J. For. Res.* 24: 1653-1661.
- Parker, W.H., A. van Niejenhuis and J. Ward. 1996. Genecological variation corresponding to FEC vegetation and soil types for jack pine and black spruce from northwestern Ontario. *Environ. Minit. Assess.* 39: 589-599.
- Pastor, J. 1990. Nutrient cycling in aspen ecosystems. *in* R.D. Adams (ed.). *Proceedings: Aspen symposium '89*. Pp. 21-38. USDA For. Serv., North Central For. Exp. Sta., St. Paul, Minnesota. Gen Tech. Rep. NC-140.
- Pastor, J and D.J. Mladenoff 1992. The southern boreal-northern hardwood forest border. *in* H.H. Shugart, R.. Leemans, and G.B. Bonan (editors) . *A systems analysis of the global boreal forest*. Cambridge, UK: Cambridge University Press. 216-240.
- Pastor, J., R.H. Gardner, V.H. Dale, and W.M. Post. 1987. Successional changes in nitrogen availability as a potential factor contributing to spruce declines in boreal North America. *Can. J. For. Res.* 17: 1394-1400.
- Peltola, H., S. Kellomäki and H. Väisänen. 1999. Model computations on the impact of climatic change on the windthrow risk of trees. *Climatic Change* 41: 17-36.
- Peltola, H., M.-L. Nykänen and S. Kellomäki. 1997. Model computations on the critical combination of snow loading and wind speed for snow damage of Scots pine, Norway spruce and birch sp. at stand edge. *Forest Ecology and Management* 95: 229-241.
- Peltzer, D.A., M.L. Bast, S.D. Wilson and A.K. Gerry. 2000. Plant diversity and tree responses following contrasting disturbances in boreal forest. *Forest Ecology and Management* 127: 191-203.
- Peng, L., J. Beaulieu and J. Bousquet. 1997. Genetic structure and patterns of genetic variation among populations in eastern white spruce (*Picea glauca*). *Can. J. For. Res.* 27: 189-198.
- Penner, M., C. Robinson and M. Woods. 2001. The response of good and poor aspen clones to thinning. *For. Chron.* 77(5): 874-884.
- Perala, D.A. 1974a. Growth and survival of northern hardwood sprouts after burning. USDA For. Serv., North Cent. For. Exp. Stn. Res. NOTE NC-176. 4 pp.



- Perala, D.A. 1974. Prescribed burning in an aspen-mixedwood forest. *Can. J. For. Res.* 4: 222-228.
- Perala, D.A. 1978. Thinning strategies for aspen: a predictive model. USDA For. Serv., North Cent. For. Exp. Stn., St. Paul, MN. Res. Pap. NC-RP-161. 19 pp.
- Perala, D.A. 1981. Clone expansion and competition between quaking and bigtooth aspen suckers after clearcutting. USDA For. Serv. Res. Pap. NC-201.
- Perala, D.A. 1984. How endemic injuries affect early growth of aspen suckers. *Canadian Journal of Forest Research* 14: 755-762.
- Perala, D.A. 1989. Scarification requirements for regenerating paper birch (*Betula papyrifera*) under shelterwood. pp. 122-130 in R.F. Sutton and L.F. Riley (eds.) *Proc. Symp. On Equipment/Silviculture Interface in Stand Establishment Research and Operations*. For. Can., Sault Ste. Marie, Ont.
- Perala, D.A. 1991a. Renewing decadent aspen stands. pp. 77-82 in Navratil, S. and P.B. Chapman., eds. *Aspen management for the 21st century*. Proc. of a symposium held Nov. 20-21, 1990, Edmonton, Alta. For. Can., Northwest Region, North. For. Cen. And Poplar Council of Canada, Edmonton, Alberta.
- Perala, D.A. 1991b. Déjà vu: "does it pay to thin young aspen?" pp. 139-144 in Haavisto, V.F., C.R. Smith and C. Mason., eds. *Space to grow: spacing and thinning in northern Ontario*. Proc. Symp. June 18-20, 1990, Sault Ste. Marie, Ont., For. Can. Ont. Min. Nat. Resour. Joint Rep. 15.
- Perala, D.A. and D.H. Alban. 1982. Rates of forest floor decomposition and nutrient turnover in aspen, pine, and spruce stands on two different soils. USDA For. Serv., North Central For. Exp. Sta., St. Paul, Minnesota. Res. Pap. NC-227.
- Perala, D.A. and A.A. Alm. 1990. Regeneration silviculture of birch: a review. *For. Ecol. Manage.* 32(1): 39-77.
- Persson, P. 1972. Stand treatment and damage by wind and snow – survey of younger thinning experiments. Skogshögskolan, Institutionen för skogsproduktion. English Abstract.
- Peterson, L.O.T. 1947. Some aspects of the poplar borer *Saperda calcarata* Say (Cerambycidae) in infestations under park-belt conditions. *Annu. Rep. Entomol. Soc. Ont.* 73: 56-61.
- Peterson, E.B. and N.M. Peterson. 1992. Ecology, management and use of aspen and balsam poplar in the Prairie provinces. *For. Can., NW Reg., North. For. Cent.* 252 pp.
- Peterson, E.B. and N.M. Peterson. 1995. *Aspen managers' handbook for British Columbia*. Can. For. Serv. Pac. For. Cen. and B.C. Min. For. Res. Br., FRDA Rep. 230. 110 pp.
- Peterson, E.B., N.M. Peterson, S.W. Simard and J.R. Wang. 1997. *Paper birch managers' handbook for British Columbia*. B.C. Min. For., Res. Br., Victoria, B.C. 133 pp.
- Petty, J.A. and R. Worrell. 1981. Stability of coniferous tree stems in relation to damage by snow. *Forestry* 54: 115-128.
- Pickering, S. and B. Richard. 1993. Sheep as a vegetation management tool in Northern Ontario. *Ont. Min. Nat. Resour., Northeast Sci. and Technol. Dev. Unit., Timmins, Ont. TN-003/VMAP Rep. 93-3.* 7 pp.
- Pierpoint, G. 1981. Site types in the boreal mixedwood forest. pp. 10-16 in R.D. Whitney and K.M. McClain, eds. *Boreal mixedwood symposium*. Proc. Symp., Sept. 16-18, 1980, Thunder Bay, ON. Can. For. Serv., Sault Ste. Marie, ON. COJFRC Symp. Proc. O-P-9.
- Pinno, B.D., V.J. Lieffers and K.J. Stadt. 2001. Measuring and modelling the crown and light transmission characteristics of juvenile aspen. *Canadian Journal of Forest Research* 31: 1930-1939.



- 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. *Can. J. For. Res.* 29: 841-851.
- Pitt, D., D. Weingartner and S. Greifenhagen. 2001. Precommercial thinning of trembling aspen in northern Ontario: Part 2 interactions with Hypoxylon canker. *The Forestry Chronicle* 77: 902-910.
- Pollard, D.F.W. and C.C. Ying 1979a. Variance in flushing among and within stands of seedling white spruce. *Can. J. For. Res.* 9: 517-521.
- Pollard, D.F.W. and C.C. Ying 1979b. Variation in response to declining photoperiod among families and stands of white spruce in southeastern Ontario. *Can. J. For. Res.* 9: 443-448.
- Popadiouk, R.V., H.Y.H. Chen, S.A. Vasiliauskas and C. Bowling. In press. Compositional and structural development of Ontario's boreal mixedwoods. *Ont. Min. Nat. Resour., Northeast Science & Information. NESI TR-045.*
- Prentice, R.M. 1955. The life history and some aspects of the ecology of the large aspen tortrix, *Choristoneura conflictana* (Wlkr.) (N. Comb.) (Lepidoptera: Tortricidae). *Can. Ent.* 87: 461-473.
- Prescott, C.E., D.G. Maynard, and R.Laiho. 2000. Humus in northern forests: friend or foe? *For. Ecol. Manage.* 133: 23-36.
- Proulx, O.J. and D.F. Greene. 2001. The relationship between ice thickness and northern hardwood tree damage during ice storms. *Canadian Journal of Forest Research* 31: 1758-1767.
- Pulkki, R. 1996. Management tools and strategies: Forest operations. pp. 61-65 in Smith, C.R. and G.W. Crook. eds. *Advancing Boreal Mixedwood Management in Ontario. Proceedings of a Workshop, Oct. 17-19, 1995, Sault Ste. Marie, Ontario, Can. For. Serv. And Ont. Min. Nat. Res.,* 238 pp.
- Purdy, B.G., Macdonald, S. and M.R.T. Dale. 2002. The regeneration niche of white spruce following fire in the mixedwood boreal forest. *Silv. Fenn.* 36(1): 289-306.
- Qi, M. and J.B. Scarratt. 1998 Effect of harvesting method on seedbank dynamics in a boreal mixedwood forest in northwestern Ontario. *Can. J. Bot.* 76:872-883.
- Racey, G.D., A.G. Harris, J.K. Jeglum, R.F. Foster and G.M. Wickware. 1996. *Terrestrial and wetland ecosites of northwestern Ontario. Ont. Min. Nat. Resour., Northwest Sci. Technol., NWST Field Guide FG-02.* 94 pp. plus appendices.
- Radosevich, S.R. and K. Osteryoung. 1987. Principles governing plant-environment interactions. pp. 105-156 in J.D. Walstad and P.J. Kuch (eds.) *Forest Vegetation Management for Conifer Production.* John Wiley, New York, NY.
- Radsliff, W., C.A. Mohn and W. Cromell. 1983. Variation among white spruce provenances in Minnesota test plantings. *Minn. For. Res. Notes* 283.
- Rajora, O.M.P. and B. P. Dancik. 1996. Genetic diversity in white spruce forest in Saskatchewan. *Prince Alberta Model Forest Rep. No. 15,* 14 pp.
- Reimoser, F. and H. Gossow. 1996. Impact of ungulates on forest vegetation and its dependence on the silvicultural system. *Forest Ecology and Management* 88: 107-119.
- Reynolds, P.E., F.W. Bell, J.A. Simpson, A.M. Gordon, R.A. Lautenschlager, D.A. Gresch and D.A. Buckley. 1997. Alternative conifer release treatments affect leaf area index of competing vegetation and available light for seedling growth. *For. Chron.* 73 (1): 83-89.
- Rice, J.A., ed. 1994. *Logging damage: The problems and practical solutions.* *Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Inf. Pap. No. 117.* 69 pp.



- Rice, J.A., G.B. MacDonald and D.H. Weingartner. 2001. Precommercial thinning of trembling aspen in northern Ontario: Part 1 – growth responses. *For. Chron.* 77: 893-901.
- Richardson, J. 1974. Direct seeding the spruces pp. 157-16 in Cayford, J.H., ed. Direct seeding symposium. *Envir. Can., Can. For. Serv., Ottawa, Publ. No. 1339*, 178 pp.
- Richardson, R. and I. Makkonen. 1994. The performance of cut-to-length systems in eastern Canada. *FERIC Tech. Rep. No. 109*. 16 pp.
- Riley, L.F. 1980. The effect of seeding rate and seedbed availability on jack pine stocking and density in northeastern Ontario. *For. Can., Great Lakes For. Res. Cen., Sault Ste. Marie, Ont. Rep. O-X-318*. 36 pp.
- Rodgers, A.R., D. Williams, A.R.E. Sinclair, T.P. Sullivan and R.J. Anderson. 1993. Does nursery production reduce antiherbivore defences of white spruce? Evidence from feeding experiments with snowshoe hares. *Can. J. For. Res.* 23: 2358-2361.
- Rodgers, A.R. and A.R.E. Sinclair. 1997. Diet choice and nutrition of captive snowshoe hares (*Lepus americanus*): Iterations of energy, protein, and plant secondary compounds. *Ecoscience* 4: 162-169.
- Rogers, J.D. and Y.-M. Ju. 1996. *Entoleuca mammata* comb. Nov. for *Hypoxylon mammatum* and the genus *Entoleuca*. *Mycotaxon* 59: 441-448.
- Rottmann, M. 1985. Schnebruchschäden in Nadel-holzbeständen. Beiträge zur Beurteilung der Schnebruchgefährdung. Zur Schadensvorbeugung und zur Behandlung schneegeschädigter Nadelholzbestände. J.D. Sauerländer's Verlag. Frankfurt am Main. 159 pp. As cited in Nykänen et al. 1997.
- Rowe, J.S. 1953. Forest sites – a discussion. *For. Chron.* 29: 278-289.
- Rowe, J.S. 1972. Forest Regions of Canada. Department of Fisheries and the Environment, Canadian Forestry Service, Publication No. 1300.
- Rowe, J.S. and G.W. Scotter 1973. Fire in the Boreal Forest. *Quaternary Research* 3: 444-464.
- Royal Commission on the Northern Environment, 1985. North of 50 - An atlas of Far Northern Ontario. J.E.J. Fahlgren, Commissioner, University of Toronto Press, Toronto, Buffalo, London. 111 pp. + append.
- Royama, T. 1984. Population dynamics of the spruce budworm, *Choristoneura fumiferana*. *Ecol. Monogr.* 54: 429-462.
- Ruark, G.A. 1990. Evidence for the reserve shelterwood system for managing quaking aspen. *North. J. Appl. For.* 7(2): 58-62.
- Ruel, J.-C. 1995. Understanding windthrow: Silvicultural implications. *For. Chron.* 71(4): 434-445
- Ruel, J.-C. 2000. Factors influencing windthrow in balsam fir forests: From landscape studies to individual tree studies. *Forest Ecology and Management* 135: 169-178.
- Ruel, J.-C. and R. Benoit. 1999. Analyse du chablis du 7 novembre 1994 dans les régions de Charlevoix et de la Gaspésie, Québec, Canada. *The Forestry Chronicle* 75: 293-301.
- Ruel, J.-C., and R. Doucet. 1998. Élaboration de classes de qualité pour les inventaires de régénération. Québec, Min. des Ressources naturelles, Dir. Rech. For, Note de rech. For. No 91. 8 pp.
- Ruel, J.-C., D. Pin, K. Cooper. 1998. Effect of topography on wind behaviour in a complex terrain. *Forestry* 71:261-265.
- Ruel, J.-C., C. Messier, R. Doucet, Y. Claveau and P. Comeau. 2000a. Morphological indicators of growth response of coniferous advance regeneration to overstory removal in the boreal forest. *The Forestry Chronicle* 76: 633-642.
- Ruel, J.-C., C.P. Quine, S. Meunier and J. Suarez. 2000b. Estimating windthrow risk in balsam fir stands with the forest Gales model. *The Forestry Chronicle* 76: 329-337.



- Ruel, J.-C., D. Pin, I. Spacek, K. Cooper and R. Benoit. 1997. The estimation of wind exposure for windthrow hazard rating: Comparison between Stronblow, MC2, Topex and a wind tunnel study. *Forestry* 70: 253-256.
- Ryans, M. and B. Sutherland. 2001. Site preparation – mechanical. pp. 201-220 in Wagner, R.G. and S.J. Colombo, eds. *Regenerating the Canadian forest: Principles and practice for Ontario*. Fitzhenry & Whiteside Ltd., Markham, Ont, Can., 650 pp.
- Ryans, M. 1989. Prime movers for silviculture: Required characteristics. pp. 71-83. in *Proceeding of a symposium on the equipment/silviculture interface in stand establishment research and operations*. 18 Sept. – 3 Oct. 1985, Jasper, Alta. Edited by R.F. Sutton and L.F. Riley. *Forestry Canada, Sault Ste. Marie, Ont. Info. Rep. 0-X-401*.
- Sandberg, D. 1951. The regeneration of quaking aspen by root suckering. MF Thesis, Univ. Minn., St. Paul, Minn. Cited in Davidson et al. 1988.
- Savill, P.S. 1983. Silviculture in windy climates. *For. Abstr. Rev. Art.* 44 (8): 473-488.
- Scarr, T.A., S.M. Smith, J.J. Turgeon and G. Howse. 2001. Insect pest management. pp. 483-502 in *Regenerating the Canadian forest: Principles and practice for Ontario*. R.G. Wagner and S.J. Colombo, eds. Fitzhenry & Whiteside, Markham, Ont. 650 pp.
- Schaetzl, R.J., S.F. Burns, T.W. Small and D.L. Johnson. 1990. Tree uprooting: Review of types and patterns of soil disturbance. *Phys. Geo.* 11(3): 277-291.
- Schier, G.A. and J.C. Zasada. 1973. Role of carbohydrate reserves in the development of root suckers in *Populus tremuloides*. *Can. J. For. Res.* 3: 243-250.
- Schowater, T.D., W.W. Hargrove, and D.A. Crossley, Jr. 1986. Herbivory in forested ecosystems. *Ann. Rev. Entomol.* 31: 177-196.
- Schnekenberger, F., K.M. Brown and J.E. Barker. 1985. Effects of nitrogen fertilization and low thinning on snow damage in jack pine. *Forest Science* 31: 552-556.
- Schopmeyer, C.S. 1974. *Seeds of woody plants of the United States*. USDA For. Serv., Washington, D.C. Agric. Handb. No. 450. 883 pp.
- Schroeder, L.M. and H.H. Eidmann. 1993. Attacks of bark- and wood-boring Coleoptera on snow-broken conifers over a two-year period. *Scandinavian Journal of Forest Research* 8: 257-265.
- Seft, R.L., M.B. Coughenour, D.W. Bailey, L.R. Rittenhouse, O.E. Sala and D.M. Swift. 1987. Large herbivore foraging and ecological hierarchies: Landscape ecology can enhance traditional foraging theory. *Bioscience* 37: 789-799.
- Shaw, C.G., and G.A. Kile. 1991. *Armillaria* root disease. USDA For. Serv., Washington, DC. Agric. Hand. 691. 233 pp.
- Shepperd, W.D. 1993. The effect of harvesting activities on soil compaction, root damage, and suckering in Colorado aspen. *Western Journal of Applied Forestry* 8: 62-66.
- Sherman, T., J. Wang, J. and A. Fredeen. Submitted (a). Photosynthesis of four conifer species grown under different densities of overstory paper birch in central interior of British Columbia. *Tree Phys.*
- Sherman, T., J. Wang and A. Fredeen. Submitted (b). Effects of overstory paper birch on early growth, biomass, and relative growth rate of four conifer species. *Can. J. For. Res.*
- Sidders, D. 2001. Canadian Forest Service, Northern Forestry Centre, in personal communication with L. Palmer.
- Sidders, R.G. 1993. Bräcke seeding rate trial: Fifth year results. *Ont. Min. Nat. Resour., Northwest Sci and Technol., Thunder Bay, Ont. TR-72*. 19 pp.



- Simard, M.-J., Y. Bergeron and L. Sirois. 1998. Conifer seedling recruitment in a southeastern Canadian boreal forest: The importance of substrate. *Journal of Vegetation Science* 9: 575-582.
- Sims, R. A. and P.W.C. Uhlig, 1996. Boreal mixedwoods in Ontario: defining the resource in relation to climate and soil/site. Pp. 22-32 *Advancing Boreal Mixedwood Management in Ontario. Proceeding of a workshop. Nat. Resour. Can., Can. For. Serv., Ont. Min. Nat. Resour., Sault Ste. Marie, Ont.* 239 pp.
- Sims, R.A., H.M. Kershaw and G.M. Wickware. 1990. The autecology of major tree species in the north central region of Ontario. *For. Can., Ont. Reg. Great Lakes For. Cen., COFRDA Rep. 3302/Ont. Min. Nat. Resour., NWOFTDU, Thunder Bay, Ont. Tech. Rep.* 120 pp.
- Sims, R.A., W.D. Towill, K.A. Baldwin, P. Uhlig and G.M. Wickware. 1997. Field guide to the forest ecosystem classification for northwestern Ontario. *Ont. Min. Nat. Res., Northwest Sci. Technol., NWST Field Guide FG-03.* 176 pp.
- Sippel, W.L. 1962. Outbreaks of the forest tent caterpillar, *Malacosoma disstria* Hübner, a periodic defoliator of broad-leaved trees in Ontario. *Canadian Entomologist* 94: 408-416.
- Smidt, M.F. and C.R. Blinn. 2002. Harvest caused soil disturbance decreased suckering capacity of quaking aspen (*Populus tremuloides* Michx.) following growing season of harvests in Minnesota, USA. *Forest Ecology and Management* 163: 309-317.
- Smith, C.R. 1979. Silvicultural equipment reference catalogue for northern Ontario. O.M.N.R., For. Res. Branch, Toronto, Ont. Can., Ont. For. Devel. Agree.
- Smith, D.M. 1986. *The practice of silviculture.* John Wiley and Sons, 527 pp.
- Smith, D.M., B.C. Larson, M.J. Kelty, and P.M.S. Aston. 1997. *The practice of silviculture: Applied Forest Ecology.* 9th ed. John Wiley and Sons, Inc. New York. 537 pp.
- Smith, D.W. and T.D.W. James. 1978. Changes in the shrub and herb layers of vegetation after prescribed burning in *Populus tremuloides* woodland in southern Ontario. *Can. J. Bot.* 56: 1792-1797.
- Smith, D.W. and J.H. Sparling. 1966. The temperature of surface fires in jack pine barrens. I. Variation in temperature with time. II. Effects of vegetation cover, wind speed and relative humidity on fire temperature. *Can. J. Bot.* 44: 1285-1293.
- Solantie, R. 1994. Effect of weather and climatological background on snow damage of forests in southern Finland in November 1991. *Silva Fennica* 28(3): 203-211.
- Solantie, R. and K. Ahti. 1980. The influence of weather in the snow damages for forests of South-Finland. *Silva Fennica* 14(4): 342-353.
- Spurr, S.H. and B.V. Barnes. eds. 1980. *Forest ecology,* 3rd ed. John Wiley & Sons, New York. 687 pp.
- St. Amour, M. 2000. Use of the Kendal Cutter in precommercial strip thinning of aspen. *FERIC Advantage, Vol. 1 No. 13.* 2 pp.
- Stanoz, G.R. and R.F. Patton. 1987. Armillaria root rot in Wisconsin aspen sucker stands. *Canadian Journal of Forest Research* 17: 995-1000.
- Staples, T.E., K.C.J. van Rees and C. van Kessel. 1999. Nitrogen competition using ¹⁵N between early successional plants and planted white spruce seedlings. *Canadian Journal of Forest Research* 29: 1282-1289.
- Stathers, R.J., T.P. Rollerson and S.J. Mitchell. 1994. *Windthrow handbook for British Columbia.* B.C. Min. For., Victoria, BC. Working Paper 94/01. 31 pp.
- Steneker, G.A. 1963. Results of a 1936 release cutting to favour white spruce in a 50-year-old white spruce-aspen stand in Manitoba. *Can. Dept. For., For. Res. Branch, Dept. For. Publ. No. 1005.* 17pp.
- Steneker, G. A. 1967. Growth of white spruce following release from trembling aspen. *Can. Dep. For., For. Re. Br. Publ. 1183.*



- Steneker, G.A. 1976. Guide to the silvicultural management of trembling aspen in the prairie provinces. Environ. Can., Can. For. Serv., North. For. Res. Cent., Edmonton, Alberta. Inf. Rep. NOR-X-164.
- Stephens, E.P. 1956. The uprooting of trees – a forest process. Proceedings of the Soil Science Society of America 1: 113-116.
- Stewart, J.D., S.M. Landhäusser, K.J. Stadt and V.J. Lieffers. 2000. Regeneration of white spruce under aspen canopies: Seeding, planting, and site preparation. Western Journal of Applied Forestry 15: 177-182.
- Stiell, W.M. 1982. Growth of clumped vs. equally spaced trees. For. Chron. 58: 23-25.
- Stocks, B.J. 1985. Forest fire behavior in spruce budworm-killed balsam fir. IN: C.J. Sanders, R.W. Starks, E.J. Mullins, and J. Murphy (eds.). Recent advances in spruce budworm research. Pp: 188-199. Can. For. Serv., Ottawa, ON. 527 pp.
- Stocks, B.J. 1987. Fire potential in the spruce budworm-damaged forests of Ontario. For. Chron. 63: 8-14.
- Stocks, B.J., D.J. McRae, T.J. Lynham and G.R. Hartley. 1990. A photo-series for assessing fuels in natural forest stands in northern Ontario. For. Can. Ont. Reg. COFRDA Rep. 3304. 161 pp.
- Stoekler, J.H. 1947. When is plantation release most effective? J. For. 45: 265-271.
- Stone, D.M. and J.D. Elioff. 1998. Soil properties and aspen development five years after compaction and forest floor removal. Canadian Journal of Soil Science 78: 51-58.
- Strobl, S. 1993. Mulches: A vegetation management alternative for small plantations. Ont. Min. Nat. Resour., Ont. For. Res. Inst., Sault Ste. Marie, Ont. VMAP Rep. 1(3): 1-2.
- Strobl, S. 1994. Mulches help trees beat weed competition. Ont. Min. Nat. Resour., Queen's Printer, Toronto. Exten. Notes AGDEX 324/645. 8 pp.
- Sutherland, B.J. 1996. Assessment of current and alternative site preparation methods: environmental impacts on forest soil and implications for vegetation control and biodiversity. P. 83-84 in Callaghan, D., compiler. NODA Northern Forestry Program: Status report on projects. NODA/NFP Tech. Rep. TR-16. 160 pp.
- Su, Q., D.A. MacLean and T.D. Needham. 1996. The influence of hardwood content on balsam fir defoliation by spruce budworm. Can. J. For. Res. 26: 1620-1628
- Sutherland, B.J. and F.F. Foreman. 1995. Guide to the use of mechanical site preparation equipment in northwestern Ontario. Nat. Res. Can., Can. For. Serv. 186 pp.
- Sutherland, B. and F.F. Foreman. 2000. Black spruce and vegetation response to chemical and mechanical site preparation on a boreal mixedwood site. Can. J. For. Res. 30: 1561-1570.
- Sutton, R.F. 1984. Plantation establishment in the boreal forest: Glyphosate, hexazinone, and manual weed control. For. Chron. 60: 283-287.
- Sutton, R.F. 1985. Vegetation management in Canadian forestry. Can. For. Serv., Great Lakes For. Res. Cen., Sault Ste. Marie, Ont. Inf. Rep. 0-X-369, 35 pp.
- Sutton, R.F. and T. P. Weldon. 1995. White spruce establishment in boreal Ontario mixedwood 5-year results. For. Chron. 71:633-638.
- Taiz, L. and E. Zeiger. 1991. Plant physiology. The Benjamin/Cummings Publishing Company, Inc., New York, 565 pp.
- Tallis, J.H. 1983. Changes in wetland communities. IN: A.J.P. Gore (Ed.), Ecosystems of the world 4A. Mires: Swamp, bog, fen and moor. Pp. 311-347. Elsevier Scientific Publishing Co., Amsterdam, The Netherlands. 440 pp.



- Tanner, D., S.C. DeLong and A. Eastham. 1996. Investigations of planted white spruce under a trembling aspen canopy. pp. 114-121 in Proceedings: Silviculture of temperate and boreal broadleaf-conifer mixtures. P.G. Comeau and K.D. Thomas, eds. Richmond, B.C., 28 Feb. 01 Mar. 1995. B.C. Min. For., Victoria, B.C. 163 pp.
- Taylor, K.C., R.W. Arnup, B.G. Merchant, W.J. Parton and J. Nieppola. 2000. A field guide to forest ecosystems of northeastern Ontario. 2nd Edition. Ont. Min. Nat. Resour. Northeast Sci. Technol. NEST Field Guide FG-001. 131 pp.
- Taylor, K. and S. Vasiliauskus. In review. Impacts of herbivory on boreal mixedwood regeneration. Ont. Min. Nat. Res., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note.
- Taylor, S.P., R.I. Alfaro, C. DeLong, and L. Rankin. 1996. The effects of overstory shading on white pine weevil damage to white spruce and its effects on spruce growth rates. Can. J. For. Res. 26: 306-312.
- Tefler, E.S. 1972. Browse selection by deer and hares. Journal of Wildlife Management 36: 1344-1349.
- Teich, A.H. and M.J. Holst 1974. White spruce limestone ecotypes. For. Chron. 50: 110-111.
- Teich, A.H., E.K. Morgenstern and D.A. Skeates. 1975. Performance of white spruce provenances in Ontario. Petawawa For. Exp. Sta., Can. For. Serv., Envir. Can. and For. Res. Div. of For., Ont. Min. Nat. Res., Petawawa, Ont. Spec. Joint Rep. 1
- Teller, J.T. 1984. The ice Age and its legacy. in Natural Heritage of Manitoba: Legacy of the Ice age. James T. Teller, ed. Manitoba Museum of Man and nature, Manitoba Nature Magazine, Winnipeg Manitoba, 208 pp.
- Terlesk, C.J. and M. McConchie. 1988. Stand reorganisation results from the trials at Hautu Forest, New Zealand. N. Zeal. Jour. of For. Sci. 18(3): 329-344.
- Thompson, I.D., R.E. McQueen, P.S. Reichardt, D.G. Trenholm and W.J. Curran. 1989. Factors influencing choice of balsam fir twigs from thinned and unthinned stands by moose. Oecologia 81: 506-509.
- Thompson, I. D. 2000. Forest vegetation of Ontario: Factors influencing landscape change. pp. 30-53 in A.H. Perera, D.L. Euler, and I.D. Thompson (eds) Ecology of a Managed Terrestrial Landscape - Patterns and Processes of Forest Landscapes in Ontario, University of British Columbia Press, Vancouver, B.C., 336 pp.
- Timmermann, J.R. 1998. Importance and use of mixedwood sites and forest cover by moose (*Alces alces*). Ont. Min. Nat. Res., Ont. For. Res. Inst., Sault Ste. Marie, Ont. Boreal Mixedwood Note No. 15. 16 pp.
- Towill, B. 2000. Silvicultural systems: getting to a desired future forest through silviculture. Pp. 51-54 in Chen, H., A. Luke and W. Bidwell., compilers. Proceedings of the ecology and management of white birch workshop. Sept. 21-22 1999, Wawa, Ontario, NEST Workshop Proceedings WP-003. 67 pp.
- Towill, W. D., 1996. Ontario's boreal mixedwood forest: distribution, extent and importance, p 21, IN:C. R. Smith and G.W. Crook (Comp), Advancing Boreal Mixedwood Management in Ontario: Proceedings of a Workshop. Joint Publication of Nat. Res. Canada Can. For. Serv and Ont. Min. Natur. Resour., Sault Ste Marie, Ont., 239 pp.
- Towill, W.D., R.O. Wiltshire and J. Desharnais, 2003, Distribution, Extent and Importance of Ontario's Boreal Mixedwood Forest. Ont. Min. Natur. Resour. Boreal Mixedwood Note # 4.
- Troth, J.L., F.J. Denke, L.M Brown. 1976. Upland aspen/birch and black spruce stands and their litter and soil properties in Interior Alaska. For. Sci. 22: 33-44.



- Turgeon, J.J., E.G. Kettela, and L. Jobin. 1995. Spruce budmoth, *Zeiraphera canadensis*. in J.A. Armstrong and W.G.H. Ives (eds.). Forest insect pests in Canada. Pp: 183-192. Nat. Res. Can., Can For. Serv., Ottawa, ON. 732 pp.
- Turkov, V.G. 1979. Treethrow in a primary forest as a biogeocological phenomenon. pp. 121-140 in Spruce-fir forests of the central Urals. Sverdlost, UNTs AN SSSR.
- Ulanova, N.G. 2000. The effects of windthrow on forests at different spatial scales: A review. Forest Ecology and Management. 135: 155-167.
- Valinger, E., L. Lundqvist and L. Bondesson. 1993. Assessing the risk of snow and wind damage from tree physical characteristics. Forestry 66(3): 249-260.
- Valinger, E., L. Lundqvist and G. Brandel. 1994. Wind and snow damage in a thinning and fertilisation experiment in *Pinus sylvestris*. Scandinavian Journal of Forest Research 9: 129-134.
- Van Damme, L., L. Buse and S. Warrington. 1988. The effect of microsite compaction on direct seeding success of jack pine and black spruce in northwestern Ontario. Can. For. Serv., Ont. Region, Sault Ste. Marie, ON. COFRDA Rep. 005. 27 pp.
- Vasiliauskas, S. and H.Y.H. Chen. In prep. Natural forest succession in Northeastern Ontario: a 50 year view.
- Veblen, T.T., D. Kulakowski, K.S. and W.L. Baker. 2001. Subalpine forest damage from a severe windstorm in northern Colorado. Canadian Journal of Forest Research 31: 2089-2097.
- Vincent, A.B. 1965. Growth of black spruce and balsam fir reproduction under speckled alder (*Alnus rugosa*). Can. Dept. For. Publ. 1102. 14 pp.
- Vitousek, P.M. 1977. The regulation of element concentrations in mountain streams in the northeastern United States. Ecological Monographs 47: 65-87.
- Von der Gonna, M.A. 1992. Fundamentals of mechanical site preparation. Can. -B.C. Partnership Agreement on For. Resour. Dev. FRDA Report 178, 27 pp.
- Wagner, R.G. 2000. Competition and critical-period thresholds for vegetation management decisions in young conifer stands. For. Chron. 76(6): 961-968.
- Wagner, R.G. and S.J. Colombo, eds. 2001. Regenerating the Canadian forest: Principles and practice for Ontario. Fitzhenry & Whiteside, Markham, Ont. 650 pp.
- Wagner, R.G., F.W. Bell and R.A. Campbell. 2001. Vegetation management. pp. 432-457 in Wagner, R.G. and S.J. Colombo, eds. Regenerating the Canadian forest: Principles and Walker, N.R. and H.P. Sims. 1984. Jack pine seed dispersal from slash and seedling performance on prepared seedbeds. Can. For. Serv., North. For. Res. Cen., Edmonton, Alta. Inf. Rep. NOR-X-259.
- Wagner, R.G., G.H. Mohammed and T.L. Noland. 1999. Critical period of interspecific competition for northern conifers associated with herbaceous vegetation. Can. J. For. Res. 29:890-897.
- Wagner, R.G., L.J. Buse, R.A. Lautenschlager, F.W. Bell, C. Hollstedt, S. Strobl, A. Morneau, W. Lewis and M.T. Ter-Mikaelian. 1995. Vegetation management alternatives program. Ont. Min. Nat. Resour., OFRI, Sault Ste. Marie, Ont. 1994-1995 Annual report. 92 pp.
- Wagner, R.G., T.D. Petersen, D.W. Ross and S.R. Radosevich. 1989. Competition thresholds for the survival and growth of ponderosa pine seedlings associated with woody and herbaceous vegetation. New Forests 3: 151-170.
- Wagner, R.G., T.L. Noland and G.H. Mohammed. 1996. Timing and duration of herbaceous vegetation control around four northern coniferous species. N.Z.J. For. Sci. 26:39-52.



- Waldron, R.M. 1974. Direct seeding in Canada 1900-1972. pp 11-27 in Cayford, J.H. (ed.). Direct seeding symposium. Envir. Can., For. Serv., Ottawa, Publ. No. 1339.
- Waldron, R.M. and V.S. Kolabinski. 1994. Uniform shelterwood cutting and scarifying in white spruce-trembling aspen stands to induce natural white spruce regeneration. Manitoba and Saskatchewan. Can. Nat. Res., Can. For. Serv., Manit. Dist. Office, Winnipeg, Manitoba. Can.-Manito. Partnership Agreement in Forestry. 51pp.
- Walker, N.R. and Sims, H.P. 1984. Jack pine seed dispersal from slash and seedling performance on prepared seedbeds. Can. For. Serv., North. For. Res. Cen., Edmonton, Alta. Inf. Rep. NOR-X-259.
- Wall, R.E. 1990. The fungus *Chonrostereum purpureum* as a silvicide to control stump sprouting in hardwoods. North. J. Appl. For. 7: 17-19.
- Walsh, S.A. and G.M. Wickware. 1991. Stand and site conditions associated with the occurrence and distribution of black spruce advance growth in northcentral Ontario. Ont. Min. Nat. Res., NWST, Thunder Bay, Ont. TR-24. 15 pp.
- Walstad, J.D. and P.J. Kuch, eds. 1987. Forest vegetation management for conifer production. John Wiley and sons, New York, 523 pp.
- Wang, G.G. 2002. Fire severity in relation to canopy composition within burned boreal mixedwood stands. Forest Ecology and Management 163: 85-92.
- Wearn, V.H., E.A. Springer and A.J. Lesage. 1982. Forest managers' photo guide to prescribed burn planning. Ont. Min. Nat. Resour., Kapuskasing District. 48 pp.
- Weber, M.G. and M.D. Flanigan. 1997. Canadian boreal forest ecosystem structure and function in a changing climate: impact on fire regimes. Environ. Rev. 5: 145-166.
- Wedeles, C.H., L. Van Damme, C.J. Daniel, and L. Sully. 1995. Alternative silvicultural systems for Ontario's boreal mixedwoods: A review of potential options. Can. For. Serv. and Ont. Min. Nat. Resour., NODA/NFP Tech. Rep. TR-18. 61 pp.
- Weetman, G.F., M.R. Roberge and C.H. Meng. 1980. Black spruce: 15-year growth and microbiological responses to thinning and fertilization. Can. J. For. Res. 10(4): 502-509.
- Weetman, G. and A. Vyse. 1990. Natural regeneration. pp. 118-129 in Lavender, D.P., R. Parish, C.M. Johnson, G. Montgomery, A. Vyse, R.A. Willis and D. Winston. Regenerating British Columbia's forests. University of British Columbia Press, Vancouver, B.C.
- Weingartner, D.H. 1980. The effects of scarification on trembling aspen in northern Ontario: a preliminary report. For. Chron. 56: 173-175.
- White, R.G. In press. Mechanical site preparation treatments and their implications for vegetation management. Northwest Sci. and Technol. Tech. Note TN-47 in Vegetation management alternatives – A guide to opportunities. Ont. Min. Natur. Resour., Thunder Bay, Ont. 20 pp.
- Whitney, R.D. 1979. Internal defect resulting from wounds in residual white pine trees. The Forestry Chronicle 55: 8-12.
- Whitney, R.D. 1989. Root rot damage in naturally regenerated stands of spruce and balsam fir in Ontario. Canadian Journal of Forest Research 19: 295-308.
- Whitney, R.D. 1991. Quality of eastern white pine 10 years after damage by logging. The Forestry Chronicle 67: 23-26.
- Whitney, R.D. 1994. Minimizing losses to Tomentosus root rot in Ontario. Nat. Res. Can., Can. For. Serv., Sault Ste. Marie, Ont. Frontline Tech. Note No. 84. 4 pp.
- Whitney, R.D. 1995. Root-rotting fungi in white spruce, black spruce, and balsam fir in Northern Ontario. Canadian Journal of Forest Research 25: 1209-1230.



- Whitney, R.D. 2000. Forest management guide for *Tomentosus* root disease. Ont. Min. Nat. Res., Sci. Development and Transfer, Sault Ste Marie, ON. 20 pp.
- Whitney, R.D., S. Greifeinhalten, J. McLaughlin, T. Meyer and H.L. Gross. 2001. Diseases and mycorrhizae. pp. 459-482 in *Regenerating the Canadian forest: Principles and practice for Ontario*. G. Wagner and S.J. Colombo, eds. Fitzhenry & Whiteside, Markham, Ont. 650 pp.
- Willcocks, A.J. and F.W. Bell. 1995. Effects of stand density (spacing) on wood quality. Ont. Min. Nat. Res., NEST, Timmins, Ont. TN-007. 12 pp.
- Wiltshire, R.O. and D.J. Archibald. 1998. Boreal mixedwood management and prescribed fire. Ont. Min. Nat. Res., Boreal Mixedwood Note No. 16, 12 pp.
- Winder, R.S. 1999. Evaluation of *Colletotrichum* spp. and *Fusarium* spp. as potential biological control agents for marsh reed grass (*Calamagrostis canadensis*). Can. J. Plant Path. 21(1): 8-15
- Winder, R.S. and D.S. Macey. 1998. Biological control of grasses in reforestation areas: Problems and prospects. pp. 360-362 in Wagner, R.G. and D.G. Thompson, eds. Third int. conf. on forest vegetation management: Popular summaries. Ont. For. Res. Inst. For. Res. Inf. Pap. No. 141. 508 pp.
- Witter, J.A. 1979. The forest tent caterpillar (Lepidoptera: Lasiocampidae) in Minnesota: A case history review. Great Lakes Entomol. 12: 191-197
- Witter, J.A., Mattson, W.J., Kulman, H.M. 1975. Numerical analysis of a forest tent caterpillar (Lepidoptera: Lasiocampidae) outbreak in northern Minnesota. Can. Entomol. 107: 837-854.
- Wood, J.E. and F.W. von Althen. 1993. Establishment of white spruce and black spruce in boreal Ontario: Effects of chemical site preparation and post-planting weed control. For.Chron. 69: 554-560.
- Wright, E.F., K.D. Coates, C.D. Canham and P. Bartemucci, P. 1998. Species variability in growth response to light across climatic regions in northwestern British Columbia. Canadian Journal of Forest Research 28: 871-886.
- Wright, J.W. 1976. Introduction to forest genetics. Academic Press, New York, New York, 463 pp.
- Yang, R.C. 1989. Growth response of white spruce to release from trembling aspen. Can. For. Serv. Inf. Rep. NOR-X-302.
- Yang, R.C. 1991. Growth of white spruce following release from aspen competition: 35 year results. For. Chron. 67: 706-711.
- Yang, R.C. and I.E. Bella. 1994. Releasing white spruce from trembling aspen – a yield analysis. Nat. Resour. Can., Can. For. Serv., Northwest Reg., North. For. Cent., Alta. For. Manage. Note 60. 6 pp.
- Yang, R.C. and R.D. Fry. 1981. Natural succession following harvesting in the boreal mixedwood forest. pp. 65-79 in Whitney, R.D. and McClain, K.M., eds. Boreal mixedwood symposium. Dept. Environ., Can. For. Serv., Great Lakes For. Res. Ctr., Sault Ste. Marie, Ont., COJFRC Symp. Proc. O-P-9. 278 pp.
- Yip, T.C. 1995. Estimating icing amounts caused by freezing precipitation in Canada. Atmospheric Research 36: 221-232.
- Young, J.A. and C.G. Young. 1992. Seeds of woody plants in North America. Dioscorides Press, Portland, Oregon. 407 pp.
- Zasada, J.C. 1971. Natural regeneration of interior Alaska forests - seed, seedbed and vegetative reproduction considerations. IN: Slaughter, C.W., Barney, R.J. and Hansen, G.M., eds. Fire in the northern environment - a symposium. USDA For. Serv., Pacific NW For. Range Exp. Sta., Portland, Oregon. pp. 231-246.
- Zasada, J. 1972. Guidelines for obtaining natural regeneration of white spruce in Alaska. USDA For. Serv., Pacific Northwood Forest and Range Experiment Station, Portland, OR, Gen. Tech. Rep.



- Zasada, J.C. 1988. Reproductive biology of trees and shrubs in interior Alaska. in Hamilton, E. and Watts, S., compilers. Vegetation competition and responses: proceedings third annual vegetation management workshop. B.C. Min. For. and Lands. FRDA Rep. 026. 85 pp.
- Zasada, J.C. and D.F. Grigal. 1978. The effects of silviculture system and seedbed preparation on natural regeneration of white spruce and associated species in the interior of Alaska. pp.213-230 *in* Proceedings of the 5th North American Forest Biology Workshop. C.A. Hollis and A.E. Squillace (eds.) USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, Oreg.
- Zasada, J.C., A.J. David, D.W. Gilmore and S.M. Landhäusser. 2001. Ecology and silviculture of natural stands of Populus species. pp. 119-151 *in* Poplar culture in North America. D.I. Dickmann, J.G. Isebrands, J.E. Eckenwalder and J. Richardson, eds. NRC Research Press, Ottawa, Ont. 397 pp.
- Zasada, J.C., J.C. Tappeiner, P. Ryan and B. Maxwell. 1988. Ecology and Management of Broad-leaved Species in Oregon Coast Range. pp. 61-63 *in* E. Hamilton and S. Watts. (Compilers). Vegetation Competition and Responses: Proc. Third Annual Vegetation Management Workshop. BC. Min. For. And Lands, FRDA Rep. 026. 85 pp.
- Zasada, J.C., T.L. Sharik and M. Nygren. 1992. The reproductive process in boreal forest trees. pp. 85-125 *in* A system's analysis of the global boreal forest. H.H. Shugart, R. Leemnas and G.B. Bonan, eds. Cambridge Univ. Press, Cambridge, U.K. 565 pp.

