Silviculture and Soil Science

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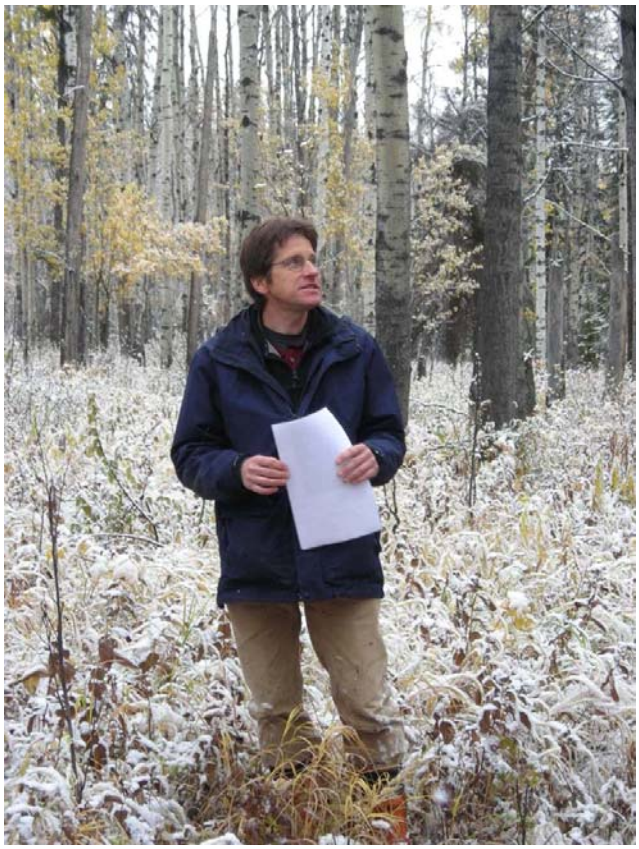
I went to the University of Saskatchewan with the idea of studying biology. By 1979 I had an agriculture degree (plant ecology), and had spent two years in the NHL (No Hit League) where I was Ankle bender of the Year. Consulting work and further education (MSc in Forest Ecology, UBC) alternated for a few years. In 1987 my wife Sandy began working with a soil conservation group near Dawson Creek, and we've enjoyed being here ever since.



Since 1991 I have been a Research Silviculturist with MFR, working in the boreal forests of northeastern BC. My work has included succession and response to disturbance, soil productivity, alternative silviculture systems, broadleaf and mixedwood silviculture, and vegetation management.

Boreal Silviculture

I am responsible for a number of long term silviculture trials, which are remeasured and analyzed in co-operation with Regional researchers, Research Branch, Forest Practices Branch, and university researchers. The studies evaluate the effectiveness of various silvicultural methods for manipulating mixedwood stands to mimic natural disturbances and produce timber, wildlife habitat, and other values. Results from the research benefit BCTS Peace Liard, forest licensees, and the Fort Nelson and Peace Forest Districts.

Comeau, P.G., C.N. Filipescu, **R. Kabzems** and C. DeLong. 2009. Growth of white spruce underplanted beneath spaced and unspaced aspen stands in northeastern B.C. – 10 year results. For. Ecol Manage. 257: 1087-1094

Craig DeLong and **Richard Kabzems**. 2008. Improving the prediction of species composition for aspen/white spruce stands. Link 10(2): 10-11. (Available on SharePoint)

Kabzems, R., A.L. Nemec, and C. Farnden. 2007. Growing trembling aspen and white spruce intimate mixtures: Early results (13–17 years) and future projections. BC Journal of Ecosystems and Management 8(1):1–15. (Available on SharePoint)

Forest Soils

The primary focus of soils research is the Long Term Soil Productivity study at the Boreal White and Black Spruce site. In 2008 we completed 10 year post treatment assessments of soil properties, understory vegetation and regeneration of aspen and white spruce in response to organic matter removal and soil compaction. This site is part of an international network of forest research sites examining long- term ecosystem responses to organic matter removal and soil compaction. Co-operators have included soil scientists from the MFR, universities, Canadian Forest Service and US Forest Service. Results from this work are incorporated into FREP monitoring for soil values and support consulting activities with BCTS Peace Liard Business Area on site-specific concerns regarding soil conservation and methods to avoid detrimental soil disturbance.

Bulmer, C., S.M. Berch, M. Curran, B. Chapman, M. Kranabetter, S. Dubé, G. Hope, P. Courtin, and **R. Kabzems**. 2008. Monitoring the effects of forest practices on soil productivity and hydrologic function. BC Journal of Ecosystems and Management 9(2):48–59. (Available on SharePoint)

Tan, X, S.X. Chang and **R. Kabzems**. 2008. Soil compaction and forest floor removal reduced microbial biomass and enzyme activities in a boreal aspen forest soil. Biology and Fertility of Soils 44:471-479

Extension

Extension activities have reflected the ecological diversity of northeastern BC. Recent activities include summarizing the implications of climate change in northeastern BC for the Northern Silviculture Committee, describing history and ecology of native grasslands in the Peace for the Grassland Conservation Council of BC, field tours with ranchers and forest licensees to discuss implications of succession and harvesting disturbance on range values in aspen ecosystems, as well as silviculture strategies for spruce aspen mixedwoods.

- Early growth of white spruce underplanted beneath spaced and unspaced aspen stands in northeastern BC
- Timber Growth and Value Conference, February 2007, Smithers
- Mixedwoods in a Changing Climate
- Northern Silviculture Committee Winter Meeting, January 2008, Prince George