

BHARAT POKHAREL

Department of Agricultural and Environmental Sciences
College of Agriculture, Human and Natural Sciences, Tennessee State University
3500 John A. Merritt, Nashville, TN 37209
Tel: (615) 963 6054; Email: bpokhare@tnstate.edu
Website: http://www.tnstate.edu/agriculture/resumes/Bharat_Pokharel.aspx

EDUCATION

Ph.D. in Forest Science (Forest Biometrics) 2008

Michigan Technological University, Houghton MI 49931, USA

Dissertation: A Critical Evaluation of Diameter Increment Modelling in the Great Lakes Region

Advisor: Robert E. Froese; Committee Members: D.D. Reed, C.R. Webster, and M.R. Smith

Bachelor of Science (Forestry) with First Class Honours 1999

Australian National University (ANU), Canberra ACT 0200, Australia

Honours Thesis: Use of GIS and Modelling to Determine the Site Productivity of an Uneven-aged Forest

Advisors: Brian J. Turner and Cris L. Brack

WORK EXPERIENCES

Research Assistant Professor Jan 2014 – Present

Dept. of Agricultural and Environmental Sciences, Tennessee State University, Nashville TN 37209

Postdoctoral Fellow (Advisor: Jeff Dech) Jun 2009 – Dec 2013

Department of Biology and Chemistry, Nipissing University, North Bay ON P1B 8L7, Canada

Postdoctoral Research Scientist (Advisor: Robert Froese) Oct 2008 – May 2009

School of Forest Res. and Env. Sci. (SFRES), Michigan Technological University, Houghton MI 49931

Research Assistant (Advisor: Robert Froese) Aug 2004 – Sept 2008

School of Forest Res. and Env. Sci. (SFRES), Michigan Technological University, Houghton MI 49931

Program Officer/Project Manager/Project Field Officer Oct 1999 – Aug 2004

World Wildlife Fund (WWF) Nepal Program, Kathmandu, Nepal

TEACHING EXPERIENCE

INSTRUCTOR

Principles of Ecology (BIOL 2446) Fall 2012

Biostatistics (BIOL 3117) Fall 2012/2013

Forests and Global Warming (BIOL 4506) Spring 2011/2012/2013

Nipissing University, North Bay, ON P1B 8L7, Canada

Measuring Forest Resources (FW2050/FW5030) Fall 2005

SFRES, Michigan Technological University, Houghton, MI 49931

LAB INSTRUCTOR

Community Ecology (BIOL 3437)
Techniques in Forest Ecology and Management (BIOL 2346)
Nipissing University, North Bay, ON P1B 8L7, Canada

Spring 2010/2012
Fall 2009/2010/2011

PUBLICATIONS

Peer-reviewed

Pokharel, B.; Dech, J. P.; Groot, A. and D. Pitt 2014. Ecosite-based predictive modeling of black spruce (*Picea mariana* (Mill.) B.S.P.) wood quality attributes in boreal Ontario. *Canadian Journal of Forest Research*, 44: 465-475.

Dech, J.P.; Mayhew-Hammond, S.; James, A. and B. Pokharel 2014. Modeling Canada yew (*Taxus canadensis* Marsh.) distribution and abundance in the boreal forest of northeastern Ontario, Canada. *Ecological Indicators*, 36: 48-58.

Pokharel, B. and J.P. Dech 2012. Mixed-effects Basal Area Increment Models for Tree Species in the Boreal Forest of Ontario, Canada Using an Ecological Land Classification Approach to Incorporate Site Effects. *Forestry*, 85(2): 255-270.

Pokharel, B.; Dech, J.P. and P. Uhlig 2012. A Tool for Converting Forest Ecosystem Classifications for Permanent or Temporary Growth Plots into the New Provincial Ecological Land Classification (ELC) System in the Boreal Regions of Ontario. *The Forestry Chronicle*, 88(1): 49-59

Pokharel, B. and J. P. Dech 2011. An Ecological Land Classification Approach to Modelling the Production of Forest Biomass. *The Forestry Chronicle*, 87(1): 23-32.

Pokharel, B. and R. E. Froese 2009. Representing Site Productivity in the Basal Area Increment Model for FVS-Ontario. *Forest Ecology and Management*, 258(5): 657-666.

Pokharel, B. and R. E. Froese 2008. Evaluating Alternative Implementations of the Lake States FVS Diameter Increment Model. *Forest Ecology and Management*, 255(5-6): 1759-1771.

Additional Selected Publications (Posters, Conference Presentations and Technical Reports)

Pokharel, B. and J.P. Dech 2013. Improving Volume and Value Estimates for Boreal Tree Species Using Enhanced Forest Inventory Data and Decision Support Tools. Final Technical Report. Submitted to Canadian Wood Fibre Centre, Sault Ste. Marie, ON p27

Dech, J.P., B. Pokharel, A. Groot and D. Pitt (2013). Predictive modeling of individual tree growth and wood quality characteristics of Black Spruce (*Picea mariana*) in boreal landscapes of Ontario. North American Forest Ecology Workshop (NAFEW), June 16-20, 2013, Bloomington, Indiana.

Pokharel, B. 2012 (invited). Climate Change: Impacts, Adaptation and Mitigation Strategies – A Case Study from Lake Nipissing, Ontario. Second Lake Nipissing Summit, April 3-4, 2012, Organized by Nipissing First Nation and City of North Bay, Nipissing University, North Bay, ON.

Dech, J.P.; Pokharel, B. and M. Bowman 2012. Linking Wood Fibre Attributes to Ecological Land Classification in the Boreal Forest of Ontario. Final Technical Report. Submitted to Canadian Wood Fibre Centre, Sault Ste. Marie, ON p30

Pokharel, B. 2012 (invited). Climate Change Mitigation through Diversifying Energy Portfolios. May 31, 2012 Energy Efficiency and Conservation Committee, City of North Bay, North Bay, ON.

Pokharel, B. and J.P. Dech 2011. Ecosite as a Growth and Yield Model Projection Unit in the Boreal Forest of Ontario. Poster Presented at the Canadian Institute of Forestry Annual General Meeting, Sept 18-21, 2011, Huntsville, Ontario.

(PUBLICATIONS CONT'D)

Pokharel, B. and J.P. Dech 2011. Use of Ecological Land Classification (ELC) in Basal Area Increment Model to Improve Forest Growth and Yield Prediction in Boreal Forest of Ontario. Presented at the Western Mensurationists' Meeting, June 19-21, 2011, Banff, Alberta.

Pokharel, B. and J.P. Dech 2011 (*Invited*). Use of Ecological Land Classification (ELC) to Improve Forest Growth and Yield Prediction in Boreal Forest of Ontario. Forest Ecosystem Science Cooperative Inc. Forest Growth and Yield Science Unit, April 12-13, 2011, Timmins, ON.

Pokharel, B. 2011 (*invited*). Lake Nipissing: Evidences and Impacts of Climate Change. Lake Nipissing Summit, 13 July 2011, Organized by Nipissing First Nation and City of North Bay, Nipissing University, North Bay, ON.

Pokharel, B. and J.P. Dech 2011. Use of Ecosite and Other Landscape Level Variables to Improve Forest Growth and Yield Models, Especially with Respect to New Forest Bioproducts. Taking Stock: Inventory Options for Today and Tomorrow, January 26, 2011, Canadian Institute of Forestry, Kapuskasing, ON.

Dech, J.P., B. Pokharel and P. K. Courville 2009. Ecologically Based Bioproducts Inventory Tools for the Boreal Forest of Northeastern Ontario. Conference on Harnessing Biomass: From the Forest to the Marketplace, October 22-23, 2009, Nipissing University, North Bay, Ontario.

Pokharel, B. and R. E. Froese 2009. Timber Inventory Plot Design Project: Final report. Submitted to Michigan Department of Natural Resources, Lansing Michigan p22.

Pokharel, B. and R. E. Froese 2009. Timber Inventory Plot Design Project: Field manual. Submitted to Michigan Department of Natural Resources, Lansing, Michigan p31.

Pokharel, B. and R. E. Froese 2008. Why is the Performance of the Lake States Variant of FVS So Poor? Poster Presented at 6th Annual Forest and Wildlife Research Review Meeting, January 16, 2008, University of Minnesota Duluth, Minnesota.

Froese, R. E. and B. Pokharel 2008. An Evaluation of Increment Modelling Approaches Used in Forest Vegetation Simulator Variants and Recommendation for Application in the Great Lakes Region. Final Report Submitted to Ontario Ministry of Natural Resources, Ontario, Canada p22

Pokharel, B. and R. E. Froese 2007. Evaluating Alternative Base Functions for Modelling Diameter Increment in Ontario. Report Submitted to Ontario Ministry of Natural Resources, Ontario, Canada p79 (including appendices).

Pokharel, B. and R. E. Froese 2007. Analysis of Diameter Growth Engines Used in FVS Variants. Poster Presented at The Third Forest Vegetation Simulator (FVS) Conference, February 13-15, 2007, USDA Forest Service, Forest Management Service Center, Fort Collins Colorado. Merit Award (Second Place).

Pokharel, B. and R. E. Froese 2006. Single-tree, Aspatial Diameter Increment Models: Literature Review and Analysis. Report Submitted to Ontario Ministry of Natural Resources, Ontario, p45

Pokharel, B. and R. E. Froese 2006. Validation, Evaluation or Evolution of Diameter Increment Models in The Lake States FVS Model Family: An Annotated Bibliography. School of Forest Resources and Environmental Science, Michigan Technological University, Houghton, Michigan p15

Pokharel, B. and R. E. Froese 2006. Validation of the Diameter Increment Model of the Lake States Variant of the Forest Vegetation Simulator (LS-FVS) Using Michigan Forest Inventory and Analysis Data. Presented at the Western Mensurationists' Meeting, June 18-20, 2006, Fortuna, California.

Pokharel, B. and R. E. Froese 2006. Is the Diameter Increment Model of the Lake States Variant of FVS Unbiased? Poster Presented at Ecosystem Science Center Annual Graduate Research Forum, Michigan Technological University. Merit Award (Grand Prize, \$500 and a Plaque).

Pokharel, B. and R. E. Froese 2006. Validation of Diameter Increment Model of the Lake States Variant of the Forest Vegetation Simulator Using Michigan Forest Inventory and Analysis Data. Poster Presented at 5th Annual Forest and Wildlife Research Review Meeting, January 11, 2006, University of Minnesota Duluth, Minnesota.

RESEARCH GRANTS

Dech, J. P. (Project leader), Pokharel, B.; Groot, A. and D. Pitt (Project collaborators). Improving volume and value estimates for boreal tree species using enhanced forest inventory data: Completing black spruce fibre length analysis and the inclusion of additional species (2013-2014), CA\$ 15,000 (*awarded*).

Dech, J. P. (Project leader), Pokharel, B.; Groot, A. and D. Pitt (Project collaborators). Improving volume and value estimates for boreal tree species using enhanced forest inventory data and decision support tools. Canadian Wood Fibre Centre (2011-2013), CA\$ 25,000 (*awarded*).

Dech, J. P. (Project leader), Groot, A.; Pitt, D. (Project collaborators) and B. Pokharel (Project team). Linking Fibre Attributes to Ecological Land Classification. Canadian Wood Fibre Centre (2011-2012), CA\$ 25,000 (*awarded*).

COMMUNITY SERVICES, AWARDS AND HONORS

Professional Memberships

Member, Canadian Institute of Forestry (2010-present); **Chair**, Algonquin Section of Canadian Institute of Forestry (2012-2013); **Membership Coordinator**, Algonquin Section of Canadian Institute of Forestry (2011-2013); **Actively involved with Forests without Borders**: Sustainable Community Development through Trees for School Supplies Initiative in a rural region of Nepal; **Life Member**, Nepal Forester's Association (since 2002); **Life Member** of Nepal Red Cross Society (Since 2013).

Awards and Honors

Tree of Life Award 2013 (Canadian Institute of Forestry); **Graduate Dean's Finishing Fellowship for Summer 2008** (Michigan Tech.); **2006 Horner Hardwood Research Award** (US\$ 1,000)(Michigan Tech.) 2006; **2005's Inductee of International Honorary for Leaders** (University Apartments Communities – IHLUAC, Michigan Tech Chapter); **AusAID Scholarship for Undergraduate Studies in Australia** (Australian National University, 1995-1998); **Timbind Utilization Prize** (a medal and AUS\$ 200) (Australian National University in 1998).