

## **Bryan J. Mood, Ph.D.**

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### **EDUCATION**

#### **Ph.D., Geography, University of Victoria, 2019**

Concentration: Resource Management, Climate Change, and Dendrochronology

Dissertation: *Dendrohydrological reconstruction and hydroclimatic variability in southwestern British Columbia, Canada*

Advisors: Dan Smith, Ph.D., David Atkinson, Ph.D., and Tobias Gardner, Ph.D.

#### **M.Sc., Geography, University of Victoria, 2015**

Concentration: Climate Change, Glacier Change, and Quaternary Geology

Thesis: *Latest Pleistocene and Holocene behavior of Franklin Glacier, Mt. Waddington Area, British Columbia, Canada*

Advisors: Dan Smith, Ph.D. and John Clague, Ph.D.

#### **B.Sc. (honours), Environmental Science, Mount Allison University, 2013**

Concentration: Climate Change and Sustainable Resource Management

Minors: Geography and Geographic Information Systems

Thesis: *Dendroecology of White Spruce in Southern Saskatchewan*

Advisor: Colin Laroque, Ph.D.

### **PROFESSIONAL EXPERIENCE**

#### **Postdoctoral Researcher, University of Saskatchewan, 2019-2020**

Led technical team in the development of a decision support system for producers and landowners in Saskatchewan ([www.shelterbelt-sk.ca](http://www.shelterbelt-sk.ca)). Duties included public presentations, leading a technical team, publishing data, ethics applications, and discussions about the support system, fieldwork, and knowledge mobilization.

#### **Executive Director, UNESCO Southwest Nova Biosphere Reserve, 2018-2019**

Enacted the board of director's vision and mission for biosphere reserve including the development and release of the Southwest Nova Science Atlas ([www.scienceatlas.ca](http://www.scienceatlas.ca)), promotion of sustainable and climate change adaptation initiatives, ecotourism, reconciliation, knowledge mobilization, and vulnerable land acquisition efforts.

### **TEACHING EXPERIENCE**

**Practice of University Teaching Certificate, University of Saskatchewan, *forthcoming***

Received accreditation in the practice of university teaching where I developed creative methods, practical tools, and assessment strategies. Also learned how to develop lesson plans and learning outcomes as well as approaches for accessible and inclusive learning practices.

**Instructor, University of Saskatchewan, 2020 (*expected*)**

Developed course outline, learning outcomes, laboratory exercises, lectures, and assignments for a class of 60 students.

Course: Renewable Resources and Environment (1<sup>st</sup> year)

**Research Mentor, Canadian Light Source, University of Saskatchewan, 2019-2020**

Mentored high school students in the development of an environmental research project from Brampton, Ontario. Duties included bi-weekly skype meetings, professional advice, help with data collection, and supervision of research activities.

**First Year Research Experience Coach, University of Saskatchewan, 2019**

Mentored first-year undergraduate students conducting research. Facilitated workshops and provided advise on the scientific method, writing, and research techniques.

Courses: Renewable Resources and Environment.

**Instructor, University of Victoria, 2017**

Developed course outline, learning outcomes, laboratory exercises, lectures, and assignments for a class of 100 students.

Courses: Introduction to Geomorphology (2<sup>nd</sup> year); Tree-Rings and Fire History (4<sup>th</sup> year).

**Specialist Instructor, University of Victoria, 2013-2018**

Taught multiple laboratory/tutorial sections to enhance learning outcomes for the corresponding courses. Led students in field work exercises, laboratory experiments, and how to write.

Courses: Physical Geography; Introduction to Quantitative Methods; Introduction to Geomorphology; Landscape Ecology; field Surveying; Advanced Topics in GIS; and Field Studies in Physical Geography.

**Teaching Assistant, Mount Allison University, 2010-2013**

Taught and graded multiple laboratory/tutorial sections to enhance learning outcomes of students taking a variety of courses.

Courses: The Physical Environment; Geomorphology; Weather and Climate; Research Methods in Environmental Science; and Introduction to Dendroarchaeology.

**Tutor, Meighan Centre for Learning Assistance and Research, Mount Allison University, 2010-2013**

Tutored undergraduate students with learning challenges through a variety of teaching methods and techniques individually suited to person.

Courses: The Human Environment; Geographic Information Systems; and Geomorphology.

**PUBLICATIONS**

**Refereed Journal Articles**

1. **Mood BJ** and Smith DJ (2015a) Late glacial and Holocene behaviour of Franklin Glacier, Mt Waddington area, British Columbia Coast Mountains, Canada. *The Holocene* 25: 784-794.
2. **Mood BJ** and Smith DJ (2015b) Holocene glacier activity in the British Columbia Coast Mountains, Canada. *Quaternary Science Reviews* 128: 14-36.

### **Manuscripts in Review**

3. **Mood BJ**, Coulthard B, and Smith DJ (*in review*) Reconstructed southwestern British Columbia snowpack influenced by ENSO over last 300 years. Submitted to Hydrological Processes manuscript ID: HYP-20-0111.
4. **Mood BJ**, Welsh C, and Smith DJ (*in review with revisions*) Chinook and coho salmon experience divergent cyclical abundance changes over the last 300 years in southwestern British Columbia, Canada. Submitted to Ecosphere manuscript ID: ECS19-0574.

### **Manuscripts in Revision**

5. **Mood BJ** and Smith DJ (*in revision*) Post-1976 Metro Vancouver July-August water supply below 300-year reconstructed average. Submitted to Journal of Hydrology: Regional Studies manuscript ID: S-18-01287.

### **Manuscripts in Preparation**

(\* indicates supervised/mentored graduate or undergraduate student)

6. Bellingier A\*, Canning C\*, **Mood BJ**, and Laroque CP (*in preparation*) Elevated arsenic levels in trees outside of Giant Mine remediation area. Being prepared for Environmental Pollution. Expected submission: September 2020.
7. **Mood BJ** and Laroque CP (*in preparation*) Observed drought legacies of white spruce outside of their natural range in Saskatchewan, Canada. Being prepared for Journal of Biogeography. Expected submission: May 2020.
8. **Mood BJ** and Smith DJ (*in preparation*) April lake levels of Harrison Lake, British Columbia, Canada, reconstructed using tree-rings. Being prepared for The Canadian Geographer. Expected submission: April 2020.
9. **Mood BJ** and Smith DJ (*in preparation*) Holocene glacier history of in the Homathko River Valley, British Columbia. Being prepared for Canadian Journal of Earth Sciences. Expected submission: June 2020.
10. **Mood BJ**, Belcher K, and Laroque CP (*in preparation*) Can shelterbelts in Saskatchewan help offset producer emissions and costs under the Prairie Resilience plan? Being prepared for Canadian Policy. Expected submission: March 2020.
11. **Mood BJ**, Jamsrandorj U, Walters K, Bentham M, Krug P, Belcher K, Kulshreshtha S, Van Rees K, and Laroque C.P. (*in preparation*) An agroforestry decision support system for Canadian shelterbelts as a climate adaptation and sustainability tool. Being prepared for Computers and Electronics in Agriculture. Expected submission: May 2020.
12. Nehemy MF\*, **Mood BJ**, and Laroque CP (*in preparation*) Eastern larch and black spruce radial growth response to water-table thresholds and climate in a peatland in Saskatchewan. Being prepared for Wetlands. Expected Submission: April 2020.

### **OUTREACH AND MASS MEDIA**

## Media Releases

Noyes J (2019) U of S researchers helping farmers create sustainable shelterbelts.

<<https://paherald.sk.ca/2019/07/22/u-of-s-researchers-helping-farmers-create-sustainable-shelterbelts/>>. Published 22 July 2019.

## Radio Interviews

**Mood BJ** (2020) Shelterbelt values in Saskatchewan. Golden West Farm Network, network of 15 radio stations across Alberta, Saskatchewan, and Manitoba.

<<https://www.pembinavalleyonline.com/radio/mb-farm-journal/mfj-feb-5-2020>; 9:35-13:40>  
Published 5 February 2020.

## Invited Public Presentations

- 1. Shelterbelts and You: An internet tool to help you learn about your trees, 2020**  
Crop Talks, Prince Albert, Saskatchewan (changed to webinar in response to COVID-19 pandemic)
- 2. Added value of fruit and shelterbelt trees in Saskatchewan, 2020**  
Saskatchewan Vegetable and Fruit Growers Association, Saskatoon, Saskatchewan
- 3. Who says money doesn't grow on trees? A progress update of the shelterbelt decision support system, 2020**  
Agricultural Applied Research Management Public Update, Saskatoon, Saskatchewan
- 4. Unlock the potential of your shelterbelt: the economic and sustainable value of shelterbelts, 2019**  
Western Canadian Agribition, Regina, Saskatchewan
- 5. Who says money doesn't grow on trees? The conservation and economic value of shelterbelts, 2019**  
Conservation Learning Centre, Prince Albert, Saskatchewan
- 6. Tree-rings and water: What dendrochronology can tell us about hydroclimate variability, 2017**  
Geography Colloquium Series, Victoria, British Columbia
- 7. Agroforestry: Shelterbelts in Saskatchewan and how they help us understand climate change, 2017**  
Environment, Society, and Sustainability, Victoria, British Columbia
- 8. Paraglacial Landforms, 2014**  
Introduction to Geomorphology undergraduate class, Victoria, British Columbia
- 9. Volume Loss of Saskatchewan Glacier, Alberta, Canada, 2011**  
Geomorphology undergraduate class, Sackville, New Brunswick

## FELLOWSHIPS AND RESEARCH GRANTS

### Research Projects

2020	Solutions to Water Threats	Global Water Futures	\$180,000
	in an Era of Global Change	University of Saskatchewan	(in review)
	Title: <i>Exploring how extreme hydrological events affect trees in the southern boreal forest of Saskatchewan</i>		

**Speaking Awards**

2018	Ineke Dijks Award	Western Division of the Canadian Association of Geographers	\$100.00
2013	J.C. Moore Prize	Mount Allison University	\$500.00

**Fellowships/Scholarships**

2015	NSERC Post Graduate CGS-D Alexander Graham Bell Scholarship	University of Victoria	\$105,000.00
2015	University of Victoria Graduate Fellowship Award	University of Victoria	\$5,000.00 (declined)
2013	NSERC Post Graduate CGS-M Alexander Graham Bell Scholarship	University of Victoria	\$17,500.00

**Research Grants**

2016	Special Dean's Bursary	University of Victoria	\$5,000.00
2015	Special Dean's Bursary	University of Victoria	\$5,000.00
2014	Special Dean's Bursary	University of Victoria	\$750.00
2013	Northern Scientific Training Program	University of Victoria	\$1,750.00

**Academic Awards**

2017	President's Award	University of Victoria	\$4,000.00
2015	University of Victoria Outstanding Graduate Entrance Award	University of Victoria	\$5,000.00
	President's Award	University of Victoria	\$4,000.00
	Graduate Award	University of Victoria	\$1,500.00
	Graduate Award	University of Victoria	\$2,500.00
2014	Graduate Award	University of Victoria	\$3,500.00
2013	President's Award	University of Victoria	\$4,000.00

**PROFESSIONAL DEVELOPMENT/TRAINING**

2020	<b>Establishing a Research Profile using ORCID and Social Media</b> University of Saskatchewan		
2020	<b>Using Reason to Conflict Resolution</b> University of Saskatchewan		
2020	<b>Research Ethics Proposal Training</b> University of Saskatchewan		
2019	<b>Undergraduate Research Mentorship Training</b> Office of the Vice President Research, University of Saskatchewan		
2019	<b>Health and Safety Orientation</b> Canadian Light Source Facility		
2019	<b>Laboratory Safety</b>		

- 2019 University of Saskatchewan  
**Radiation Awareness (RAM and RWT)**  
Canadian Light Source Facility
- 2019 **Safety Orientation for Research, Services, and Fieldwork**  
University of Saskatchewan
- 2019 **Workplace Hazardous Material Information System (WHIMIS)**  
Canadian Light Source Facility and University of Saskatchewan

## **SERVICE**

### **Leadership in Organizations**

- 2014-2015 **Western Division of the Canadian Association of Geographers**  
Student Executive Member
- 2011-2012 **Atlantic Division of the Canadian Association of Geographers**  
Student Executive Member

### **Search Committees**

- 2016-2017 **Tenure Track Assistant University of Victoria Professor of Geomorphology**  
Graduate Committee Member

### **Referee Work**

- Geographiska Annaler Series A, Physical Geography (1)  
Northwest Science (1)

### **Leadership Positions**

- 2014-2016 **Geography Graduate Students' Society, University of Victoria**  
President
- 2014-2016 **Graduate Students' Society, University of Victoria**  
Department Representative
- 2011-2012 **Geography and Environment Society, Mount Allison University**  
President

### **Community Service**

- 2018-2019 **Tusket River Environmental Protection Association (TREPA)**  
Board Member
- 2018-2019 **UNESCO Southwest Nova Biosphere Reserve Association**  
Non-voting member
- 2018-2019 **Kesputwitk Conservation Collaborative**  
Member-at-large

### **Professional Memberships**

- 2010-Present Canadian Association of Geographers
- 2010-Present Atlantic Division of the Canadian Association of Geographers
- 2012-Present Canadian Geomorphology Research Group (CGRG)
- 2012-Present Geographic Information Systems Study Group (GIS-SIG)
- 2013-2018 Western Division of the Canadian Association of Geographers
- 2009-2013 Mount Allison University Geography and Environment Society

## **CONFERENCE ACTIVITY**

### **Conference Organizing Committees**

- 2014        **Annual Meeting of the Western Division of the Canadian Association of Geographers**  
University of Victoria, Victoria, British Columbia
- 2011        **Annual Meeting of the Atlantic Division of the Canadian Association of Geographers**  
Mount Allison University, Sackville, New Brunswick

### **Special Sessions Organized**

- 2018        **The Many Facets of Our Forests: Trees across Canada**  
Western Division of the Canadian Association of Geographers Annual Meeting  
(with J. Maillet, B. Howat, and C.P. Laroque)
- 2015        **Innovations and Applications in Dendrochronological Research**  
Annual Meeting of the Canadian Association of Geographers  
(with J. Maillet, K. Hoffman, and C.P. Laroque)
- 2014        **Paleoenvironments Special Session**  
Annual Meeting of the Western Division of the Canadian Association of Geographers  
(with B.L. Coulthard)
- 2013        **Dendrochronology in Canada**  
Annual Meeting of the Canadian Association of Geographers  
(with M.G. Clark and C.P. Laroque)

### **Sessions Chaired**

- 2015        **Annual Meeting of the Canadian Association of Geographers**  
Simon Fraser University, Vancouver, British Columbia
- 2014        **Annual Meeting of the Western Division of the Canadian Association of Geographers**  
University of Victoria, Victoria, British Columbia
- 2013        **Annual Meeting of the Canadian Association of Geographers**  
Memorial University, St. John's, Newfoundland
- 2012        **Science Atlantic Biology (42<sup>nd</sup>), Aquaculture and Fisheries (22<sup>nd</sup>) and Environment (10<sup>th</sup>) Conference**  
Mount Allison University, Sackville, New Brunswick
- 2011        **Annual Meeting of the Atlantic Division of the Canadian Association of Geographers**  
Mount Allison University, Sackville, New Brunswick

### **International Conferences**

1. **Mood BJ**, Coulthard B, and Smith DJ (2020) Southwestern British Columbia April 1 SWE shows regional synchrony and distinct variability over the last 300 years. American Association of Geographers Annual Meeting. Denver, Colorado, USA, April 6-10, 2020.  
\* *Cancelled due to COVID-19 Pandemic.*

2. **Mood BJ** and Smith DJ (2014) Frankly Speaking: A Comprehensive Record of Holocene Behaviour at Franklin Glacier, British Columbia, Canada. 2014 Geological Society of America Meeting. Vancouver, British Columbia, October 19-22, 2014.
3. Smith DJ and **Mood BJ** (2014) Holocene Glacier Activity in the British Columbia Coast Mountains, Canada. 2014 Geological Society of America Meeting. Vancouver, British Columbia, October 19-22, 2014.

### National Conferences

4. Maillet J, **Mood BJ**, and Laroque CP (2019) Cross-Scale Applications of Dendrochronology in Forest Carbon Research. Annual Meeting of the Canadian Association of Geographers. Winnipeg, Canada, May 27-31, 2019.
5. **Mood BJ** and Smith DJ (2016) Reconstructed SWE in the Southern Coast Mountains, British Columbia, Canada to 1710 CE and Its Implications for Water Management. Annual Meeting of the Canadian Association of Geographers. Halifax, Canada, May 29-June 4, 2016.
6. Laroque CP, Davis E, and **Mood BJ** (2015) Forecasting Radial Growth in Shelterbelt Trees Across Southern Saskatchewan. Annual Meeting of the Canadian Association of Geographers. Vancouver, British Columbia, Canada, June 1-5, 2015.
7. **Mood BJ** and Smith DJ (2015) Dendroglaciological Evidence for Late Holocene Glacier Activity in the Andrei Icefield Area, British Columbia Coast Mountains, Canada. Annual Meeting of the Canadian Association of Geographers. Vancouver, British Columbia, Canada, June 1-5, 2015.
8. Smith DJ, Coulthard B, Craig J, **Mood, BJ**, and Larocque SJ (2014) Dendroglaciological Exposés in the Mt Waddington Area, British Columbia Coast Mountains. Annual Meeting of the Canadian Association of Geographers. St. Catharine's, Ontario, May 26-30, 2014.
9. Davis EL, Laroque CP, **Mood BJ**, and Van Rees K (2013) White Spruce Now and Then: Determining the Growth Response of Shelterbelt Trees to Climate Change in the Canadian Prairies. Annual Meeting of the Canadian Association of Geographers. St. John's, Newfoundland, August 11-15, 2013.
10. **Mood BJ**, Clark MG, Laroque CP, and Van Rees K (2013) Determining Physiological Stress and Growth Thresholds of White Spruce in Southern Saskatchewan. Annual Meeting of the Canadian Association of Geographers. St. John's, Newfoundland, August 11-15, 2013.
11. **Mood BJ**, Borneman J, Bousada G, Kershaw GGL, and Laroque CP (2012) Volume Loss of the Saskatchewan Glacier: Glacier-Temperature Dynamics Observed Through Raster Analysis. Annual Meeting of the Canadian Association of Geographers. Waterloo, Ontario. May 28 – June 2, 2012.
12. Hogan E, Davis E, Jennings C, Hall S, **Mood BJ**, and Laroque CP (2012) A Dendroarchaeological Analysis of the Cormier House, Sackville, New Brunswick. Canadian Archaeological Association Annual Meeting: Montreal 2012. Montreal, Quebec. May 17-19, 2012.
13. **Mood BJ**, Laroque CP, and Robichaud A (2012) Dendroarchaeological Investigations at the Campbell Carriage Factory, Sackville, NB. Canadian Archaeological Association Annual Meeting: Montreal 2012. Montreal, Quebec. May 17-19, 2012.



## Regional Conferences

14. Manning I, **Mood BJ**, and Drydale C (2018) An Interactive Science Atlas for the Kespukwitk and UNESCO Southwest Nova Biosphere Reserve. Mersey-Tobieatic Research Institute 7<sup>th</sup> Annual Science Conference: Kespukwitk Two-Eyed Seeing Gathering. Bear River First Nation, Nova Scotia. October 18-19, 2018.
15. **Mood BJ** and Smith DJ (2018) A Dendrohydrological Analysis of the Greater Vancouver Regional District's Water Supply. Western Division of the Canadian Association of Geographers Annual Meeting. Edmonton, Alberta. March 9-10, 2018.
16. Smith DJ, Coulthard B, **Mood BJ**, and Starheim C (2016) Reconstructing long-term snow histories from tree-rings in the British Columbia Coast Mountains. Western Division of the Canadian Association of Geographers Annual Meeting. Prince George, British Columbia. March 11-12, 2016.
17. **Mood BJ** and Smith DJ (2014) Frankly, Amazing: Dendroglaciological Investigations at Franklin Glacier, British Columbia, Canada. Western Division of the Canadian Association of Geographers Annual Meeting. Victoria, British Columbia. March 7-8, 2014.
18. **Mood BJ**, Clark MG, and Laroque CP (2013) Forests of the Future? Using Mean Sensitivity as a Measure of Physiological Stress and the Future Climate-Envelope Contraction of White Spruce in Saskatchewan. Science Atlantic Biology (43<sup>rd</sup>), Aquaculture and Fisheries (23<sup>rd</sup>) and Environment (11<sup>th</sup>) Conference. Wolfville, Nova Scotia. March 15-17, 2013.
19. Carter JDH, **Mood BJ**, Wagar MJ, and Laroque CP (2012) Reading Between the Layers – The Stratigraphy Near Cavell Lake. Atlantic Division of the Canadian Association of Geographers Annual Meeting. Halifax, Nova Scotia. October 19-21, 2012.
20. **Mood BJ**, Clark MG, and Laroque CP (2012) Spacious Spruce: Spatial Patterns of *Picea glauca* Growth in Southern Saskatchewan. Atlantic Division of the Canadian Association of Geographers Annual Meeting. Halifax, Nova Scotia. October 19-21, 2012.
21. Wagar MJ, Carter JDH, **Mood BJ**, Clark G, and Laroque CP (2012) Blasted Out of the Past! A Dendroglaciological Study in the Mount Edith Cavell Area. Atlantic Division of the Canadian Association of Geographers Annual Meeting. Halifax, Nova Scotia. October 19-21, 2012.
22. MacMichael MJ, **Mood BJ**, McLelland M, and Nelson BK (2012) Expansion of *Xanthoria elegans* and *Aspicilia candida* Radial Growth Curves. Science Atlantic Biology (42<sup>nd</sup>), Aquaculture and Fisheries (22<sup>nd</sup>) and Environment (10<sup>th</sup>) Conference. Sackville, New Brunswick. March 2-4, 2012.
23. MacMichael MJ, **Mood BJ**, McLelland, M, and Nelson BK (2012) Expansion of *Xanthoria elegans* and *Aspicilia candida* Radial Growth Curves. 23<sup>rd</sup> Annual Meeting of the Atlantic Association of the Canadian Geographers. Sackville, New Brunswick. October 14-16, 2011.
24. **Mood BJ** and Laroque CP (2011) Accessible Science: Making Research Outcomes Available to Canadian Citizens Through Technology. 23<sup>rd</sup> Annual Meeting of the Atlantic Association of the Canadian Geographers. Sackville, New Brunswick. October 14-16, 2011.
25. Bousada G, **Mood BJ**, Kershaw G, Borneman J, and Laroque CP (2010) Three-dimensional Model of Saskatchewan Glacier, Jasper National Park, Alberta. 22<sup>nd</sup> Annual

Meeting of the Atlantic Association of Canadian Geographers. St. John's, Newfoundland.  
October 1-3, 2010.

### **Institutional Conferences**

- 26. Mood BJ** (2015) Seven(-ish) years at Tiedemann: Nineteen Days in the Back Country. Geography Graduate Student Symposium. December 2015.
- 27. Mood BJ** (2014) Did Glaciers in Western North America Advance in Concert With Abrupt Climate Change During the Early Holocene? Geography Graduate Student Symposium. December 2014.
- 28. Mood BJ** (2013) When Did Frank(lin) Kill the Trees? Dendroglaciological Investigations at Franklin Glacier, Canada. Geography Graduate Student Symposium. December 2013.
- 29. Mood BJ** (2013) Dendroecology of White Spruce in Southern Saskatchewan. Geography and Environment Honours Day. Sackville, New Brunswick, April 12, 2013.
- 30. Mood BJ** (2012) Delineating Spatial Patterns of *Picea glauca* Radial Growth in Southern Saskatchewan, Canada. Student Undergraduate Research Fair. Sackville, New Brunswick. September 14, 2012.
- 31. Mood BJ** (2011) Comparative Spatial Interpolation Methods for the Atlantic Provinces and the UNESCO Fundy Biosphere Reserve. Mount Allison Geographic Information Systems Day, 2011. December 6, 2011.
- 32. Mood BJ** and Laroque CP (2011) Aiding the Shelterbelt Decision Making Process Through an Internet Program. Student Undergraduate Research Fair. Sackville, New Brunswick. September 16, 2011.