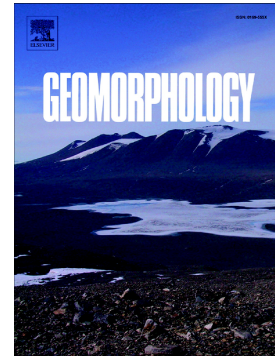


Accepted Manuscript

Semi-automated classification of exposed bedrock cover in British Columbia's Southern Mountains using a Random Forest approach

Christopher Scarpone, Margaret G. Schmidt, Chuck E. Bulmer, Anders Knudby



PII: S0169-555X(17)30103-4
DOI: doi: [10.1016/j.geomorph.2017.02.013](https://doi.org/10.1016/j.geomorph.2017.02.013)
Reference: GEOMOR 5929
To appear in: *Geomorphology*
Received date: 24 November 2015
Revised date: 6 December 2016
Accepted date: 18 February 2017

Please cite this article as: Christopher Scarpone, Margaret G. Schmidt, Chuck E. Bulmer, Anders Knudby , Semi-automated classification of exposed bedrock cover in British Columbia's Southern Mountains using a Random Forest approach. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. *Geomorphology* (2017), doi: [10.1016/j.geomorph.2017.02.013](https://doi.org/10.1016/j.geomorph.2017.02.013)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Semi-automated classification of exposed bedrock cover in British Columbia's Southern Mountains using a Random Forest approach

Christopher Scarpone^a, Margaret G. Schmidt^{a,*}, Chuck E. Bulmer^b, Anders Knudby^{a,c}

^a Department of Geography, Simon Fraser University, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada,

^b British Columbia Ministry of Forests Lands and Natural Resources Operations, Forest Sciences Section, Vernon, BC, V1B 2C7, Canada,

^c present address: Department of Geography, University of Ottawa, 75 Laurier Ave E, Ottawa, Ontario, K1N 6N5, Canada,

*Corresponding author: Dr. Margaret G. Schmidt, margaret_schmidt@sfu.ca

Abstract

Knowledge of the spatial distribution of exposed bedrock (EB) is essential for natural resource inventories, environmental monitoring, and landscape evolution modelling. This paper presents a method for the use of a Random Forest (RF) classifier and legacy land data to locate areas of EB in a mountainous landscape of southern British Columbia, Canada. EB map accuracy increased from 48% to 88% with the use of RF models in comparison to the legacy land cover maps. Reducing the total number of predictor variables from 43 to 17 had a negligible effect on prediction accuracy.

Download English Version:

<https://daneshyari.com/en/article/5781041>

Download Persian Version:

<https://daneshyari.com/article/5781041>

[Daneshyari.com](https://daneshyari.com)