

NSF Result Highlight

‘Athabaskan Personal Histories of Climate Change in Alaska and Canada’

PI: Sharon Hargus, University of Washington

Native American residents of the Bulkley/Morice River valleys of western central British Columbia, Canada are providing anecdotal support for claims about climate change in this part of North America. Dr. Sharon Hargus of the University of Washington is collecting interviews of native speakers of Babine-Witsuwit'en, an Athabaskan language. Speakers uniformly report that the region used to be colder when they were growing up. These anecdotal reports are supported by local weather data from Environment Canada, available for 1922-present (daily data only since 1955). The weather data are being interpreted by Rick Thoman, Lead Forecaster, National Weather Service, Fairbanks, Alaska. Among other findings, Thoman notes that ‘analyses of climate variables from Smithers, BC appear to demonstrate some correlation with the phase of the Pacific Decadal Oscillation...Although daily data is available only since 1955, there is a strong shift to an earlier melt-out of the winter snowpack of two weeks following the PDO shift in the summer of 1976. It is quite remarkable that following the PDO shift, loss of winter snowcover has only twice occurred as late or later than the 1955-76 median date.’ (e-mail to Hargus, 2-7-10).

Through these interviews on climate change, Dr. Hargus has also collected a large amount of data on Witsuwit'en, an endangered language with only about 100 speakers remaining. These texts are being translated and transcribed and will be very useful for answering linguistic questions about sentence level grammar, such as question formation, negation, and intonation. For example, in a January 2009 presentation to the Society for the Study of the Indigenous Languages of the Americas, Hargus found evidence for a type of intonation contour used to Witsuwit'en yes/no questions which may be cognate with a tonal contour used to mark uncertainty in Tsek'ene, another Athabaskan language of B.C.

wit_map5.eps

Traditional Witsuwit'en territory in the Bulkley and Morice River valleys of British Columbia, Canada. Cartography by François Depey. Copyright UBC Press and used with permission. [I will forward approval as soon as I get it. If the article needs to go to press before you receive my forwarded approval, this map cannot be used. Can you generate another one from Google Maps?]

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Primary interviewer Lillian Morris with Roy Morris during November 2009 interview in Moricetown, B.C. Photo by Sharon Hargus.

Smithers_Meltout.jpg

1955-2007 spring snowpack meltout dates, prepared by Rick Thoman (NWS) from Environment Canada data, Smithers A weather station.

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Witsuwit'en native speaker George Williams working with Sharon Hargus in Vancouver B.C., January 2010, translating Lillian Morris's 2009 interview of Roy Morris. Photo by Dave Paul Nelson. [.tif version of this photo is available, but it is 10x bigger in size and will be hard to send]