

Non-Timber Forest Product Resource Use in Interior Alaska

Kimberley Maher, BNZ, University of Alaska Fairbanks



Ada Gallen, Athabascan elder from Northway, Alaska, pulling spruce roots for birch bark basketry



Harvesting birch sap in rural Alaska is a labor intensive process.

Bonanza Creek LTER is situated in the midst of Alaska and the boreal forest. The forest provides an array of important ecosystem services to communities that reside in Interior Alaska. Tangible benefits from the forest include non-timber forest products (NTFPs) such as berries, mushrooms, firewood, and birch bark. In Interior Alaska, these key resources are gathered from the landscape mainly through informal institutions for subsistence, cultural, personal, and commercial purposes.

Personal and Subsistence Harvest of NTFPs

Personal and subsistence harvest of NTFPs are popular activities across demographic sectors. Title VIII of the Alaska National Interest Lands Conservation Act protects subsistence harvest on the 60% of land in Alaska that is federally owned. Harvesting is also allowed on state-owned land in Alaska (an additional 28% of land in Alaska). Unlike hunting and fishing, no licenses or permits are needed for personal use or subsistence harvesting of NTFPs on federal or state land in Alaska. Because of this, little data exists regarding harvesting activities. The Alaska Boreal Forest Council conducted a Forest Use Survey in 2003 and surveyed household throughout the Tanana Valley on their use of the forest resources.

Quantifying amounts harvested and number of trips taken is one way to begin to interpret non-market value of NTFP resources. Qualitative interviews will be conducted to better understand and document people's motivations for harvesting NTFPs and the value that these resources contribute to people's lifestyles.



Sweet success while harvesting wild blueberries- *Vaccinium uliginosum*

Photo credit: Shannon McNeeley

"I'm not doing it for the money, that's for sure"

Lily Glass, seasonal birch syrup employee

Most common NTFPs harvested	% of Households that reported harvesting	Mean quantity harvested	Mean # of harvesting trips
Wild blueberries	40.7%	7.7 quarts (11.1 s.d.)	2.9 (3.7 s.d.)
Firewood	26.3%	4.7 chords (4.2 s.d.)	6.3 (7.6 s.d.)
Low-bush cranberries	23.2%	5.8 quarts (4.5 s.d.)	2.4 (2.4 s.d.)
Raspberries	17.8%	3.9 quarts (4.6 s.d.)	3.0 (3.8 s.d.)
High-bush cranberries	13.1%	3.3 quarts (2.4 s.d.)	2.1 (1.7 s.d.)

Commercial Harvest of NTFPs

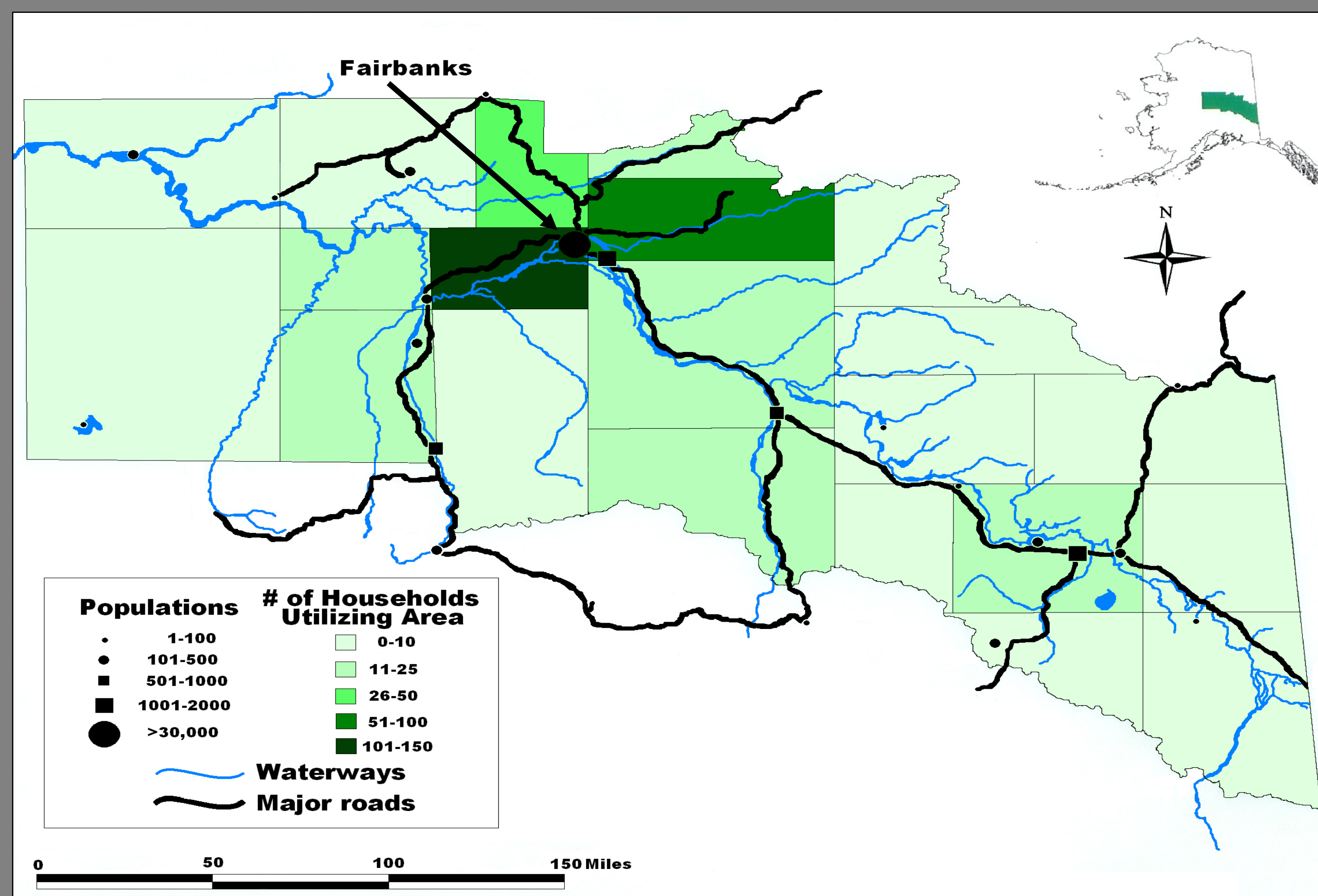
Commoditization of NTFPs is often heralded as a means to promote forest conservation and improve rural livelihoods. This work may be a successful avenue for some workers who seek an alternative lifestyle for a variety of reasons; however, commercial harvesting often requires long, arduous hours and provides low wages.

Prominent NTFP industries in Alaska include wild berry products and birch syrup. Commercial harvest of NTFPs on state-owned land in Alaska just recently began receiving direct management attention. In 2008, the Alaska Department of Natural Resources began a permit process that allocates commercial harvesting rights for most NTFPs with their over-the-counter, non-geographically specific, commercial permits. When new management policies are established, the recognized benefits of those policies must outweigh the costs of implements and enforcing the new policies otherwise the changes will not be incorporated into people's behavior (Alexander and Fight 2003). Two-way communication is necessary between harvesters and land managers in order to have effective policies and compliance of regulations (Love and Jones 2002). NTFP resource harvesters have demonstrated low compliance with regulations of which they do not recognize the legitimacy (McLain and Jones 1998).

While NTFP harvest is usually assumed to be benign or have negligible impacts on the resource, this is not always the case. Ticktin (2004) lays out three key ecological questions to consider when developing harvesting management, specifically (1) What are the ecological impacts of harvest? (2) What are the mechanisms underlying these impacts? (3) What kinds of management practices may mitigate negative impacts and/or promote positive impacts?

In order for commercial NTFP ventures to be successful, they must be economically profitable, harvesters must have access to the resource (including both property rights to the resource and reliability of finding the resources), and harvesting can not degrade the resource. Since NTFPs are not usually highly profitable commodities, little is known regarding the biology and sustainable harvest for many NTFPs. My research will contribute to the understanding of tapping impacts on birch trees and the motivations for participation in the industry.

Alexander, S. J., and R.D. Fight. 2003. Managing Access to Nontimber Forest Products. In Compatible Forest Management, eds R.A. Monsrud, R.W. Haynes, and A.C. Johnson. Dordrecht, The Netherlands: Kluwer Academic Publishers.
Love, T. and E.T. Jones. 2001. Why is Non-Timber Forest Products Harvesting an "Issue"? Excluding Local Knowledge and the Paradigm Crisis of Temperate Forestry. In Non-Timber Forest Products: Medicinal Herbs, Fungi, Edible Fruits and Nuts, and Other Natural Products from the Forest, eds M. Emery and R.J. McLain. Binghamton, New York: Food Products Press.
McLain, R.J. and E.T. Jones. 1998. Participatory Non-Wood Forest Products Management: Experiences from the Pacific Northwest, USA. In Sustainable Development of Non-Wood Goods and Benefits from the Boreal and Cold Temperate Forests, eds H.G. Lund, B. Pajari, and M. Korhonen. Joensuu, Finland: European Forest Institute.
Ticktin, T. 2004. The ecological implications of harvesting non-timber forest products. Journal of Applied Ecology 41:11-21.



Concentration of NTFP Harvesting Activities around population centers

Demographics of Harvesters		% of category that reported harvesting NTFP resources
Income	Low income (> \$30,000)	49.0 %
	Mid income (\$30,000-\$100,000)	62.7 %
	High income (< \$100,000)	66.7 %
Residence	Urban	55.5%
	Exurban	76.7 %
	Rural	78.6 %
Self-identifying harvester status	Does not identify as subsistence or personal use harvester	11.0 %
	Personal use harvester	97.9 %
	Subsistence harvester	100.0 %

"Any opportunity to get in the woods and do something neat like this or build a cabin someplace- to work and live, I'll do that anytime" Jonathan Olander, seasonal birch syrup employee

Support for this work has been provided by

- The Community Forestry & Environmental Research Partnerships Program
- IGERT Resilience and Adaptation Program
- NSF GK-12 Fellowship Program
- Alaska EPSCoR NSF award #EPS-0701898 and the state of Alaska



