Overview of the Northwest Arctic Borough Subsistence Mapping Project

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Photo provided by Virgil Naylor.

Photo by Zach Stevenson.

Geographic Scope: Northwest Arctic Borough

Zach Stevenson, Project Coordinator

Harvesting a beluga whale. Photo from NAB.

Red Dog Mine. Image from www.nana-dev.com.

- **The Northwest Arctic Borough is located 40 miles above the Arctic Circle in Northwest Alaska.**
- **The Northwest Arctic Borough is one of the most sparsely populated regions in Alaska.**
- **The region is the size of Ohio and has 11 communities including Kivalina, Noatak, Selawik, Noorvik, Buckland, Deering, Kotzebue, Kiana, Ambler, Shungnak, and Kobuk.***
- **The region's estimated 2013 population is 7,685 people of which 80.2% are Alaska Native or Native American (United States Census Bureau).**
- **The mining industry's payroll is the largest in the region, contributing 27% of the earnings in 1997 (Alaska Department of Labor, 1999).**
- **The Alaska Department of Fish and Game documented annual subsistence harvests ranging from 347 lb per capita in Kiana (2006) to 940 lb of wild foods per capita in Kivalina (1983).**

*The current project includes the 7 **underlined** communities.

Project Goals and Primary Objectives

Zach Stevenson, Project Coordinator

- **Advance Northwest Arctic Borough Code and Comprehensive Plan Goals to maintain the Iñupiaq culture, promote subsistence and development, and protect the environment.**
- **Compile existing subsistence related literature for Northwest Alaska.**
- **Document traditional knowledge and science regarding subsistence use (where people look for food by season, by species, and by taxa).**
- **Document traditional knowledge and science regarding important ecological areas (where species reproduce, raise young, feed, and migrate).**
- **Identify resource development areas and begin planning process to reduce environmental impacts and balance development and subsistence.**
- **Four year-project. By May 2015 produce updated atlas showing subsistence use and IEAs to support Borough permitting and zoning and aid in implementing federal plans.**

John Chase hauling in a net. Photo by Zach Stevenson.

Fish and seal meat drying. Photo by Zach Stevenson.

Data Collection

Dr. Damian Satterthwaite-Phillips, Anthropologist

Photo by Lee Ballot.

Photo from Lance Kramer.

- **Via one-on-one semi-directive interviews.**
- **Sought out most knowledgeable and experienced hunters, gatherers, fishers, and trappers in each sex/age class.**
- **Candidates were suggested by local tribal governments and by local subsistence practitioners. Final candidate lists approved by tribal government.**
- **Subsistence use areas were marked on mylar overlays on base maps.**

Data Analysis: Representativeness and Completeness

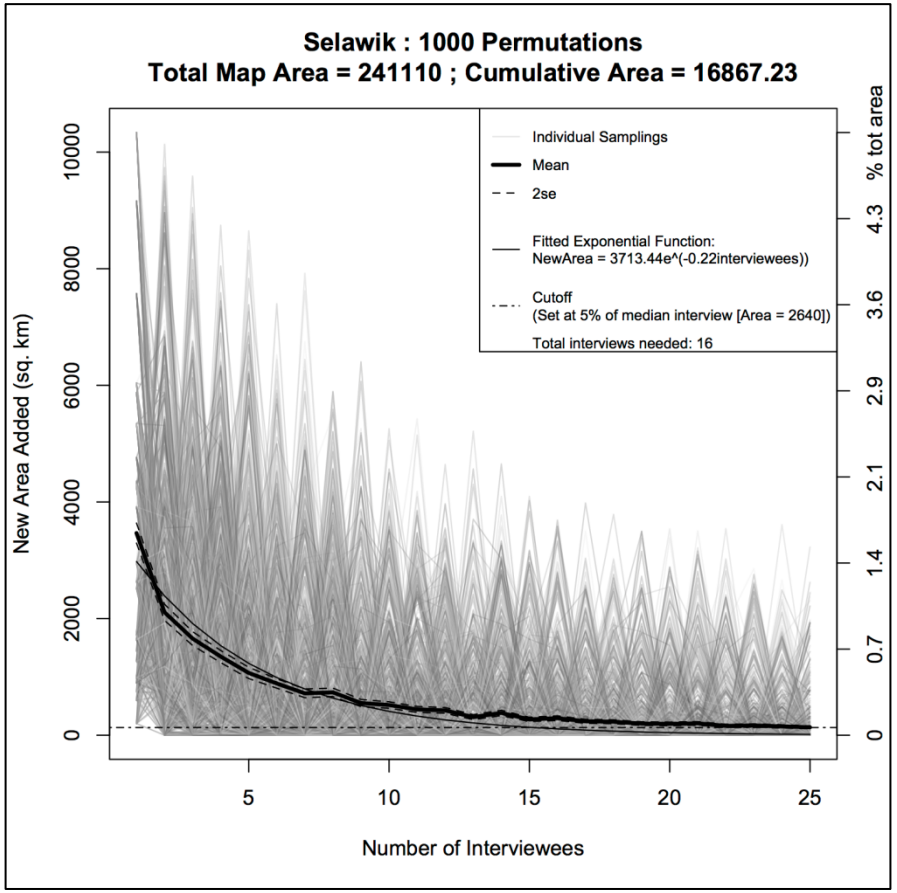
Dr. Damian Satterthwaite-Phillips, Anthropologist

Representativeness:

- **M & F, 3 age classes (18-34, 35-64, 65+).**
- **Sample proportions designed to fit population proportions (log-likelihood/G goodness-of-fit test).**

Completeness

- **Used area (km^2) as unit of measurement.**
- **Estimated amount of "new information" as a function of the number of interviewees.**
- **Threshold set at <5% of the median interviewee's area.**



Produced by Damian Satterthwaite-Phillips.

Documenting Traditional Knowledge

Lance Kramer, Traditional Knowledge Specialist

Photo from Lance Kramer.

Photo from Lance Kramer.

- **Local Iñupiat People of the NWAB have been relying on TK *(where to look for food by season, how to harvest, process, and prepare it)* for hundreds of years in order to survive and thrive.**
- **Each current TK holder has not only his/her knowledge, but the wisdom of their ancestors' countless generations of careful observations, testing, and refining.**
- **TK is a *qualitative* science. It's litmus test isn't a paper put out in a journal to be reviewed by peers, but instead it's the mass, quality, and variety of foods put away.**
- **We've tapped into this vast knowledge bank by interviewing 150 TK holders from 7 coastal communities of where they look for food by season.**
- **The TK data is gathered in a scientifically defensible way and subject to peer-review.**
- **Another example of TK marrying Western Science is the Kotzebue IRA's Seal Tagging project where local hunters used TK to help scientists capture live seals and install remote satellite tags.**

Promoting Youth Outreach and Education

Lance Kramer, Traditional Knowledge Specialist

- **The younger generation of local Iñupiat (ages 18-34) subsist LESS in both mass and variety, than the mid and upper generations (based on our interview data).**
- **To curb this trend, we developed quarterly YOE activities in each of the 7 villages to teach the youth what's available at certain places at certain times, how to harvest, how to process, and how to prepare their catch for food.**
- **We've budgeted about $1800/activity. Lesson plans will be added to the project.**

Photos from Lance Kramer.

Taikuu. Thank you.

Norma Ballot with *niqipaq* (traditional food) for students in the community of Selawik. Photo by Zach Stevenson.

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