

Promoting Coastal Resilience through a Shared Understanding of Subsistence Fisheries in the Chukotka and Alaska Arctic

Martin Robards



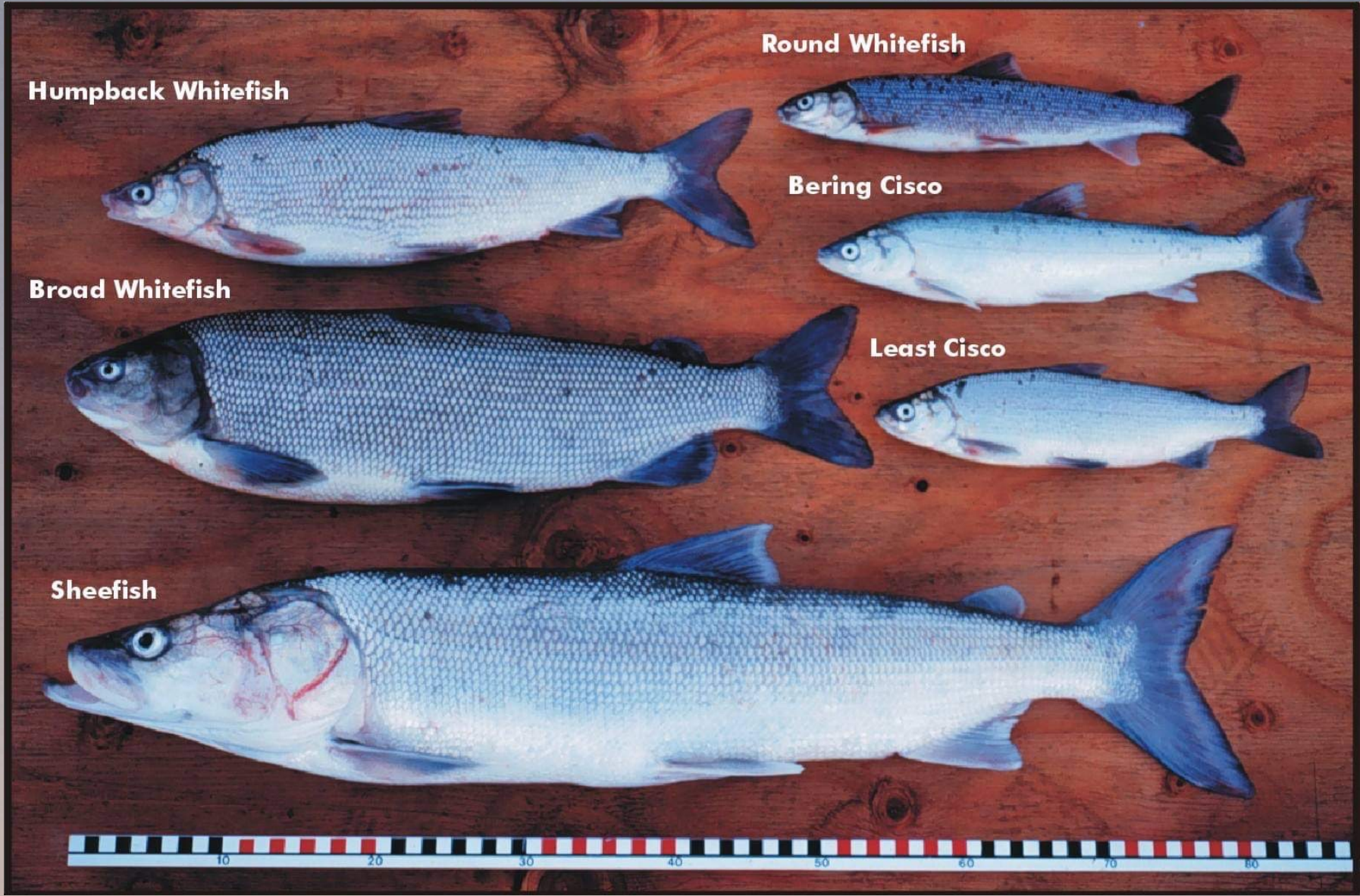
Why Study Fish and Subsistence Fisheries?



- Cultural Importance of Coastal and Freshwater Fisheries to Local Food and Economic Security
- Scientific Importance for Understanding Diversity and Adaptation of Fish Populations (Particularly non-Salmon Species)
- Importance for International Diplomacy







Humpback Whitefish

Round Whitefish

Broad Whitefish

Bering Cisco

Sheefish

Least Cisco





WHITEFISH

TRADITIONAL ECOLOGICAL KNOWLEDGE
AND
SUBSISTENCE FISHING
IN THE
KOTZEBUE SOUND REGION, ALASKA

SUSAN GEORGETTE & ATTAMUK SHIEDT
ALASKA DEPARTMENT OF FISH AND GAME • MANILAQ ASSOCIATION

TECHNICAL PAPER No. 290
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“Whitefish have proven to be a consistently abundant and highly reliable food source over the lifetimes of respondents, and quite likely for generations before that. In many parts of the region, whitefish have played a critical role in seeing people through years of failed salmon runs, diminished caribou herds, and other resource shortages”



Native Village of Kotzebue
HARVEST SURVEY PROGRAM
2002 – 2003 – 2004



Lola Kenworthy

Results of Three Consecutive Years
Cooperating with *Qikiqtagrugmiut*
to Understand their Annual Catch
of Selected Fish and Wildlife

Alex Whiting - Environmental Specialist
March 2006

“Fish made up 40 to 55 percent of the total harvest by weight, followed by marine and land mammals comprising 20 to 29 percent each”



When the fish come, we go fishing:
Local Ecological Knowledge
of Non-Salmon Fish Used for Subsistence
in the Bering Strait Region



Kawerak, Inc.
Social Science Program
Natural Resources Division

Julie Raymond-Yakoubian

2013

For Community Distribution

“...non-salmon fish remain important to individuals and communities in contemporary times. ...residents of these communities put significant effort into harvesting non-salmon fish and that they are shared widely within communities. Subsistence harvested non-salmon fish have important economic roles in study communities.”





Article

Traditional Diet and Environmental Contaminants in Coastal Chukotka I: Study Design and Dietary Patterns

Alexey A. Dudarev ^{1,*}, Sveta Yamin-Pasternak ², Igor Pasternak ³ and Valery S. Chupakhin ¹

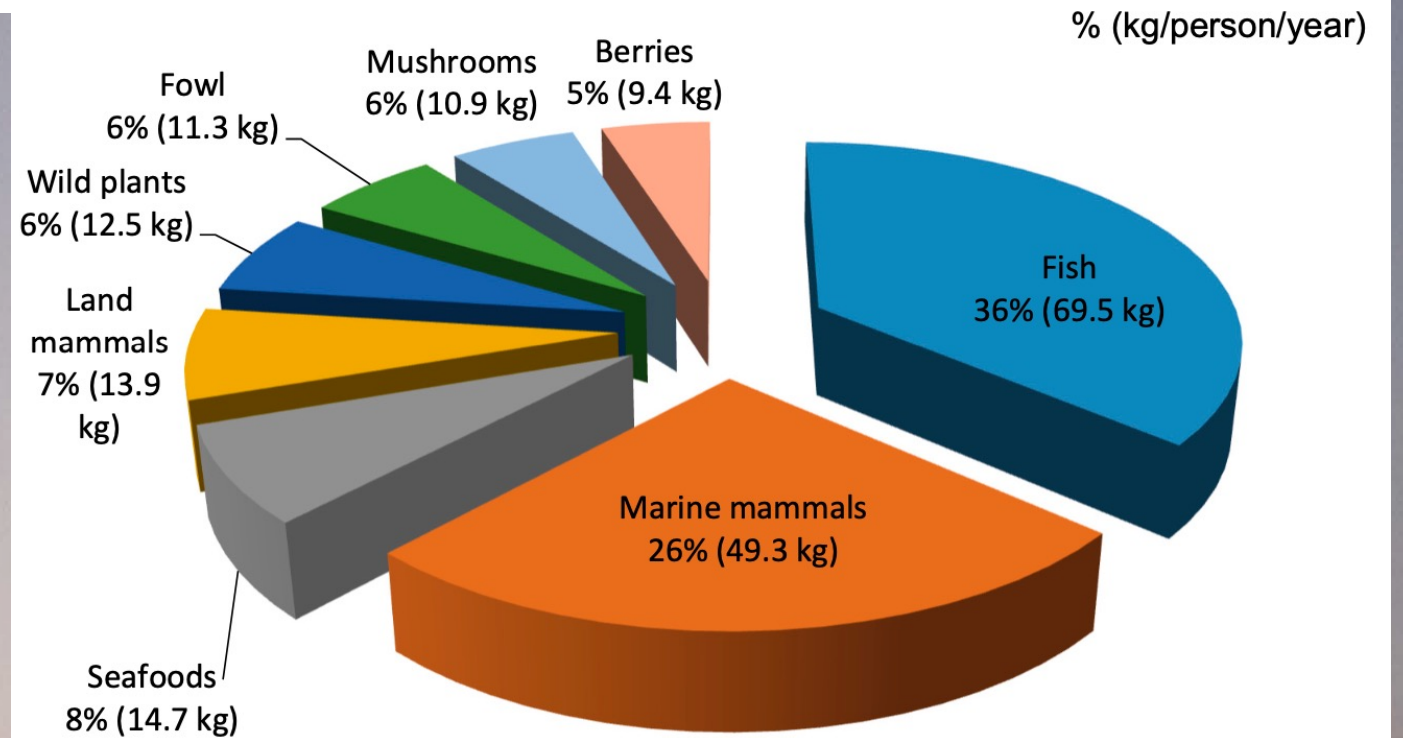
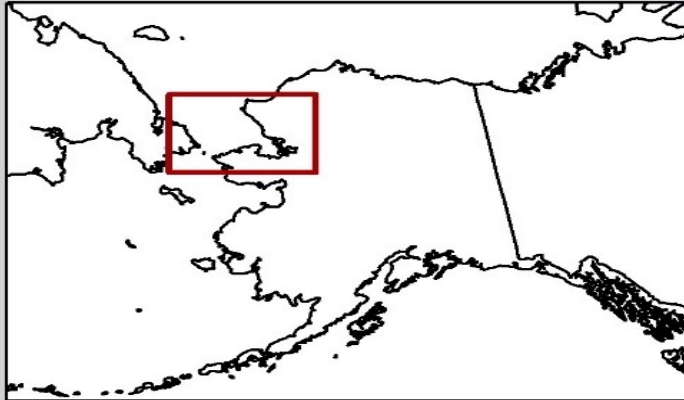


Figure 7. Structure (%) and average annual consumption of local foods (kg/person/year) by coastal native people residing in the settlements of Enmelen, Nunligran, and Sireniki.

What are the long term changes in fish populations and their habitats?



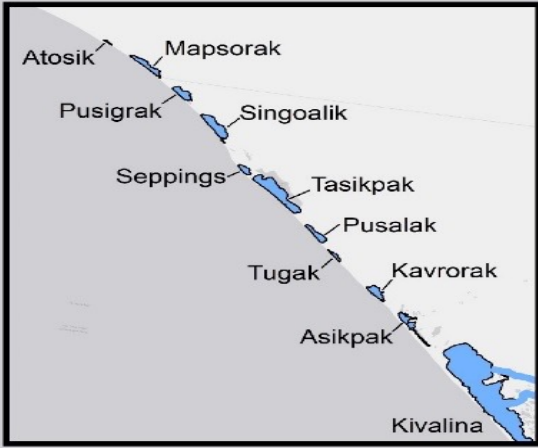


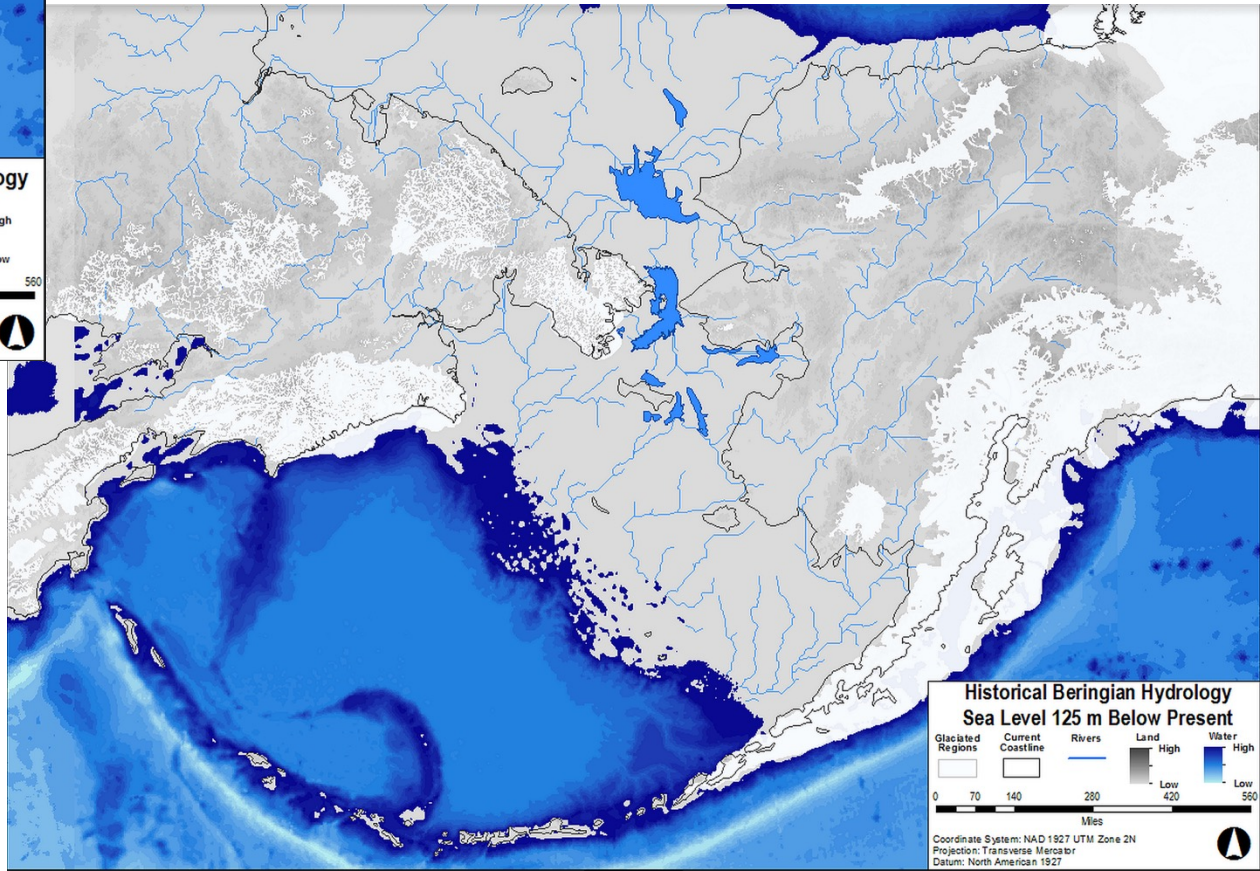
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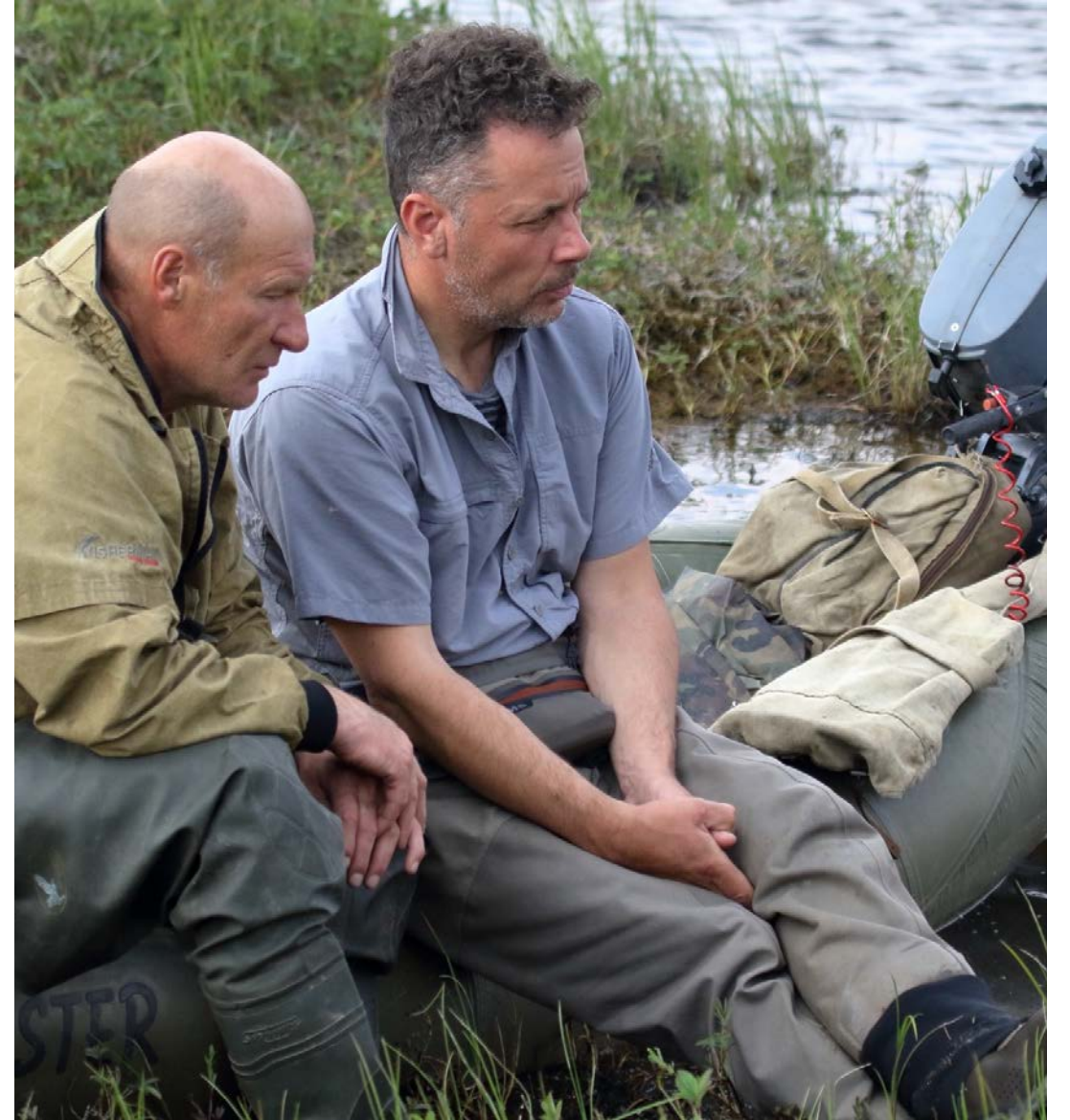
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The Forgotten Coast:
 A Synthesis of Current Knowledge of Southern Chukchi Sea Lagoon Ecosystems

Kevin M. Fraley,^{1,2} Tahzay Jones,³ Martin D. Robards,¹ Beatrice Smith,¹ Marguerite Tibbles⁴ and Alex Whiting⁵











Evgeny Syroechkovskiy
1968-2022



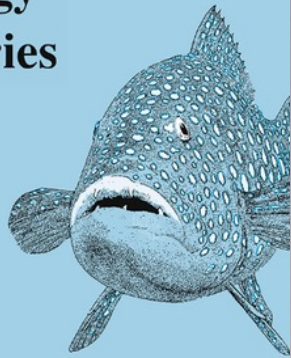






Biogeography of Beringian Fishes After the Molecular Revolution and Into the Post-Genomics Era

**Reviews in
Fish Biology
and Fisheries**



 Springer



Matthew Campbell (UAF)
Randy Brown (USFWS)
Kevin Fraley (WCS)
Dmitry Politov (RAS)
Andrés López (UAF)
Martin Robards (WCS)

Significant progress in our knowledge of Beringian biodiversity and in the technologies available for biodiversity research has been made in the several decades since a comprehensive biogeographic synthesis of Beringian freshwater fishes was compiled and published in 1986.

We find that Beringian fishes may poorly fit traditional taxonomic categories and the designation of conservation units below the species level may be of great practical application.



Migratory diversity in an Arctic fish supporting subsistence harvest

Emma E. Hodgson^a  , Rachel A. Hovel^b, Eric J. Ward^c, Sarah Lord^d, Jonathan W. Moore^a

“Across individuals, we found large variability in migratory patterns ... this diversity may buffer whitefish and reliant human communities against change, but indicates dependence on a large, intact watershed.”











Russia

