Shorebird Subsistence Harvest and Indigenous Knowledge in Alaska

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Harvest Assessment Program
Alaska Migratory Bird Co-Management Council

- Annual harvest surveys
- Research related to priority information needs
Priority Information Need: Shorebird Harvest and Indigenous Knowledge

habitat loss, climate change, harvest, … at shorebird breeding, migration, and wintering grounds

Source: Environment and Climate Change Canada
Objectives

1) Consolidate available shorebird subsistence harvest data in Alaska

2) Document indigenous knowledge
   • context to harvest numbers
   • importance as food and cultural resources
Methods: Harvest Estimates

- 775 community-years, 1990–2015
- Harvest Assessment Program, Alaska Migratory Bird Co-Management Council
- Community Subsistence Information System
- Kawerak (2004), Ahmasuk & Trigg (2008), Bacon et al. (2011), etc.
**Results: Annual Harvest Estimates for Birds and Eggs**

- **AK-wide shorebird harvest = 2,783 birds/year (±18% CI: 2,733–2,833)**
- **Godwits = 1,115 birds per/year (±77% CI: 859–1,974), most likely Bar-tailed Godwit**
- **AK-wide shorebird egg harvest = 4,676 eggs/year (±35% CI: 2,334–7,001)**
Results: Seasonal Shorebird Harvest Estimates

- Spring (Apr–Jun)
- Summer (Jul–Aug)
- Fall–winter (Sep–Mar)
- Unknown season

Shorebird categories:
- Tuyik, Tuuligaq (Black-bellied/Golden plovers)
- Black Oystercatcher
- Pipiqaq, Ikkilliak (Whimbrel/Bristle-thighed Curlew)
- Tevatevaq, Tegueguaq (godwits)
- Small shorebirds
- Shorebirds (unidentified)
Methods: Yup’ik Indigenous Knowledge

5 Communities, 72 Interviews
Yup’ik Shorebird Ethnotaxonomy: Names and Categorization
Shorebirds are known mostly by specialists.
Respondents were familiar with Yup'ik shorebird names, did not know or use English names.
8/10 Categories were multi-specific.
7 Most salient names.
8+ Onomatopoeic names.
“When I was growing up, I used bow and arrow and slingshot [...], those were my weapons, my hunting tools. It teaches a child how to stalk a bird without spooking it, try to get as close to it as possible and that is a challenge [...]. It teaches you patience to get to the bird, how to crawl, or stoop down, or hide behind a knoll, it teaches those skills.”
“When the numbers were going down, I haven’t hunted [shorebirds] for a while. I hardly see them around. [...] Their numbers are going down and I don’t want them to go extinct, I always wait [to hunt] until they get more.”
Shorebird Harvest and Uses

- Shorebirds and their eggs are not main food sources, used only for food
- Egg harvesting is enjoyed by families and children
- Children harvest shorebirds as part of learning hunting skills
- Harvest in times of food shortage, emergency meals: valued as survival food especially by older generations. Non-primary food resources → food security.
Cultural Importance

- Shorebirds and other birds are a joyful part of nature, mark the end of winter.
- Stories, songs, beliefs, place names, and wooden masks, but shorebirds were not as prominent as other birds.
- Older generations relate shorebirds with a time when people were closer to nature and their traditions, and are concerned about loss of culture and language.

Yup’ik mask, early 1900s

[Image of a mask and a bird]
Harvest Monitoring & Management

- Look-alike species, local ethnotaxonomies ≠ western taxonomy, harvest data often unavailable at species level
- Species identification issues → harvest regulations at species level are impractical
- Uncertainty in harvest and population data
- Harvest management must include outreach and communication to engage harvesters in conservation
Shorebird Conservation, Recommendations

- Support transmission of traditional knowledge, languages, interaction elders ↔ youth
- Increase awareness about species identification, ecology, and conservation
- Support local efforts that benefit shorebirds and their environments
- Collaborative conservation approaches that are inclusive of traditional uses and cultural importance of shorebirds

Connections with nature and traditional ways of life: community wellbeing, community-based conservation
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Indigenous knowledge interview respondents

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Quyana! Thank you!