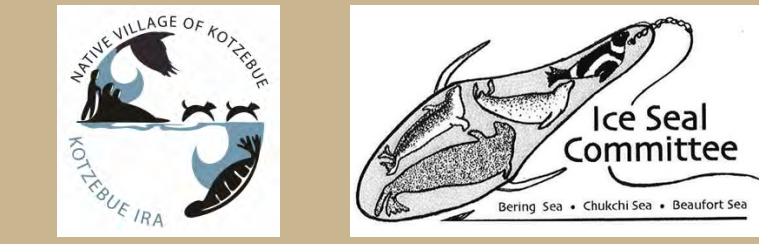


Hunter-assisted study on ringed and bearded seal movements, habitat use, and TEK



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Introduction

Ringed (*Pusa hispida*) and bearded (*Erignathus barbatus*) seals are called “ice seals” because they use sea ice for pupping, nursing, molting, and resting. In Alaska, these seals are found in the Bering, Chukchi, and Beaufort seas. They are important subsistence species used by Alaska Natives for food, oil, clothing, and handicrafts. The timing and extent of sea ice have increased access to the Arctic, increasing the need to plan shipping lanes, oil and gas lease sales, and to develop mitigation measures to minimize these effects on seals, but understanding how these changes will affect ice seals and their habitat is less clear. Cooperative hunter-biologist satellite-tagging studies are increasing our understanding of important seal habitats, seasonal movements, use of sea ice including haul out behavior, and seasonal site fidelity. This project builds on past studies by tagging seals at several widely-spaced locations and by incorporating traditional knowledge.

Objectives

Work with seal hunters to:

- capture and tag ringed and bearded seals;
- document ice seal habitat use and movement; and
- gather and document local and traditional knowledge.

Activities

2014

- Seal hunters were trained to tag seals with satellite-linked transmitters in Norton Sound, Hooper Bay, and Kotzebue.
- Hunter-taggers determined when and where to capture seals using local knowledge.
- Four ringed and one bearded seal were tagged near Kotzebue in June (Fig. 1).
- Three bearded seals were tagged near Koyuk in September (Fig. 1).

2015

- Traditional knowledge was collected in Barrow, Elim, St. Michael, and Stebbins in January and February. See results in Poster 103 (Row 10).
- The Ice Seal Committee (ISC) brought hunters from the North Slope, Northwest Arctic, Bering Strait, Yukon-Kuskokwim Delta, and Bristol Bay together in March to learn how to deploy satellite tags on seals.
- One ringed seal was tagged near Hooper Bay in May (Fig. 1).
- Four bearded seals were tagged near Koyuk in August (Fig. 1).
- One ringed and four bearded seals were tagged near St. Michael in August (Fig. 1).

Norton Sound



Alex Niksik prepares to release a bearded seal near St. Michael.



Palsson Fitka and Alex Niksik releasing a bearded seal.



Merlin Henry prepares to release a tagged bearded seal near Koyuk.



Young bearded seals look toward the water upon release.

Hooper Bay



Albert Simon II prepares to tag a ringed seal near Hooper Bay.



Albert Simon and Evan Napoleon looking for seals near Hooper Bay.

Kotzebue Sound

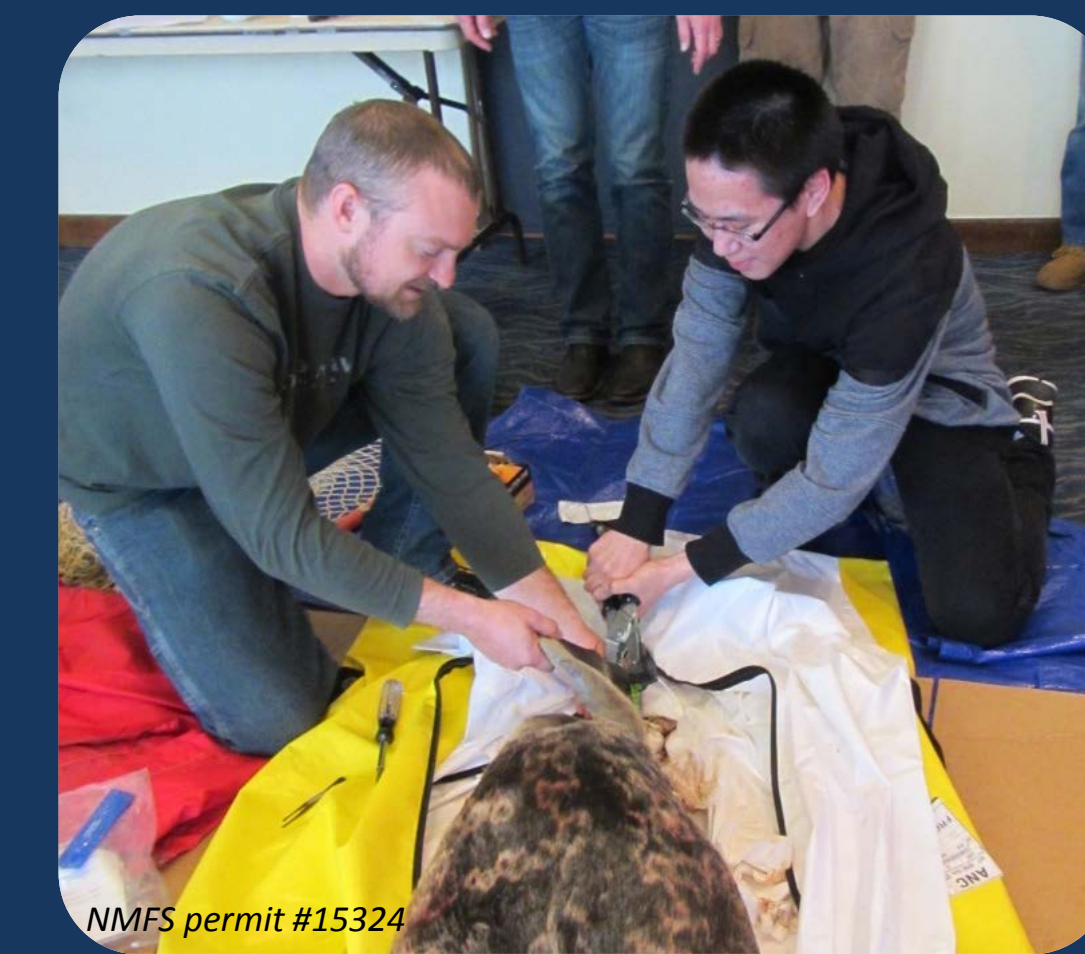


John Goodwin and crew search for bearded seals in Kotzebue Sound.

Hunter-tagger Training



The training was funded by the ISC, with assistance from ADF&G, NSB, and NMML.



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Movements of tagged seals

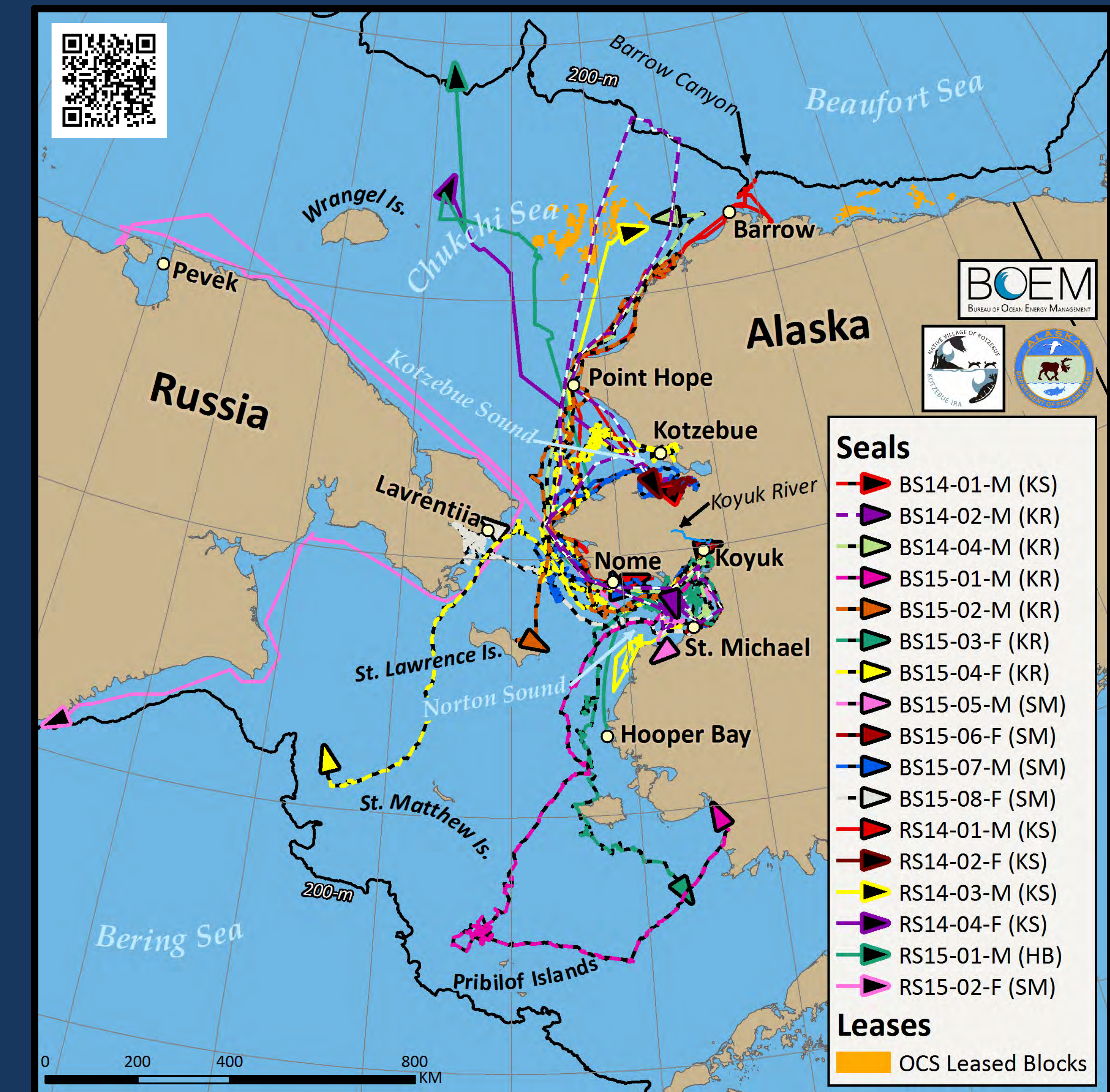


Figure 1. Movements of seals tagged during 2014 and 2015 near Kotzebue Sound (KS), Koyuk River (KR), St. Michael (SM), and Hooper Bay (HB).

Future plans

- Continue to work with trained hunter-taggers and with new hunters and communities.
- Conduct workshops to document local and traditional knowledge to better understand seal movements in response to changing sea ice.

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