

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 considered “ice associated seals” or “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. Changes in 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 effects on seals. Our understanding of important seal habitats and the timing and magnitude of movements by species, sex, and age, however, is limited, but cooperative hunter-biologist satellite-tagging studies in Kotzebue Sound, Barrow, and Hooper Bay have begun to gather this information. This project will build on past studies by tagging seals at several widely-spaced locations and by collecting traditional knowledge, both of which will allow us to better understand the range and timing of movements, their use of sea ice including haul out behavior, important habitats, and seasonal site fidelity.

Objectives

Work with seal hunters to:

- capture and tag ringed and bearded seals,
- document habitat use, movement patterns, and movement timing, and
- gather and document local and traditional knowledge of ringed and bearded seals.

2014 Activities

- Seal hunters were trained to tag seals with satellite-linked transmitters in Norton Sound and Hooper Bay.
- 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).

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 seals movements in response to changing sea ice.

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Movements of tagged seals during 2014



Figure 1. Movements of seals tagged in June and September during 2014.

Norton Sound hunter-tagger training

Hunters from Elim, Koyuk, Unalakleet, and St. Michael learned how to tag seals with satellite transmitters in March.



Gordon Eakon practices attaching a transmitter to a seal flipper while Edwin Kotangan and Merlin Henry look on.
NMFS Permit #15324



Alexander Niksik practices gluing a transmitter while Gordon Eakon and Merlin Henry look on.



Gordon Eakon shows a transmitter he attached to a subsistence harvested seal flipper.
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Kotzebue Sound tagging - June

Four ringed and one bearded seal were tagged in Kotzebue Sound during June.



Pearl Goodwin keeps track of the data.



John and Pearl Goodwin searching for seals.



Frank Garfield, Edward Ahyakak, and Mark Nelson weighing a seal.
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Edward Ahyakak applying epoxy to the back of a young bearded seal.
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A young bearded seal is tagged and ready for release.
NMFS Permit #15324



Frank Garfield, Boyuk Goodwin, Edward Ahyakak, and Kathy Frost tagging a ringed seal.
NMFS Permit #15324

Norton Sound tagging - September

Three young bearded seals were tagged near Koyuk in September.



Merlin Henry prepares to tag a young bearded seal 15 miles up the Koyuk River.
NMFS Permit #15324



Merlin Henry with a young bearded seal prior to release into the Koyuk River.
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