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Results from village-based walrus studies in Alaska, 2012

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Pacific walruses winter in the Bering Sea, but females with young summer in the Chukchi Sea resting on sea ice; most adult males remain in the Bering Sea where they rest on land. The rapid retreat of sea ice is changing summer walrus habitat in the Chukchi Sea and may be changing summer distributions and haulout behavior, requiring that walruses haul out on land instead of ice. The purpose of this project is to work with subsistence walrus hunters to conduct observations at terrestrial haulouts accessible from coastal communities, deploy satellite-linked tags to monitor movements and feeding behavior, and to document local knowledge regarding terrestrial walrus haulouts. Local knowledge collected in Point Lay and Wainwright described historical occurrences of terrestrial walrus haulouts and detailed the steps taken by communities to minimize disturbances. In February, we co-sponsored a workshop on coastal walrus haulouts and provided travel to Barrow for several elders and walrus hunters to discuss walrus haulout issues with each other and management agencies. In May, we worked with hunters to deploy satellite tags on walruses near Little Diomede Island, but were unsuccessful due to unfavorable sea ice and weather conditions. During August and September, local hunters were prepared to monitor the haulouts from blinds using spotting scopes and they assisted in the construction of camera towers to potentially monitor walrus behavior near the previous haulout site. Sea ice, however, persisted in the northern Chukchi Sea and walruses did not haul out in large numbers along the Alaskan coast as they had in recent years (20,000–25,000 walruses in September 2011). Also in August, residents of Little Diomede Island began to monitor terrestrial haulouts and causes of disturbance in the area.

Alaska Marine Science Symposium, 21–25 January 2013, Anchorage AK

Results from village-based walrus studies in Alaska, 2012

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Introduction

Pacific walruses (*Odobenus rosmarus*) winter in the Bering Sea, but females with young summer in the Chukchi Sea resting on sea ice; most adult males remain in the Bering Sea where they rest on land. Over the past decade, sea ice in the Chukchi Sea has receded north beyond the shallow continental shelf in late summer. The rapid retreat of sea ice is changing summer walrus habitat in the Chukchi Sea and may be changing summer distributions and haulout behavior, requiring walruses to haul out on land instead of ice. Large terrestrial haulouts of walruses have formed along the Arctic coast of Alaska in four of the past six years and are expected to occur more often. Terrestrial haulouts are susceptible to disturbances which can cause stampedes resulting in mortality due to trampling of young walruses. Haulout locations are not consistently used each year and some may be accessible from coastal villages (Fig. 1).

The purpose of this project is to work with subsistence walrus hunters to conduct observations at terrestrial haulouts accessible from coastal communities, deploy satellite-linked transmitters to monitor movements and feeding behavior, and to document local knowledge regarding walrus terrestrial haulouts. As summer sea ice has decreased in the Chukchi Sea, oil and gas activity has increased, elevating the importance of understanding walrus movements, feeding behavior, and habitat requirements.

Methods

Local walrus hunters monitor the status of terrestrial haulouts, help document local knowledge regarding terrestrial haulouts, and work with biologists to deploy satellite-linked transmitters (Fig. 2). They also examine and document walrus carcasses (e.g., record length, age, sex, blubber thickness, and take photographs).

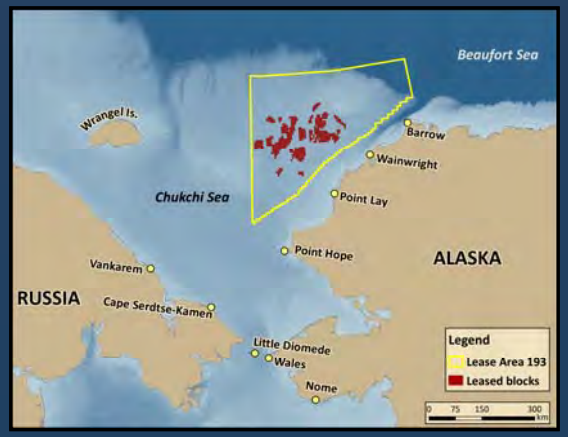

Figure 1. Locations of Alaskan communities near walrus summer habitat and the Chukchi Sea Lease Sale Area.

Figure 2. Thomas Killigvuk (on right) and crew surveying area for walruses to tag near Point Hope, June 2010.

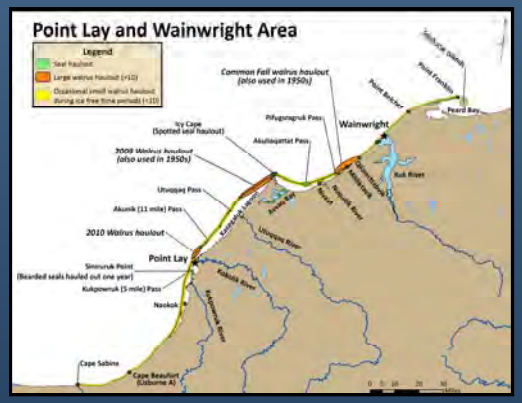

Figure 3. Walrus and seal haulout sites as documented during traditional knowledge interviews in Point Lay and Wainwright.

Figure 4. Workshop on coastal walrus haulouts in Barrow, February 2012.

Results

- We finalized a report documenting local knowledge collected in Point Lay and Wainwright that described historical occurrences of terrestrial walrus haulouts and detailed the steps taken by communities to minimize disturbances (Fig. 3).
- In February, we co-sponsored a workshop on coastal walrus haulouts and provided travel to Barrow for several elders and walrus hunters to discuss walrus haulout issues with each other and management agencies (Fig. 4).
- In May, we worked with hunters to deploy satellite-linked transmitters on walruses near Little Diomede Island, but were unsuccessful due to unfavorable sea ice and weather conditions.
- In August and September, we supported efforts of local hunters to monitor the haulouts from blinds using spotting scopes and conduct carcass surveys. They also assisted in the construction of camera towers to potentially monitor walrus behavior near the previous haulout site. Sea ice, however, persisted in the northern Chukchi Sea and walruses did not haul out in large numbers along the Alaskan coast as they had in recent years (20,000–25,000 walruses in September 2011, Fig. 5).
- Also in August, we supported efforts of residents on Little Diomede Island to monitor walrus activity and causes of disturbance in the area.

Figure 5. Terrestrial haulout north of Point Lay, as observed from the barrier island, facing southwest, September 2011.

Future Activities

We will continue to prepare local teams to respond to future haulouts near coastal villages, including Point Lay and Little Diomede Island. We will visit Barrow and Point Hope to document hunters' experiences with walruses on terrestrial haulouts and identify hunters interested in participating in Village-Based Walrus Studies. Further, we plan to evaluate the success of deploying transmitters with local hunters near coastal villages in Spring.

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