

DECLINING TRENDS IN HARBOR SEALS (*PHOCA VITULINA RICHARDSI*) AT GLACIAL ICE AND TERRESTRIAL HAULOUTS IN GLACIER BAY NATIONAL PARK, 1992-1998

Mathews, Elizabeth A.¹, Pendleton, Grey W.²

(1) *University of Alaska Southeast*

First Author Address: Biology Dept., 11120 Glacier Hwy, Juneau, AK, 99801, USA

(2) *Alaska Department of Fish and Game*

Glacier Bay (GB) National Park has the largest remaining breeding colony of harbor seals in Alaska, and this aggregation is found in Johns Hopkins Inlet (JHI), a tidewater glacial fjord where seals haul out on ice bergs. 4,600-7,400 harbor seals have been counted on haulouts in GB during summer with 64-75% in JHI. Although seals appear to prefer glacial ice for pupping and molting, JHI is the only glacial system in Alaska where there is longterm monitoring data, largely because of the difficulty in counting seals on drifting ice. From 1992-1998 we counted seals in JHI in June and August from an elevated shore site and used aerial photography to count seals at terrestrial haulouts in August. We estimated trends in numbers at the glacial ice and at terrestrial haulouts using models that control for different environmental and observer-related covariates for the two haulout substrates. We detected downward trends between 1992 and 1998 for both the glacial ice (-5.4%/year) and terrestrial sites (-11.4%/year). While the cause for the decline in the glacial fjord is not clear, human disturbance appears to be a factor at the terrestrial sites. Trends in numbers of harbor seals in GB are of regional interest because: 1) seal numbers have declined by up to 85% in central and western Alaska, while numbers in southeastern Alaska are currently considered stable or increasing, 2) GB is the only area in Alaska where subsistence hunting of seals is prohibited, and 3) JHI is the only area that is closed to vessel traffic during pupping and rearing. Trend routes near glacial fjords used by a significant proportion of the seals in an area need to include surveys of seals on ice to avoid misinterpreting a shift in distribution as a decline or increase.

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ABSTRACTS

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