

survey effort was more evenly allocated among regions, bearded seals were shown to prefer the region with highest benthic biomass.

### **Habitat Selection by Ice-Associated Pinnipeds Near St. Lawrence Island, Alaska in March 2001**

Simpkins, Michael<sup>1</sup>; Hiruki-Raring, Lisa<sup>1</sup>; Sheffield, Gay<sup>2</sup>; Grebmeier, Jacqueline<sup>3</sup>; Bengtson, John<sup>1</sup>

(1) National Marine Mammal Laboratory, Alaska Fisheries Science Center, NOAA, 7600 Sand Point Way NE, Seattle, WA 98115 USA

(2) Alaska Department of Fish and Game, 1300 College Road, Fairbanks, AK 99775 USA

(3) Department of Ecology and Evolutionary Biology, 569 Dabney Hall, The University of Tennessee, Knoxville, TN 37996 USA

Five species of pinnipeds are associated seasonally with sea ice in Alaskan waters: walrus (*Odobenus rosmarus*) and four species of phocid seals: bearded (*Erignathus barbatus*), ribbon (*Phoca fasciata*), ringed (*P. hispida*), and spotted (*P. largha*). We conducted aerial surveys of these species south of St. Lawrence Island, Alaska in March 2001. We evaluated habitat use by pinnipeds during the survey to assess whether animals tended to associate with preferred sea ice conditions or tended to remain near rich foraging grounds southwest of St. Lawrence Island. A mid-survey storm with strong northerly winds dramatically altered sea ice conditions within the survey region, providing good contrast in ice conditions during the survey period. Randomization tests were used to investigate habitat selection for each species before and after the storm. Both ringed seals and walrus preferred large ice floes (> 48 m in diameter) that were common in the interior ice pack. Spotted seals favored smaller ice floes (< 20 m in diameter) common near the ice edge, and bearded seals avoided large floes and preferred transitional habitat between small and large floes. Ringed seals also seemed to prefer areas with greater than 90% sea ice coverage, and bearded seals preferred 70-90% sea ice coverage while avoiding areas with greater than 90% coverage. The preferences shown by most species for specific sea ice conditions suggested that those species were strongly associated with preferred sea ice habitats. All species, except spotted seals, were most common in the region of high benthic biomass southwest of St. Lawrence Island before the storm, but this pattern may have resulted from survey effort being concentrated in that region. After the storm, when

# 15<sup>th</sup> Biennial Conference



NORTH CAROLINA 2003

## on the Biology of Marine Mammals

Greensboro, NC, USA  
14 - 19 December 2003



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