

### **Steller sea lion studies in the northeastern Bering Sea, Alaska, USA**

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Steller sea lions (*Eumetopias jubatus*; SSL) were once abundant along the North Pacific Rim but, since the 1970s, declined by more than 80% in the western Alaska portion of their range. Spatial and temporal distribution and abundance of SSLs were poorly understood in the northeastern Bering Sea during the period of decline due to a paucity of data from this region. We compiled and analyzed older count data from Round Island and Cape Newenham, the two primary haulouts in Bristol Bay, and initiated surveys in the Bering Strait beginning in 2010. The number of sea lions counted at Round Island declined 2.6%/yr (95% CI -3.8% to -1.7%) from 1985-2007, and counts at Cape Newenham declined 9.8%/yr (95% CI -10.3% to -9.4%) from 1990-2005. In the Bering Strait, 478 SSLs were counted in November 2012. Residents from the Bering Strait village of Gambell on St. Lawrence Island reported unusually large numbers of SSLs hauled out nearby, inspiring us to conduct brand-resight surveys to determine the origin of animals using this site. We found SSLs from five natal rookeries were represented, spanning the North Pacific Ocean from the western Aleutians in Russia to southern Alaska near the US-Canada border. Four males seen at or near their natal rookery during summer 2010 travelled to St. Lawrence Island in fall 2010, then returned to (or near) their natal rookery by the following summer; one such trip was a minimum round-trip distance of 6,000km. Sea temperature increases and sea ice declines likely will lead to increased activities in the northeastern Bering Sea such as oil and gas exploration and development, northward shifts in commercial fisheries, and increases in ship traffic. Understanding sea lion distribution and abundance will help resource managers evaluate and mitigate the impacts of these activities.

# ABSTRACTS

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