

Seasonal changes in diving behavior of adult and subadult ringed seals (*Pusa hispida*) in the Bering and Chukchi seas

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Diving behavior of 14 adult and 21 subadult ringed seals in the Bering and Chukchi seas was analyzed from satellite-linked dive recorders (SDRs) placed on seals in Kotzebue Sound, Alaska during October 2007–2009 and tracked for 12 to 297 days. During the open-water period, in October and November, all seals moved throughout the Chukchi Sea, in waters that averaged 70 m and were up to 200 m deep, and dive durations were not different between age classes, averaging 1.9 min/dive; however, subadults dove to deeper depths ($P < 0.01$). As sea ice coverage increased during late November and December adults stayed near the shorefast ice in the Chukchi Sea and Bering Strait while subadults migrated south into the central Bering Sea pack ice, in waters that averaged 63 m and were up to 2,180 m deep. From December through March, adults dove longer (2.4 min/dive), but to shallower depths ($P < 0.01$), than subadults (1.9 min/dive; $P = 0.01$). In spring the adults remained near their winter locations and subadults followed the receding sea ice northward into the Chukchi Sea. From April to June, adults again dove longer (3.4 min/dive), but to shallower depths ($P < 0.01$), than subadults (2.8 min/dive; $P < 0.01$). Adults used shorefast habitats in the Chukchi Sea during winter and spring where they maintain breathing holes and lairs. Adults return to the same lairs or breathing holes and may need to forage farther from their holes to find adequate prey. By moving south to the Bering Sea ice front during winter, however, subadults can feed in broken pack ice, where foraging opportunities are not restricted by access to air. At the ice front, subadults dove for shorter durations than adults.



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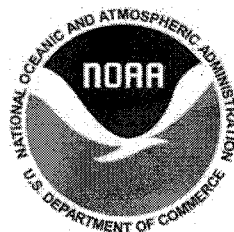
ON

THE BIOLOGY OF MARINE MAMMALS

TAMPA, FLORIDA
NOVEMBER 27 - DECEMBER 2, 2011

HOSTED BY

National Marine Fisheries Service
Southeast Regional Office
National Oceanic and Atmospheric
Administration
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