

**186: Dive behavior of bowhead whales within the Cape Bathurst polynya**

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Each spring, the vast majority of bowhead whales (*Balaena mysticetus*) of the Bering-Chukchi-Beaufort (BCB) stock leave their wintering grounds in the Bering Sea and migrate to the Canadian Arctic. Prior to sea ice retreat in April and May, most whales leave the Bering Sea, shortly before it becomes one of the most productive seas in the world, and migrate to the Cape Bathurst polynya within the entrance of Amundsen Gulf, Canada. However, it is unknown if whales are feeding there and if foraging conditions are better within the polynya than where they came from in the Bering Sea. Here we provide an examination of the diving behavior within the polynya during May and June, using 16 bowhead whales tagged with satellite-linked transmitters between 2008 and 2016. Two tags, one in 2013 and one in 2015, were also capable of collecting paired depth and temperature readings to describe water masses. Approximately 63% of the polynya is comprised of shelf habitat (<200 m); however, bowhead whales preferentially used deeper (>200 m) oceanic habitats (89% of whale locations). Within oceanic habitats, most use was within 100 m of the surface, in water of Pacific origin, and dives rarely reached the seafloor (~1%). Whales sometimes spent large amounts of time (25% to 80% of a 6-hr interval) between 100 and 300 m, within the thermocline between Pacific Water and Atlantic Water. There were almost no dives below 300 m, indicating that whales were not using deeper Atlantic Water. Most dives were square-shaped and are likely indicative of feeding. Other studies in Amundsen Gulf suggest that there are high densities of large zooplankton within 100 m of the surface in May and June. As such, whale use of the polynya in May and June corresponds to both the timing and location of copepod prey.



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