

## Using movement, diving and haul out behavior to identify the relative importance of foraging areas for walrus in the Alaskan Chukchi Sea

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Female Pacific walrus and their young summer in the Chukchi Sea, resting on sea ice between benthic feeding bouts, when sea ice is available. The rapid decrease of sea ice in summer is changing walrus habitat in the Chukchi Sea and consequently the Pacific walrus is being considered for listing under the U.S. Endangered Species Act. Knowing the location and use of foraging areas is important as industrial and shipping activities increase. Satellite-linked dive recorders were placed on >50 adult female walrus (with and without calves) and tracked for up to 124 days. We identified Hanna Shoal, a known foraging area for walrus, and Icy Cape as two areas within the Alaskan Chukchi Sea with a higher than average density of dives. To evaluate the relative importance of these areas for foraging, we compared diving and haul out behavior within these two areas with that found in the rest of the Alaskan Chukchi Sea. Adult females (with and without calves) dove longer (3.1 vs. 2.3 min), made fewer dives (6.6 vs. 8.1 dives/hour), and hauled out for a larger proportion of time (22.1 vs. 17.0 min/hr) at Hanna Shoal than the other two areas ( $P < 0.01$ ). Icy Cape and the rest of the Alaskan Chukchi Sea did not differ statistically. Walrus in better quality habitat, with higher densities of prey, are expected to make fewer dives of longer duration and spend more time resting. As such, diving and haul out behavior indicated higher quality habitat near Hanna Shoal than Icy Cape and the rest of the Alaskan Chukchi Sea, which were similar to each other. Therefore, Icy Cape may not be higher quality foraging habitat than the Alaskan Chukchi Sea in general.