

Bowhead Whale Feeding in the Alaskan Beaufort SeaLowry, Lloyd F.¹; Sheffield, Gay²; J. Craig, George³*(1) University of Alaska, Fairbanks, 1550 Coyote Trail, Fairbanks, AK, 99701, United States**(2) Alaska Department of Fish and Game**(3) North Slope Borough, Department of Wildlife Management*

We studied feeding of bowhead whales taken by Alaska Natives at Barrow (western Beaufort Sea) and Kaktovik (eastern Beaufort Sea). Our objectives were to: 1) identify the proportion of harvested whales that had been feeding (data from 1969-2000); and 2) describe diet based on stomach contents (88 whales harvested during 1986-2000). There was no significant difference in the proportion of animals that had been feeding during the fall at Kaktovik (75%) and Barrow (73%) ($X^2 = 0.69$; $df = 1$; $P > 0.1$). Copepods occurred more frequently in animals from Kaktovik ($X^2 = 43.04$; $df = 1$; $P < 0.001$), while euphausiids ($X^2 = 10.61$; $df = 1$, $P < 0.001$) and hyperiid amphipods ($X^2 = 12.39$; $df = 1$; $P < 0.001$) occurred more frequently at Barrow. During the fall, the percent copepods by volume was greater in animals taken at Kaktovik than at Barrow (mean = 60.7% vs 4.5%; $t = 5.45$; $df = 23$; $P < 0.001$), while the percent euphausiids by volume was greater in whales from Barrow than from Kaktovik (mean = 84.2% vs 21.9%; $t = 6.88$; $df = 29$; $P < 0.001$). At Barrow, a larger proportion of animals was feeding in the fall (73%) than the spring (31%) ($X^2 = 35.77$; $df = 1$; $P < 0.001$), and copepods occurred more often in the spring ($X^2 = 31.52$; $df = 1$; $P < 0.001$). Bowhead whales feed regularly in both the eastern and western Alaskan Beaufort Sea, and there are regional and seasonal differences in their diet.

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