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An estimation of walrus (*Odobenus rosmarus*) predation on bivalves in the Young Sound area (NE Greenland)

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The total consumption of bivalve prey by walruses (*Odobenus rosmarus*) in the important inshore summer feeding area Young Sound (about 74° N) in Northeast Greenland was estimated. To determine relative area use, the movement and activity of three adult male walruses with satellite transmitters were studied during the open water season in 1999 and 2001. Because one of the animals was tracked during both years the study covered a total of four "walrus seasons". Overall, the animals used ca. 30% of the time in the water in the inshore study area in Young Sound. The remainder of time was used along the coast north and south of Young Sound and offshore in the Greenland Sea. Information on the total number of walruses using the area (n=60), occupancy in the study area, and estimates obtained from satellite telemetry on the number of daily feeding dives (110-111/24 h at sea), was used to calculate the amount of bivalve food consumed by the walruses during a total of 1620 "walrus feeding days" inshore in Young Sound. Depending on the applied estimator of number of feeding dives, the estimated consumption by walruses of shell-free (SF) bivalve wet weight (WW) during the open water period range between 111 and 171 tons. Based on estimates of mean total body mass (TBM: 1000 kg) of walruses using the area and daily *per capita* gross food intake, the corresponding estimate of consumption by walruses is 97 tons SF WW. Daily feeding rates in walruses (6-7% of TBM) indicate that an estimate of total predation of around 100 tons SF WW per year is plausible.

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