

**ABUNDANCE AND TRENDS IN ABUNDANCE OF THE ATLANTIC WALRUS  
(*ODOBENUS ROSMAREUS ROSMAREUS*) IN CENTRAL WEST GREENLAND**

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**ABSTRACT**

Atlantic walrus (*Odobenus rosmareus rosmareus*) are exploited for subsistence purposes in Central West Greenland. However, current information about the abundance of walrus is lacking yet necessary for sustainable catch levels. Between 21 March and 19 April 2006 and between 3 and 12 April 2008, two visual aerial surveys were conducted to estimate the number of walrus on two disjunct Central West Greenland wintering grounds: the southern wintering ground between ca. 66° 30' and the northern wintering ground between ca. 68°15' N and 69°15' and 70° 30' N, respectively. The surveys resulted in abundance estimates that were corrected for (1) the availability of walrus on sea ice based on data collected simultaneously with the aerial surveys, (2) walrus submerged below a detectability threshold, and (3) walrus that were missed by the observers. Two methods of calculating abundance were utilized: Method I applied separate adjustments for walrus detected on ice and walrus detected in water. The fully corrected estimates of abundance were 3,162 (95% CI: 3,101-3,225) for 2006 and 1,625 (1,365-1,938) for 2008. A weighted average of the estimates from the two years suggests that the West Greenland wintering stock of walrus numbers 3,008 (2,245-4,029). Method II corrected all detections for walrus that were not hauled out. The estimates of abundance were 3,041 (1,328-8,196) for 2006 and 3,240 (863-12,170) for 2008 with a weighted average of 2,978 (2,597-3,415). Trends in abundance since the early 1980s were reflected in sighting rates (i.e. weighted estimates of density of walrus observed per linear km flown) during 11 aerial surveys conducted in Central West Greenland in 1981, 1982, 1984, 1990, 1991, 1993, 1994, 1998, 1999, 2006 and 2008. The sighting rate (n=11 years) in the southern walrus' wintering area fluctuated between