**Aloitussivu**

The walrus (Odobenus rosmarus) is a large flippered marine mammal with a discontinuous distribution about the North Pole in the Arctic Ocean and subarctic seas of the Northern Hemisphere. The walrus is the only living species in the family Odobenidae and genus Odobenus. This species is subdivided into three subspecies:[3] the Atlantic walrus (O. r. rosmarus) which lives in the Atlantic Ocean, the Pacific walrus (O. r. divergens) which lives in the Pacific Ocean, and O. r. laptevi, which lives in the Laptev Sea of the Arctic Ocean.

Adult walruses are easily recognized by their prominent tusks, whiskers, and bulkiness. Adult males in the Pacific can weigh more than 2,000 kg (4,400 lb)[4] and, among pinnipeds, are exceeded in size only by the two species of elephant seals.[5] Walruses live mostly in shallow waters above the continental shelves, spending significant amounts of their lives on the sea ice looking for benthic bivalve mollusks to eat. Walruses are relatively long-lived, social animals, and they are considered to be a "keystone species" in the Arctic marine regions.

The walrus has played a prominent role in the cultures of many indigenous Arctic peoples, who have hunted the walrus for its meat, fat, skin, tusks, and bone. During the 19th century and the early 20th century, walruses were widely hunted and killed for their blubber, walrus ivory, and meat. The population of walruses dropped rapidly all around the Arctic region. Their population has rebounded somewhat since then, though the populations of Atlantic and Laptev walruses remain fragmented and at low levels compared with the time before human interference.

**Sivu 1**

**Reproduction**

Walruses live to about 20–30 years old in the wild. The males reach sexual maturity as early as seven years, but do not typically mate until fully developed at around 15 years of age. They rut from January through April, decreasing their food intake dramatically. The females begin ovulating as soon as four to six years old. The females are polyestrous, coming into heat in late summer and also around February, yet the males are fertile only around February; the potential fertility of this second period is unknown. Breeding occurs from January to March, peaking in February. Males aggregate in the water around ice-bound groups of estrous females and engage in competitive vocal displays. The females join them and copulate in the water.

Gestation lasts 15 to 16 months. The first three to four months are spent with the blastula in suspended development before it implants itself in the uterus. This strategy of delayed implantation, common among pinnipeds, presumably evolved to optimize both the mating season and the birthing season, determined by ecological conditions that promote newborn survival. Calves are born during the spring migration, from April to June.

They weigh 45 to 75 kg (99 to 165 lb) at birth and are able to swim. The mothers nurse for over a year before weaning, but the young can spend up to five years with the mothers. Because ovulation is suppressed until the calf is weaned, females give birth at most every two years, leaving the walrus with the lowest reproductive rate of any pinniped.

Range and habitat

The majority of the population of the Pacific walrus spends its summers north of the Bering Strait in the Chukchi Sea of the Arctic Ocean along the northern coast of eastern Siberia, around Wrangel Island, in the Beaufort Sea along the north shore of Alaska, and in the waters between those locations. Smaller numbers of males summer in the Gulf of Anadyr on the southern coast of the Siberian Chukchi Peninsula, and in Bristol Bay off the southern coast of Alaska, west of the Alaska Peninsula. In the spring and fall, walruses congregate throughout the Bering Strait, reaching from the western coast of Alaska to the Gulf of Anadyr. They winter over in the Bering Sea along the eastern coast of Siberia south to the northern part of the Kamchatka Peninsula, and along the southern coast of Alaska. A 28,000-year-old fossil walrus was dredged up from the bottom of San Francisco Bay, indicating Pacific walruses ranged that far south during the last ice age.[34] There were roughly 200,000 Pacific walruses according to the most recent (1990) census-based estimate.

The much smaller population of Atlantic walruses ranges from the Canadian Arctic, across Greenland, Svalbard, and the western part of Arctic Russia. There are eight hypothetical subpopulations of walruses, based largely on their geographical distribution and movements: five west of Greenland and three east of Greenland. The Atlantic walrus once ranged south to Cape Cod, Massachusetts, and as late as the eighteenth century was found in large numbers in the greater Gulf of St. Lawrence region, sometimes in colonies of up to 7,000 to 8,000 individuals. This population was nearly eradicated by commercial harvest; their current numbers, though difficult to estimate, probably remain below 20,000. In April 2006, the Canadian Species at Risk Act listed the population of the northwest Atlantic walrus in Quebec, New Brunswick, Nova Scotia, Newfoundland and Labrador as having been eradicated in Canada.

The isolated population of Laptev walruses is confined year-round to the central and western regions of the Laptev Sea, the eastmost regions of the Kara Sea, and the westmost regions of the East Siberian Sea. The current population of these walruses has been estimated to be between 5,000 and 10,000.

The limited diving abilities of walruses brings them to depend on shallow waters (and the nearby ice floes) for reaching their food supply.

**Sivu 2**

**Diet**

Walruses prefer shallow shelf regions and forage primarily on the sea floor, often from sea ice platforms. They are not particularly deep divers compared to other pinnipeds; their deepest recorded dives are around 80 m (260 ft). They can remain submerged for as long as half an hour.

The walrus has a diverse and opportunistic diet, feeding on more than 60 genera of marine organisms, including shrimp, crabs, tube worms, soft corals, tunicates, sea cucumbers, various mollusks, and even parts of other pinnipeds.However, it prefers benthic bivalve mollusks, especially clams, for which it forages by grazing along the sea bottom, searching and identifying prey with its sensitive vibrissae and clearing the murky bottoms with jets of water and active flipper movements. The walrus sucks the meat out by sealing its powerful lips to the organism and withdrawing its piston-like tongue rapidly into its mouth, creating a vacuum. The walrus palate is uniquely vaulted, enabling effective suction.

Aside from the large numbers of organisms actually consumed by the walrus, its foraging has a large peripheral impact on benthic communities. It disturbs (bioturbates) the sea floor, releasing nutrients into the water column, encouraging mixing and movement of many organisms and increasing the patchiness of the benthos.

Seal tissue has been observed in fairly significant proportion of walrus stomachs in the Pacific, but the importance of seals in the walrus diet is under debate. There have been isolated observations of walruses preying on seals up to the size of a 200 kg (440 lb) bearded seal. Rarely, incidents of walruses preying on seabirds, particularly the Brünnich's guillemot (Uria lomvia), have been documented. Walruses may occasionally prey on ice-entrapped narwhals and scavenge on whale carcasses but there is little evidence to prove this.

**Sivu 3**

Predation

Due to its great size and tusks, the walrus has only two natural predators: the killer whale (orca) and the polar bear. The walrus does not, however, comprise a significant component of either predator's diets. Both the orca and the polar bear are also most likely to prey on walrus calves. The polar bear often hunts the walrus by rushing at beached aggregations and consuming the individuals crushed or wounded in the sudden exodus, typically younger or infirm animals. The bears also isolate walruses when they overwinter and are unable to escape a charging bear due to inaccessible diving holes in the ice. However, even an injured walrus is a formidable opponent for a polar bear, and direct attacks are rare. Walruses have been known to fatally injure polar bears in battles if the latter follows the other into the water where the bear is at a disadvantage. Polar bear–walrus battles are often extremely protracted and exhausting, and bears have been known to forgo the attack after injuring a walrus. Orcas regularly attack walrus, although walruses are believed to have successfully defended themselves via counterattack against the larger cetacean. However, orcas have been observed successfully attacking walruses with few or no injuries.

Conservation

In the 18th and 19th centuries, the walrus was heavily exploited by American and European sealers and whalers, leading to the near extirpation of the Atlantic population.[58] Commercial walrus harvesting is now outlawed throughout its range, although Chukchi, Yupik and Inuit peoples[59] continue to kill small numbers towards the end of each summer.

Traditional hunters used all parts of the walrus. The meat, often preserved, is an important winter nutrition source; the flippers are fermented and stored as a delicacy until spring; tusks and bone were historically used for tools, as well as material for handicrafts; the oil was rendered for warmth and light; the tough hide made rope and house and boat coverings; and the intestines and gut linings made waterproof parkas. While some of these uses have faded with access to alternative technologies, walrus meat remains an important part of local diets, and tusk carving and engraving remain a vital art form.

According to Adolf Erik Nordenskiöld, European hunters and Arctic explorers found walrus meat not particularly tasty, and only ate it in case of necessity; however walrus tongue was a delicacy.

Walrus hunts are regulated by resource managers in Russia, the United States, Canada, and Denmark, and representatives of the respective hunting communities. An estimated four to seven thousand Pacific walruses are harvested in Alaska and in Russia, including a significant portion (about 42%) of struck and lost animals. Several hundred are removed annually around Greenland. The sustainability of these levels of harvest is difficult to determine given uncertain population estimates and parameters such as fecundity and mortality. The Boone and Crockett Big Game Record book has entries for Atlantic and Pacific walrus. The recorded largest tusks are just over 30 inches and 37 inches long respectively.

The effects of global climate change are another element of concern. The extent and thickness of the pack ice has reached unusually low levels in several recent years. The walrus relies on this ice while giving birth and aggregating in the reproductive period. Thinner pack ice over the Bering Sea has reduced the amount of resting habitat near optimal feeding grounds. This more widely separates lactating females from their calves, increasing nutritional stress for the young and lower reproductive rates. Reduced coastal sea ice has also been implicated in the increase of stampeding deaths crowding the shorelines of the Chukchi Sea between eastern Russia and western Alaska. However, there are insufficient climate data to make reliable predictions on population trends.

Currently, two of the three walrus subspecies are listed as "least-concern" by the IUCN, while the third is "data deficient". The Pacific walrus is not listed as "depleted" according to the Marine Mammal Protection Act nor as "threatened" or "endangered" under the Endangered Species Act. The Russian Atlantic and Laptev Sea populations are classified as Category 2 (decreasing) and Category 3 (rare) in the Russian Red Book. Global trade in walrus ivory is restricted according to a CITES Appendix 3 listing.