ABSTRACT

The polar bear (Ursus maritimus) is a mammal native to the Arctic Circle. It is the world’s largest land carnivore, and can weigh up to 1,500 pounds. It has many body characteristics that are adapted for cold temperatures, in order to move across snow and ice and to be able to hunt seals, which makes up most of its diet. Although most polar bears are born on land, most of their lives are spent at sea. The polar bear is now classified as a vulnerable species, with many of its subpopulations currently in decline. This can be attributed to many factors, such as climate change and pollution, which has damaged the polar bear’s environment and has negatively affected its sustenance.

HABITAT AND DISTRIBUTION

The polar bear spends a majority of the year at sea, and is therefore referred to as a marine mammal. Polar bears are found throughout the circumpolar Arctic, and they are very well adapted to life in and around the Arctic Ocean.

BIOLOGY AND BEHAVIOR

The polar bear is the largest terrestrial carnivore on the planet, sharing the title with the Kodiak Bear (Davids, 1982). The average male weighs between 850-900 pounds, and the average female is about half that size at anywhere between 330-550 pounds. The polar bear has many physical characteristics that adapt it well with the icy and snowy environment it lives in, as well as adaptations for swimming. The legs of a polar bear are stocky, however the feet are very large and wide, in order to distribute load while walking on ice and snow, and also to provide propulsion when swimming (Lockwood, 2005). The polar bear’s claws are also short and stocky compared to other members of the bear family, in order to be able to grip heavy prey and ice (Stirling, 1988).

CONSERVATION STATUS

It is estimated that the polar bear population could decrease by 30% in the next forty-five years. As of 2008, the World Conservation Union (IUCN) has declared that the polar bear population is in decline, and has upgraded their conservation status from “least concern” to “vulnerable species”. These declines can be primarily attributed to climate change, and the current warming trend around the world has severely endangered the survival of the species (Barber, 2004). Much of the sea ice that the polar bears rely on as a platform to hunt seals from has been melting because of the rising temperature. This has driven the bears to shore before they are able to build up sufficient fat reserves for the periods of scarce food in the late summer and early fall (Stirling, 1999). The shortage of sea ice also forces polar bears to swim longer distances, which further depletes their energy and can sometimes lead to drowning. This lack of sufficient nourishment leads to lower reproduction rates in female bears and also results in lower survival rates in cubs. The U.S. Geological Survey predicts that by 2050, two-thirds of the world’s polar bear population will disappear (Amstrup, 2007). This depends on if polar bears are able to adapt to the climate change by switching to terrestrial food sources, however many consider those who rely on this adaptation to be naïve (Campbell, 2008). There is a scarcity of terrestrial resources in the areas inhabited by polar bears, so even if they were able to adapt, their sustenance would be threatened and it would be very difficult to maintain the species.

HUNTING AND PRESERVATION

Polar bears have long been the target of hunting by both indigenous populations and for commercial harvest. They have long provided raw materials for the Arctic people, such as the Inuit, and almost all parts of the captured animal had a use. In commercial harvest, polar bear fur is a valuable item, especially in Northern Canada and Russia. Fortunately in 1973, the five countries whose territory is inhabited by polar bears (Norway, Canada, Denmark, the United States, and Russia) signed the International Agreement on the Conservation of Polar Bears, which effectively ended the commercial harvest of these animals (Polar Bear Specialist Group).

REFERENCES

http://www.pbsg.npolar.no/en/issues/conservation/historic
http://www.seaworld.org/animal/