

Polar Bear

The polar bear is the world's largest land carnivore and one of the largest of the bear family.

Overview

Order: Carnivora

Family: Ursidae

Species: Ursus maritimus

IUCN Status: vulnerable species

Distribution: northern polar regions occurring in 5 nations - Greenland, Norway, Canada, United States and Russia and also on Arctic sea pack ice usually within 300km of land. Some individuals wander up to 200km inland.

Population: 22,000 to 31,000 with 60% living in Canada.

Habitat: favourite habitat is a combination of pack ice, open water and coastal land.

Description: coat colour varies from pure white to shades of yellow. Small ears; black eyes and nose.

Height: 1.6m to shoulder

Length: 2.2 - 2.5m.

Size of feet: 30cm long, 25cm wide.

Weight: male 400 - 650 kg, female 300 - 350kg. Polar bears have actually shrunk in size compared to their predecessors in the early 20th century. This could be because of pollution and shrinking sea ice making it harder for them to find food and therefore grow.

Life span: about 30 years.

The polar bear is the world's largest land carnivore and one of the largest of the bear family, alongside with the omnivorous Kodiak bear which can sometimes weigh



over 900 kg.

| Polar Bear Habits

Polar bears are mostly solitary animals and are active at all times of year, always on the look-out for a meal. They are extremely strong and active and cover the ground quickly with long strides of their bowed legs. The soles of their feet are covered with hair to help them get a grip on slippery ground. Polar bears are also good swimmers using their front legs to propel them, their hind feet trailing behind. Keeping their eyes open and their nostrils closed, they dive beneath the surface and can stay under for up to two minutes at a time.

Winter

Some bears spend both summer and winter along the lower edge of the pack ice, sometimes migrating from north to south as this edge shifts. Others move onto the land in the summer and spread out across the ice as it forms along the coast and between the islands during the winter.

Any polar bear may make a winter den for temporary shelter during severe weather. Pregnant females can stay in their dens for up to three months to give birth to their young. They don't eat during this time, but live off their fat reserves. Males and non-pregnant females remain active all year.

| Polar Bears and Humans

Traditionally, the polar bear has been hunted by the Inuit people of North America and Greenland for its fur and flesh, but it wasn't until Western people began hunting the bear for 'sport', often from aircraft, that the numbers of polar bears dwindled. Between 1965 and 1970 the population of polar bears was estimated at only 8,000 - 10,000 and it was classified as an endangered species.

Fortunately, in 1973, an international agreement banned the hunting of the polar bear, only the native Inuits are allowed to kill them. Since the ban, the polar bear population steadily increased and the current population worldwide is now between 22,000 - 31,000. It is an endangered animal and there are serious threats to the continued increase of the population; these are...

Habitat destruction

The exploration and recovery of natural gas and oil in the Arctic Basin could destroy important polar bear habitat and food supplies if an accident should occur in the Polar sea - especially as the number of oil wells increases. The human population density may also increase as the development grows and this would increase the likelihood of human and polar bear conflicts.

Pollution

Toxic chemicals e.g. PCBs, dumped in the sea, even in small amounts, are transferred up the food chain until they become concentrated and accumulate in polar bear body fat. Scientists believe that these chemicals could affect the bears' reproduction and they may not be able to produce as many young as normal. Most countries banned PCBs in the 1980s when they discovered how dangerous they are but unfortunately they can persist for decades. They can impede the bears' immune system and cause birth defects. There has been a noticeable increase in the level of organochlorines found in several polar bears in Canada.

Tourism

Tourist activity has increased in several areas which has led to accommodation building and the use of all-terrain vehicles and aircraft for aerial tours. This interference means humans come into contact with polar bears and can result in harassment, or even killing in self-defence. Indirectly it may also lead to the bears leaving their habitat to search for peace or abandoning their traditional dens.

However a respectful, limited level of tourism may be beneficial for the polar bears whilst also generating income for local people as many tour operators follow a code of conduct and partake in conservation efforts. Tourism is limited anyway with only a limited number of permits to go around. At least visitors will increase their understanding of the problems polar bears and the Arctic are facing and this awareness will surely help to safeguard their futures.

| The Future

In summary, the most serious threats to the future of the polar bear are destruction of their habitat through oil and gas exploration and significantly through climate change, interference by tourists and pollution of the sea. If these causes are not restricted, the population of this great bear will continue to decline.

Scientists predict that if current trends continue, the polar bear population will shrink by two-thirds by the year 2050 and faces a high risk of extinction by the end of the 21st century.

For further information see:

[Polar Bears International](#)

[World Wildlife - Polar bears](#)

Play [Jumpybear](#), YPTE's online game and help Peter The Polar Bear make it across the melting ice!

| Credits

Image: Polar Bear by [Alex Berger](#)

Information sourced from:

The IUCN Red List of Threatened Species (2015), *Ursus maritimus* [online], Available from: <http://www.iucnredlist.org/search> [accessed 12/07/2015]

Food and Hunting

The polar bear is carnivorous, eating mainly the ringed seal, although small land mammals, carcasses of marine mammals and reindeer, berries etc, also form part of the diet. They are at the top of the food chain and are important at keeping the seal population in check as well as being vital for many other food web connections.

One of the mainstays of the polar bear's diet is the ringed seal which it stalks across the ice or ambushes at a breathing hole. The white-yellow coat of a bear acts as camouflage against the snow-coloured background. The seal is killed by a blow from the bear's powerful paw. The fat and skin is usually eaten first and the meat left until last.

During the late summer and early autumn polar bears will search for walrus and whale carcasses (carrion) along the coastal areas. Sometimes ten or twenty bears may be feeding at a carcass. There is more open land at this time of year and the diet is more varied, including lemmings, Arctic foxes, ducks and their eggs. Polar bears, like most bears, will also feed on berries, toadstools, mosses, lichens, grasses, seaweeds etc.

Breeding

Polar bears mate in the spring, particularly in April. During this time, the males wander over long distances, looking for females without cubs. Most females breed every three years when their young have left.

The female bear digs out her den during October and November, to a depth of 1 to 3 metres under the snow, often on a steep south-facing slope of a hill where northerly winds blow the snow into large piles. A den usually consists of a tunnel leading into a large chamber. The temperature inside the den can be 4.4 degrees Celcius warmer than the outside air temperature.

The cubs, usually two, are born in November or December, after a gestation period of 7 - 8 months, and are only the size of a rat, weighing 450 - 900g. To begin with they are blind and hairless. Feeding on their mother's rich milk, they grow very quickly and when they leave the den in March or April, they are about the size of a domestic cat. The cubs leave their mother in the third spring of their life.

Polar Bears and Climate Change

In March 2009 delegates from the US, Canada, Russia, Greenland and Norway met in Norway for the first meeting of its kind for 25 years and officially recognised that the greatest threat to polar bears has shifted from hunting to climate change.

The polar ice cap lies at the centre of the Arctic sea, extending 500 miles from the north pole. The rest of the Arctic sea only freezes for a part of the year so that during the winter time the area of ice more than doubles. This crust of ice, called "pack ice", is where the polar bears like to hunt during the winter. Every year between June and October this ice melts. However global warming has resulted in there being about 15% less ice than there was 20 years ago.



Sea ice extent in December 2014 averaged 12.52 million square kilometers (4.83 million square miles). This is 540,000 square kilometers (208,495 square miles) below the 1981 to 2010 long-term average of 13.06 million square kilometers (5.04 million square miles) and 500,000 square kilometers (193,051 square miles) above the record low for the month observed in 2010.

Polar bears hunt near to the edge of the pack ice where it is thinner so that they can catch seals.

They only need to eat one seal every 4 to 5 days but finding food is becoming more of a problem for polar bears as the area of pack ice gets smaller. Every year the winter time shortens, the water freezes later and the summer returns earlier, melting the ice. Its not that polar bears can't live on land - they do, but they need to eat and the main place to find food is on the ice!

During June to October the sea ice melts and the bears are unable to hunt seals until it freezes over again. They are capable of fasting but longer times of fasting mean they are going hungry and are less likely to survive. The lack of food has also caused a drop in the birth rate. The hungrier they are, the more aggressive they become which is particularly an issue in Hudson Bay where polar bears and people come in close contact with one another.

Polar bears are excellent swimmers indeed and 15 miles for them poses no problem at all. However, in recent years they have been forced to to swim longer distances between ice floes sometimes swimming up to 60 miles across open sea to find an ice platform from which to hunt. This can leave the polar bears feeling exhausted and vulnerable to hypothermia. They can even drown if they are caught up in a storm so far from the ice pack or land.



The Young People's Trust for the Environment is a charity which aims to encourage young people's understanding of the environment and the need for sustainability.

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