

General Information

Habitat

Polar bears (*Ursus maritimus*) are found throughout ice-covered waters of the circumpolar Arctic. In Canada, there are 13 discrete populations, totaling approximately 15 000 bears.

Polar bears are considered to be mainly marine animals and spend much more time on the sea ice than they do on land. They can swim several hundred kilometers without resting and can dive underwater for up to one minute. Polar bears are at the top of the Arctic food chain. Preferring to remain on the sea ice, they hunt their main prey, ringed seals (*Phoca hispida*), although they will also eat bearded seals (*Erignathus barbatus*) and occasionally walruses (*Odobenus rosmarus*), beluga whales (*Delphinapterus leucas*) and narwhals (*Monodon monoceros*). In many areas of the Arctic, they remain on the ice year-round. It is only in areas where the ice melts in the summer, like Hudson Bay, that the bears are forced ashore until the ice refreezes in the fall.

Polar bears are the largest land carnivores in the world! An average adult male weighs 500 to 600 kg and reaches maximum size by eight to ten years of age. Male bears reach their maximum weight in their early teens. An average adult female is about half the size of a male, weighing 200 to 300 kg and reaching maximum size by age four to five. Cubs weigh only 0.6 kg (about 1 lb) at birth. The lifespan for males is over 20 years and for females over 25 years.



Polar bears are well adapted to live in the Arctic. Parts of their bodies are covered with a thick layer of fat (adipose tissue) that protects them from the cold and adds buoyancy in the water. During the long months of fasting, bears depend on these fat reserves for survival. They also play an important role in reproductive success. If a pregnant female has an insufficient store of adipose tissue, she will have insufficient energy to feed her cubs, to fast, and to return to her preferred hunting grounds at ice freeze-up. It is also in the fat reserves that environmental toxins are stored.

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They have thick, white fur that covers most of their bodies, including the inside of their ears, perfect for camouflage. The guard hairs of the polar bears fur are hollow, which increases their insulating properties. The fur also has a thick undercoat that prevents water from penetrating it, thus keeping the bear warm and dry when swimming. After swimming, bears will shake excess moisture from their fur like a dog or by pushing themselves across the ice. Their webbed forepaws can measure up to 16 cm in diameter. They act not only as paddles for swimming but also as snowshoes for walking on land or on thin ice. Compared to other bears, the polar bear's head is streamlined. It has a longer snout for warming cold air on inhalation and for trying to access ringed seals slipping down breathing holes.

Reproduction and Denning

Both males and females become mature at four to five years, although most males probably do not breed until eight to ten years. Polar bears mate out

on the sea ice in the spring. The female has delayed implantation. That means that the fertilized egg develops to a multicellular state and then stops developing until it is implanted in the uterus in September or October. Instead of returning to the ice in the fall to hunt with the rest of the population, pregnant females enter a maternity den by late October/early November. The foetus forms and the short gestation of about two months takes place over the winter months while the female hibernates. Cubs are born in the den from late November to early January. Cubs are altricial in nature; that is to say that they are tiny at birth and completely dependent on their mother for food (i.e., milk). Females usually give birth to twins although a litter can range from one to three cubs. After three to four months in the den, the cubs have grown to 10 kg and the new family moves back to the sea ice in late February to April to hunt - the same time that seal pups are born. In most areas, cubs remain with their mother who nurses them for 2.5 years. Cubs may occasionally stay with their mothers for 3.5 years.

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