

Grizzly Bear (*Ursus arctos*)



Key to Identifying:

Grizzly bears have prominent shoulder hump, a dished face, a pale yellow to dark brown fur and long front claws, which are always visible.

Grizzly bears can be found in forests and riparian area, in valley bottoms to high alpine tundra, throughout mainland except southwestern BC.



Source: Environmental Reporting BC. 2012. Grizzly Bear Population Status in B.C. State of Environment Reporting, Ministry of Environment, British Columbia, Canada.

Biology:

Taller than the Black bear, the grizzly bear can be 1.8 to 2.6 meters long, and 90 to 120 centimeter shoulder height. His weight can vary between 110-530 kg.

The specific grizzly bear anatomy is well-adapted to its environment, owing to changes that occurred

during its evolution, including:

- The ability to stand upright, which enhances smelling and viewing of potential prey or threats, especially in brush-covered meadows.
- Long claws, long muzzle and massive shoulders, which help with digging. This is probably adaptive for root out food. Long muzzle improve probably smell and help to find food. Massive forearms allow the bear to run at very high speeds - up to 55km/hr.

Behavior (Grizzly v.s. black bears):

The grizzly bear behavior is different from the black bear one:

- Open slopes and margin forest are grizzlies' preferred habitat versus deep forest for black bears.
- Grizzly bear cubs can climb on a tree but their straightened claws limit adult climbing abilities. Black bears have a real agility to climb with their curved claws.
- Digging abilities are strong for grizzlies and limited for black bear.
- Parental care is longer for grizzlies (more than 2.5 years) than for black bear (1.5 years) and they tend to be extremely aggressive in many situations, whereas the black bear tends to be less aggressive.

The fact that Grizzlies are living in open-habitat would explain their more aggressive behavior, their larger size and thus, their ability to protect food resources.

Biomass in dense forest tends to be more concentrated in trees and tree roots, whereas in openings such as wetlands, meadows, avalanche paths, beaches, estuaries and recent clear cuts, it tends to provide more foods like berries, herbaceous plants and plants with edible roots. This biomass repartition is likely to explain that grizzlies are thriving in open habitat and black bears, in both open and forested - but always close to trees, especially black bear females with cubs.

The parental care of the grizzly tends to be longer than the black bear because of the aggressive nature of male grizzlies (and their size), which brings them to kill the cubs of a female they want to mate with. Black bears live in denser forest habitat, are smaller and have the agility to climb trees, which increases their odds for survival.

Grizzly bears have a remarkable ability to adapt to environmental change and conditions, which is particularly relevant in a phenomenon called **delayed implantation**. This relates to the fact that although female bears mate in the spring, the fertilized embryo does not attach to the uterine wall until the bear enters the den the following fall. The embryo will only attach if the female bear has enough body fat reserves (usually around 20%) to successfully reproduce.

Food Diet:

Bears are omnivores with diets that include usually considerable vegetation. Main sources of energy (for *interior* grizzlies) are huckleberries, roots, grasses, horsetail, and parsnip. Berries are extremely important in the late summer and the start of fall, representing up to 90% of their diet

During spring and fall, in emergence time and before hibernation, when they need a boost in energy, grizzlies principally eat elk or deer meat.

Management:

The species is vulnerable or threatened in much of its territorial range. The Grizzly population needs to travel between different food supplies without disruption. Sometimes, human or road construction may take place in grizzly area and disrupt their travel, depending on the movement pattern of bears in the area.

In general, hunting (and mortality from other human causes) 4% of adult's males should have minimal effects on the population, but hunting even 1% of adults females can have a strong effect on the population.

Grizzly bear hunting should be closely monitored. Hiking in bear country and the behavior of hikers should also be monitored (to check for adequate disposal of garbage, bear avoidance techniques, etc.) In general, garbage disposal regulations must be closely managed to avoid bear attacks.

