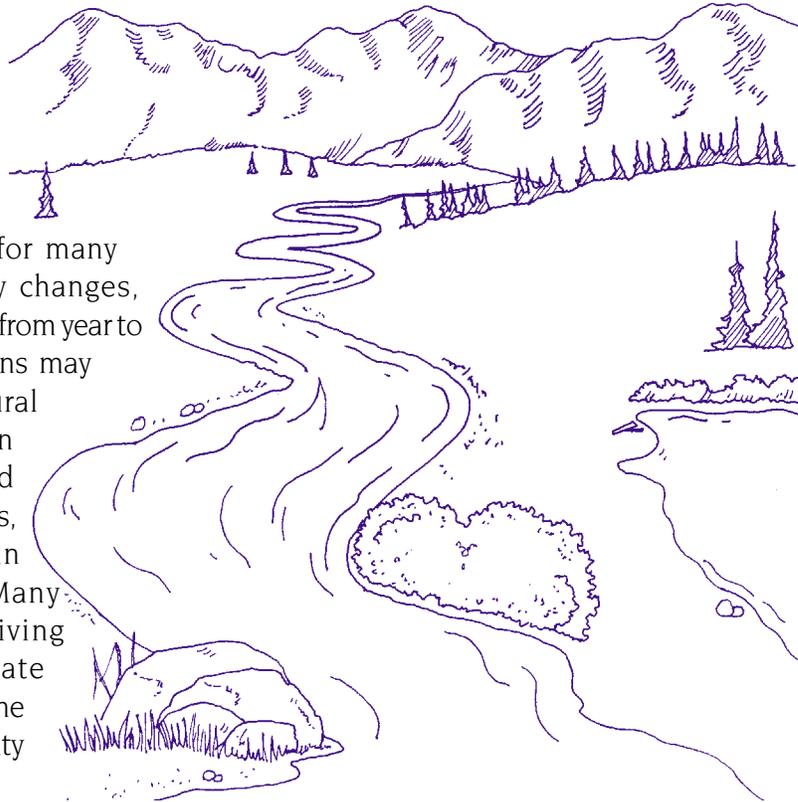


CARRYING CAPACITY

Carrying capacity may be defined as the number of plants or animals of a given species that an area of land or water can support. It is the largest **population** a unit of **habitat** can support on a year-round basis, or during the most critical period for the species.



Carrying capacity for many species constantly changes, both seasonally and from year to year. Yearly variations may be caused by natural disasters, changes in rainfall and temperature patterns, or human interventions. Many populations of living things fluctuate naturally around some level. Carrying capacity affects that level.

other and brown bears. Adult bears run adolescent bears out of the area or occasionally kill them. These young bears must keep moving until they find an area vacated by the death of an adult. If they do not find an area for themselves, eventually they will die.

A population may be *below* carrying capacity, such as in the spring following a hard winter, or temporarily *above* it. The latter situation inevitably results in a decline of the population by deaths through disease, emigration, and/or lowered reproductive rate until it drops below carrying capacity.

- When **food** supplies are reduced, competition becomes more intense. Some adult bears might temporarily move to seldom-used portions of their home ranges, sometimes many miles away. Most bears, however, must live on what food is available in their area. These individuals may become thin, occasionally starve, or in the case of young bears, be killed or forced from the area by more aggressive adults.

Black Bear Example

Black bear habitat limits populations especially through the influences of shelter, food supply, and the social tolerances or territoriality of the animal.

- **Shelter** or **cover** is a prime **limiting factor**. Black bears need thick cover to hide from each

Through these “adjustments,” the total bear population remains within the carrying capacity of the habitat.