



Lessons from the Plateau



In 1906, northern Arizona's Kaibab Plateau was declared a park. Mule deer hunting ended, and an effort was made to eliminate all the predators on the Plateau with the belief that these actions would "protect" the deer herd. During the next 25 years, the following predators were killed:

- 4,889 Coyotes
- 781 Mountain lions
- 544 Bobcats
- 30 Wolves
- ?? An unknown number of golden eagles

Graph the numbers below to see what happened to the Plateau's deer population as predators disappeared.

# of deer	4,000	10,000	25,000	60,000	100,000	90,000	30,000	15,000	10,000
Year	1905	1910	1915	1920	1923	1925	1930	1935	1940

Question: Can you explain why the deer population "exploded" and then "crashed."

Answer: The deer population exploded because predation (including hunting) -- the major regulatory factor for the deer -- was totally eliminated. Deer death rates dropped drastically, while the deer birth rate increased dramatically. The crash occurred because the unnaturally high deer herd over-browsed the Plateau, literally eating itself out of house and home.

An area of land has enough food, water, shelter and space for only a certain number of animals of a particular kind. This number is called the area's **carrying capacity**.

In 1905, the Kaibab Plateau had a deer carrying capacity of 30,000 animals. By 1935, this carrying capacity was reduced to only 10,000 animals. Plot these two numbers on your graph and connect them with a dotted line.

Question: Why did the Plateau's carrying capacity change in this way?

Answer: Because serious deer over-browsing took place. Plants were damaged long-term, meaning less forage was available to the deer herd.

Question: How do predators help maintain nature's balance?

Answer: Predators play an important regulatory role for other animals, maintaining populations at a level where the resources they need remain adequate.

The story of the deer on the Kaibab Plateau represents a classic blunder in wildlife management, providing wildlife biologists with a valuable lesson regarding the role of predators in the environment.

