

Yellowstone National Park is a large wildlife area located mostly in Wyoming. Yellowstone is home to many species of mammals, including elk. The elk feed on grasses and on cottonwood, aspen, and willow trees. Historically, a significant portion of the elk population died each winter because winters in Yellowstone were long and very cold, with deep snow.

Over the past 50 years the climate in Yellowstone has become warmer and snowfall amounts have decreased. More elk have been surviving the winters, but populations of scavengers have been decreasing. Scavengers feed on the carcasses of animals.

The reintroduction of gray wolves to Yellowstone in the 1990s has affected elk population size and has contributed to the recovery of some scavenger populations. The wolves prey on elk and other animals. When wolves make a kill, they feed until they are full and then they leave the carcass behind.

Researchers have studied the changes in elk mortality (number of deaths) in Yellowstone by using data and mathematical models to calculate the average number of elk that die (represented by number of carcasses) from November to April each year. The results, with wolves present and without wolves present, are shown in the graph below.

