Gray wolf *Canis lupus*

Second only to humans in adapting to climate extremes, gray wolves once ranged from coast to coast and from Alaska to Mexico in North America. They were absent from the East and the Southeast, which were occupied by red wolves (*Canis rufus*), and from the large deserts in the southwestern States. By the early 20th century, government-sponsored predator control programs and declines in prey brought gray wolves to near extinction in the lower 48 States.

Photo by John & Karen Hollingsworth/USFWS

Wolf groups, or *packs*, typically include a breeding pair (the alpha pair), their offspring, and other non-breeding adults. Wolves are capable of mating by age two or three and sometimes form a lifelong bond. Wolves can live 13 years and reproduce past 10 years of age. On the average, five pups are born in early spring and are cared for by the entire pack. For the first six weeks, pups are reared in dens. Dens are often used year after year, but wolves may also dig new dens or use some other type of shelter, such as a cave.

Pups depend on their mother's milk for the first month, then are gradually weaned and fed regurgitated meat brought by pack members. By seven to eight months of age, when they are almost fully grown, pups begin traveling with the adults. After they are a year or two, wolves may leave and try to find a mate and form a pack. Lone, dispersing wolves have traveled as far as 600 miles in search of a new home.

Wolf packs live within territories, which they defend from other wolves. Their territories range in size from 50 square miles to more than 1,000 square miles, depending on the available prey and seasonal prey movements. Wolves travel over large areas to hunt, as far as 30 miles in a day. Although they usually trot along at five miles per hour wolves can run as fast as 40 miles per hour for short distances.

Studies at Yellowstone National Park indicate that wolves support a wide variety of other animals. Ravens, foxes, wolverines, coyotes, bald eagles, and even bears feed on the carcasses of animals killed by wolves. Antelope are swift, elk are alert, and mountain goats are adept at climbing steep cliffs, in part because of the long-term effects of wolf predation. Wolves also help maintain the balance between these *ungulates* (hoofed animals) and their food supply, making room for other plant-eaters such as beavers and small rodents.

Wolves use their distinctive howl to communicate. Biologists have identified a few of the reasons that wolves howl. First, they like to howl. They also howl to reinforce social bonds within the pack, to announce the beginning or end of a hunt, sound an alarm, locate members of the pack, or warn other wolves to stay out of their territory. Wolves howl more frequently in the evening and early morning, especially during winter breeding and pup-rearing.

Settlers moving westward depleted most populations of bison, deer, elk, and moose – animals that were important prey for wolves. Wolves then increasingly turned to sheep and cattle as a replacement for their natural prey. To protect livestock, ranchers and government agencies began an eradication campaign. Bounty programs initiated in the 19th century continued as late as 1965, offering $20 to $50 per wolf. Wolves were trapped, shot, dug from their dens, and hunted with dogs. Poisoned animal carcasses were left out for wolves, a practice that also killed eagles, ravens, foxes, bears, and other animals that fed on the tainted carrion.

By the time wolves were protected by the Endangered Species Act of 1973, only a few hundred remained

in extreme northeastern Minnesota and a small number on Isle Royale, Michigan. Gray wolves were listed as endangered* in the contiguous 48 States and in Mexico, except that in Minnesota they were listed as threatened.** Alaska wolf populations number 7,700 to 11,200 and are not considered endangered or threatened.

The wolf's comeback nationwide is due to its listing under the Endangered Species Act, resulting in increased scientific research and protection from unregulated killing, along with reintroduction and management programs and education efforts that increased public understanding of wolf biology and behavior. Today about 2,921 wolves live in the wild in Minnesota, 19 on Lake Superior's Isle Royale, about 557 in Michigan's Upper Peninsula, and at least 690 in Wisconsin.

In the northern Rocky Mountains, the U.S. Fish and Wildlife Service reintroduced gray wolves into Yellowstone National Park and U.S. Forest Service lands in central Idaho in 1995 and 1996. The reintroduction was successful, and the recovery goals for this population have been exceeded. By December 2009 there were about 1,359 wolves in the Yellowstone area and Idaho; in total, at least 1,599 live in the northern Rocky Mountains of Montana, Idaho, and Wyoming.

The Mexican gray wolf, a subspecies, *Canis lupus baileyi*, has also been reintroduced into Arizona and New Mexico. Native to the Southwest, the wolves existed only in zoos until 1998, when 13 of the animals were released in Arizona. By the end of 2009, there were 42 wolves in the wild in Arizona and New Mexico with another 300 in zoos and other facilities. Since 2002, wolf packs have produced pups in the wild. The goal is to establish a self-sustaining wild population of at least 100 wolves in their historical range.

Photo by Tracy Brooks-Mission

Gray wolf populations fluctuate with food availability, strife within packs, and disease. In some areas wolf populations may change due to accidental or intentional killing by people.

There is some concern that wolf recovery may pose a threat to human safety. However, wolf attacks on humans are extremely rare in North America, even in Canada and Alaska where there are consistently large wolf populations. Most documented attacks have been in areas where wolves habituated to people when they were fed by people or attracted to garbage.

Special features of the Endangered Species Act have been used in parts of the wolf range to allow the removal of wolves that prey on livestock. There are programs to compensate for the loss of livestock and pets in most of the recovery areas.

The Mexican wolves in the southwestern United States are designated as non-essential, experimental populations under the Endangered Species Act. This designation allows more management flexibility while contributing to recovery.

Wolf recovery efforts have restored a top predator to its ecosystem, and improved our understanding of the complex interactions among species in their natural environments.

For more information:
http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=A00D

**Endangered* means a species is considered in danger of extinction throughout all or a significant portion of its range.

***Threatened* means a species is likely to become endangered in the foreseeable future.

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