

## **Wolves 101: A Brief Lesson**

**Species:** Gray Wolf (*Canis lupus*)

**Diet:** Carnivore

**Size:** 26-32 inches tall; 4.5-6.5 feet long and one of the largest mammalian carnivores found in the Pacific West, next to the Grizzly Bear, Black Bear and Mountain Lion (Cougar)

**Weight:** 55-130 lbs.

**Lifespan in the wild:** 7-8 years

**Diet:** Primary prey consists of ungulates, or hooved mammals, such as deer or elk. Though wolves generally rely on large prey species, they are opportunists and have also been known to consume smaller mammals, such as beavers or rabbits, as well as scavenge upon already-dead animals. During periods of abundant food, wolves can eat up to 30 pounds of meat per day. Fluctuating environmental conditions require wolves to adapt to sudden abundances of prey often followed by days of prey scarcity.

**Behavior:** Wolves are social animals that usually live in packs. Packs are typically family groups that consist of a breeding male and female (also called the breeding pair) and their offspring. Sometimes called "alphas," the breeding pair are usually responsible for tracking and hunting prey, establishing territories, finding den sites, and reproducing. Subordinate wolves often assist in rearing young pups, hunting, and other responsibilities. Sometimes wolves depart from their pack to establish new territories and form new packs. This is called dispersal. One of the most exciting aspects of wolf research is our constantly-evolving understanding of their complex social dynamics.

Communication is an important component of wolves' social structures. Wolves use a complex system of vocalizations ranging from barks and whines, to growls and howls to communicate within and between packs. Researchers have recently found that howls are unique to individual wolves, allowing individual identification by wildlife managers, researchers and other wolves. Wolves also communicate through body postures, positions of the ears and tail, facial expressions, and by scent-marking.

**Territories and Range:** The distribution of wolves across a landscape primarily depends on territoriality. Territories are areas of habitat occupied and defended by a single wolf pack. These territories can vary in size depending on prey density, wolf population density, and other factors but must be large enough for adult wolves to ensure the survival of their offspring. Territories have been documented as small as 50 square miles to as large as 1,000 square miles. Within these territories, wolves can travel as far as 30 miles a day. While this is what we know now, ongoing research continues to reveal more about wolves' dispersal and travel.

At one point in time, wolves were common throughout the North American landscape and, in fact the gray wolf species was once the most widely-ranging mammal on the planet, occupying nearly the entire northern hemisphere. Due to a systematic extermination program of trapping, hunting, and poisoning by humans, wolves came close to extinction in the continental United States, have been rendered entirely extinct in some countries and their populations have been severely reduced in other parts of the world. With the help of recovery efforts, gray wolf populations are beginning to rebound, but in North America their populations are limited to Canada and portions of the U.S., including Alaska, Idaho, Montana, Michigan, Minnesota, Oregon, Washington, California, Wisconsin, Wyoming and most recently a gray wolf sighting in Nevada (April 2017). While wolves have begun to make a promising comeback in North America, they still only occupy a fraction of their historical range. The Mexican wolf, a subspecies of the gray wolf, is also making a slow, recovery in Arizona and New Mexico. In the southeastern U.S., red wolves are slowly recovering as well.

**Reproduction:** In a given year, the breeding male and female of a stable pack mate in January or February and typically produce four to seven pups. The breeding female gives birth around the end of April in a den. Pups are raised by the whole pack until they reach maturity at 10 months. Not all pups survive to adulthood. Some will stay with their pack their entire lives while others eventually disperse to find new territories and establish a pack of their own.

**Population:** Currently, the U.S. is home to more than 5,000 wolves in the lower 48 states and an estimated 7,000 to 11,200 wolves in Alaska. The vast majority of wolves outside Alaska are found in six states in the upper Midwest and Intermountain West. Globally, wolf populations are estimated to be 200,000 individuals spread across 57 countries. Though wolves dominated the North American landscape in the past, persecution by humans through the 1930's caused wolf populations to plummet, leaving one small population in far northeastern Minnesota. This represents a small part of the historical population estimates of 2 million wolves in North America alone and even more worldwide.

**Conservation Status:**

**Washington:** Wolves began to return to Washington from the north and west in the late-1990s. By the end of 2016, the Washington Department of Fish and Wildlife reported at least 115 wolves reside in Washington, consisting of 20 packs and 10 breeding pairs, showing a roughly 30 percent annual population growth rate. Wolves are classified as endangered under state law, and as endangered in the western two-thirds of the state under federal law. A state wolf conservation and management plan was approved in 2011, requiring a persistent and well-distributed wolf population for recovery. Wolves have recovered in northeast Washington, but poaching in the northern Cascades has set back statewide recovery, highlighting the importance of the state's Wolf Advisory Group for building social tolerance for wolves and processing tough issues. The multi-stakeholder Group has a key role in preventing wolf-livestock conflicts through deterrence planning, range riders, guard dogs and other measures, as well as diminishing threats to wolf recovery from the state legislature.

**Oregon:** Oregon's last wolf bounty was collected in 1947. Just four years after wolves were reintroduced to the Western US to augment populations returning on their own, the first known wolf returned to Oregon in 1999. A permanent presence of wolves in Oregon began with the confirmation of B-300, a wolf from Idaho who dispersed to Oregon and became the breeding female of the Imnaha pack in 2008. At the end of 2016, the Oregon Department of Fish & Wildlife confirmed there are at least 112 wolves consisting of 12 packs and 8 breeding pairs in Oregon. Wolves in the western two-thirds of Oregon are still protected by the federal ESA. Congress stripped federal Endangered Species Act (ESA) protections from wolves in Oregon's eastern third in 2011 as part of a must-pass funding bill, setting the dangerous precedent of removing a species from the Endangered Species Act through legislative action. Management of wolves there is guided by the state's Wolf Conservation and Management Plan which was written in 2005 and has been revised several times. In 2015 the state removed state Endangered Species Act protections from wolves.

**California:** In December 2011 a gray wolf was documented in California for the first time in 87 years. Wolf OR-7 or "Journey," traveled from northeastern Oregon throughout Northern California and returned to Oregon after a multi-year journey where he eventually found a mate and sired pups in Oregon every year since they established their territory in 2014. In 2014, a petition to

protect wolves under California's state Endangered Species Act was approved by the state. In August 2015 the state's first wolf family, the Shasta pack, consisting of two adults and five pups, was confirmed in Siskiyou County. The California Department of Fish & Wildlife released a draft Wolf Conservation and Management Plan in late 2015 and accepted public comments through February 15, 2016. A final version of the Plan was released in late 2016.

**The Importance of Wolves:** Like all native wildlife, wolves play a key role in keeping ecosystems healthy. As a keystone species, their presence or absence has a disproportionate impact. Wolves can help keep deer and elk populations in check (as well as other wild ungulates wolves may feed on, such as bison, moose and caribou), can help reduce the spread of disease in some ungulate populations and may even alter ungulates' behavior. Since unchecked overbrowsing by wild ungulates can heavily impact plant communities, this can benefit plant species and many other animal species including fish and songbirds.

Wolves tend to prey on weaker elk and deer instead of "trophy bulls" commonly targeted by human hunters. By culling weaker animals from the herds, wolves can help maintain the overall health of these animals and the habitat they share. The carcasses of wolves' prey also help redistribute nutrients and provides food for other wildlife species like grizzly bears, black bears, coyotes, ravens, beetles, and other scavengers. Scientists are just beginning to fully understand the positive and complex ripple effects that wolves have on ecosystems, but it's becoming increasingly clear that wolves play a critical and irreplaceable role. As the great conservationist Aldo Leopold said, "The last word in ignorance is the man who says of an animal or plant, 'What good is it?' If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering."

**Living with Wolves:** As wolves return to the west, it will impact the way livestock operators do business. All farms in wolf territory – from small hobby farms to large sprawling ranches – will need to learn to live with wolves. Rural communities share the landscape with wild wolves, so it is important for these communities to have the tools to succeed and reduce conflict with the returning predator on the landscape. Lessons learned from ranchers in Alberta, Montana, and across the west can ease this transition.

Most successful wolf-livestock conflict deterrence efforts involve programs designed to help fund and implement preventative measures, such as calving on fenced

property, using range riders to increase human presence, and the removal of sick or dead livestock to avoid attracting predators. However, each ranching operation is different and coexistence is not a 'one-shoe-fits-all' scenario. Preventative measures should be considered a priority, matching the unique situation of each ranch. In some areas, ranchers taking steps to reduce wolf-livestock conflicts receive compensation from the state for the value of their losses if a confirmed wolf depredation occurs.

Coexistence between people, livestock and predators may not always be easy, but it is possible to find success where people, livestock and predators share the same space.

**Threats:** There are a number of threats facing wolves, but here are four primary threats:

- **Conflict With Humans** - In areas where there are people, livestock and wolves, the most common cause of death for wolves is conflict with people over potential or actual livestock losses. Another conflict with humans occurs when wolves are in areas where hunting and trapping is allowed. It's also very important to note that in areas where no wolf hunting or trapping is allowed, the most common cause of wolf mortality is interpack strife with other wolves.
- **Intolerance** – Overall, the greatest threat to wolves is prejudice, fear and misunderstanding about the species. Many fairy tales and myths, from Little Red Riding Hood to Three Little Pigs, have misrepresented wolves as villainous, dangerous creatures and these myths have been perpetuated over time. It is a slow process to undo centuries of misinformation. Wolf and wildlife policy are often dictated by social and political agenda that have more to do with humans than wildlife and often harm conservation efforts.
- **Habitat Loss** - As human development encroaches upon the habitat of wolves and their prey, habitat becomes degraded and fragmented. Wolves may have to travel across lands with varying degrees of protection, or cross highways, developed areas, and large portions of private lands where they are more likely to come into conflict with humans.
- **Diminishing Protections** – Wolves have been restored to only very limited portions of their historical range. Diminishing Endangered Species Act protections at the state and federal level could derail wolf recovery efforts in areas around the country where it has barely begun. The Pacific states of Washington, Oregon and California represent an example of this as wolf recovery has only just begun and the loss of state and federal protections will impact wolf recovery. The loss of protections often results in more killing, and

also results in decreased social acceptance. This social acceptance is perhaps what wolves need more than anything else.

**Conservation & Coexistence:** Despite all the challenges thrown in their way, gray wolves are undoubtedly reclaiming their previous territory at a rapid pace. While much of their habitat has changed drastically with the expansion of farms and towns and other human development, wolves are incredibly adaptable creatures.

As wolves return to places once called home, the responsibility for understanding their needs and fostering for the return of wolves in the West Coast states and elsewhere lies with us. Learning about wolves, protecting them and their habitat, and helping affected ranching families and communities co-exist with wolves is essential for wolves' continued existence and for our own need and desire for a healthy planet.