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NORTHWEST WILDLIFE PRESERVATION SOCIETY

Elk

Cervus canadensis



By Rowena Shi

After the moose, the elk is the second largest species of *cervidae* (deer) in the world. Elk prefer woodland, coniferous forests and forest-edge habitat, feeding on grasses, plants, leaves, and bark, and range throughout the northern biomes of western North America and Eurasia.

Characteristics

Elk are larger than black or white tailed deer and caribou and weigh up to 450 kilograms (1,000 lbs). A bull elk towers nearly 9 feet tall, including his antlers, which can add up to 4 feet of height and grow anew each year from small pedicles attached to their skull. An elk's coat ranges in colour from dark brown in the winter to a lighter tan in the summer. One of the elk's most prominent characteristics is its shaggy mane -- a dark, thick scarf of fur that hangs from its neck to its chest. Elk have a white rump which gives them their Shawnee name *wapiti*.

Life Cycle

Elk usually only have one calf each year. It is rare for them to have twins. Female elk are able to breed at approximately 16 months of age, though rarely do so that young. Bulls reach reproductive maturity at 24 to 30 months of age. Bulls are very territorial and protective of the females around them. On average, most cows will have their first calf at three years of age. Cows and bulls will reach physical maturity at four to five years of age. The breeding period for elk (called the rut) generally takes place between September and October. During the rut, bulls compete for dominance through bugling, sparring with each other, and chasing would-be competitors away as they try to maintain a harem of females. The gestation period (conception to birth) for elk cows is 250 days. Calves are born in May or June and prefer to spend the first week of their lives in tall grass, usually getting up only to nurse (drink milk from their mothers). Calves are spotted when born to aid in camouflage and develop their brown coats in six months. Calves are usually weaned from their mothers at three to five months of age.

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Habitat

Elk were once found throughout much of the Northern Hemisphere, from Europe through northern Africa, Asia, and North America. Extensive hunting and habitat destruction have limited elk to a portion of their former range. Elk populations in eastern North America were reduced as a result of over-hunting.

Today large populations of elk in North America are found only in the western United States and from Canada through the Eastern Rockies to New Mexico, and in a small region of the northern lower peninsula of Michigan. Elk prefer open woodlands and avoid dense unbroken forests. Elk can be found in coniferous swamps, clear cuts, aspen-hardwood forests, and coniferous-hardwood forests.

Behaviour

Elk are herbivores feeding on grasses, sedges, and forbs in summer and woody growth in the winter months. Woody plants include cedar, wintergreen, eastern hemlock, sumac, jack pine, red maple, staghorn, and basswood.

Adult elk usually stay in single-sex groups for most of the year. During the mating period known as the rut, mature bulls compete for the attentions of the cow elk and will try to defend females in their harem. Rival bulls challenge opponents by bellowing and by paralleling each other, walking back and forth. This allows potential combatants to assess the other's antlers, body size and fighting prowess. If neither bull backs down, they engage in antler wrestling, and bulls sometimes sustain serious injuries.

Dominant bulls follow groups of cows during the rut, from August into early winter. A bull will defend his harem of 20 cows or more from competing bulls and smaller predators. Only mature bulls have large harems and breeding success peaks at about eight years of age. Bulls between two to four years and over 11 years of age rarely have harems, and spend most of the rut on the periphery of larger herds. Young and old bulls that do acquire a harem hold it later in the breeding season. A bull with a harem rarely feeds and he may lose up to 20 percent of his body weight. Bulls that enter the rut in poor condition are less likely to make it through to the peak conception period or have the strength to survive the rigors of the oncoming winter.

Bulls have a loud vocalization consisting of screams known as bugling, which can be heard for several kilometres. Bugling often occurs in open environments such as parklands, meadows and areas bordering woodlands, where sound can travel great distances. Females are attracted to the males that bugle more often and have the loudest call. Bugling is most common early and late in the day and is one of the most distinctive sounds in nature, akin to the howl of the grey wolf.

Threats

The most significant natural predator of elk are grey wolves. This forms an important predator-prey relationship, whereby wolves will normally concentrate their efforts on weak or older elk, thereby actually strengthening the herd. In spring, newborn elk calves are also vulnerable to bears and even coyotes and wolverine.

By the turn of the century, hunting posed a threat to wildlife populations such as the elk in Beaver Hills, considered to be one of the last herds in Canada by 1903. Five concerned residents of the area proposed to the federal government that they would deliver at least 20 elk to a reserve around Astotin Lake, in return for the government reimbursing them for the cost of fencing the land. This agreement may have

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been the beginning of Canada's game laws. The herd that was delivered had never been crossed with other elk and thus are today one of the few, and possibly the only, herd that has not been hybridized.

Besides hunting, diseases are another major threat to wild elk. Chronic wasting disease (CWD) is an emerging infectious disease of North America's deer species. Since the early 1980s, when it was first detected in wild, free-ranging animals in Colorado and Wyoming, the disease has spread to mule deer, white-tailed deer, and elk in 22 US states and 2 Canadian provinces. CWD is a serious threat to our herds of deer, elk, and even moose. The story of how this disease epidemic will progress is still unfolding. There's no instance of the disease diminishing in any herds that have become infected, even after 25-30 years. The only good news here is that CWD spreads relatively slowly among animals once a population of deer or elk becomes infected.

The most significant overall decline in elk numbers came with the destruction of their habitat throughout large portions of eastern North America as Europeans settled on this continent.

What We Can Do To Help

The best way to help elk populations is to protect large areas of wilderness. This not only supports elk, but a myriad of other species that rely on critical habitat, from wolves and bears, to songbirds and waterfowl, to plants and microorganisms. In addition we need to be able to tolerate large carnivores and not eradicate them for their own species survival but also because they can be critical in maintaining healthy elk populations.

In some areas, elk have also been reintroduced to their former habitats from populations in western and northern Canada. Agencies and state and provincial governments need to work together to provide a strong parks system to protect iconic wildlife such as elk.

Other Interesting Facts

--- Elk have played an important role in the cultural history of a number of peoples. Pictograms and petroglyphs of elk were carved into cliffs thousands of years ago by the Anasazi of the southwestern U.S. More recent Native American tribes, including the Kootenai, Cree, Blackfeet, Ojibwa and Pawnee, produced blankets and robes from elk hides. The elk was of particular importance to the Lakota, and played a spiritual role in their society.

--- Elk have incredibly strong shoulder and neck muscles to be able to hold their large antlers and joust with other males.

--- Elk antlers are shed in the winter after the rut.

Where & When to view elk

Today, large populations of elk in North America are best observed in large tracts of pristine wilderness and within several national parks such as Jasper, Banff, Yellowstone and Grand Tetons. As elk are active year round they can be viewed in any season and are often heard in September and October during their rut.

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Bibliography

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