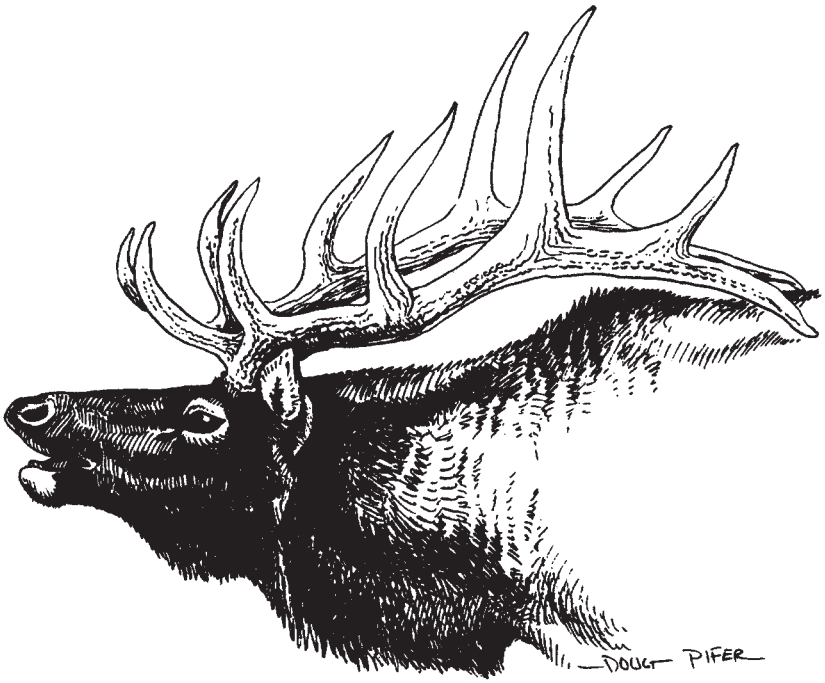
Wildlife Note—33
LDN0713

# Elk




Before white settlers arrived in Pennsylvania, elk (*Cervus elaphus*) lived throughout the state, with concentrations in the northcentral and Pocono Mountains. By 1867 the species had been extirpated; ultimately it became extinct throughout its range, which included New York and New England.

Today, elk inhabit portions of Elk and Cameron counties, and are being seen more and more in Clinton and Clearfield counties. The animals are descendants of elk released by the Pennsylvania Game Commission between 1913 and 1926.

The word "elk" comes from the German "elch," the name for the European moose. The elk is also called "wapiti," an Indian word meaning "white deer," probably referring to animal's sun-bleached spring coat or its light-colored rump.

The elk is the second largest member of the deer family in North America; only the moose is larger. Many Western states, several Canadian provinces, and a few Eastern states – including Pennsylvania – support thriving elk populations, and in those places the elk is a popular big game animal.

**Biology**

Elk are much larger and heavier than white-tailed deer. A mature male elk, called a bull, stands 50-60 inches at the shoulder and weighs 600-1000 pounds. Females, or cows, weigh 500-600 pounds.

Elk have a summer and a winter coat. The summer pelage is short, thin and colored reddish brown. In winter, long, coarse guard hairs overlay wooly underfur. At this time, an elk's body is tawny brown or brownish gray, with the neck, chest and legs dark brown, and the underparts darker than the back. Buffy or whitish fur covers the rump and the 4- to 5-inch tail. Sexes are colored essentially alike. Young elk, called calves, are dappled with spots.

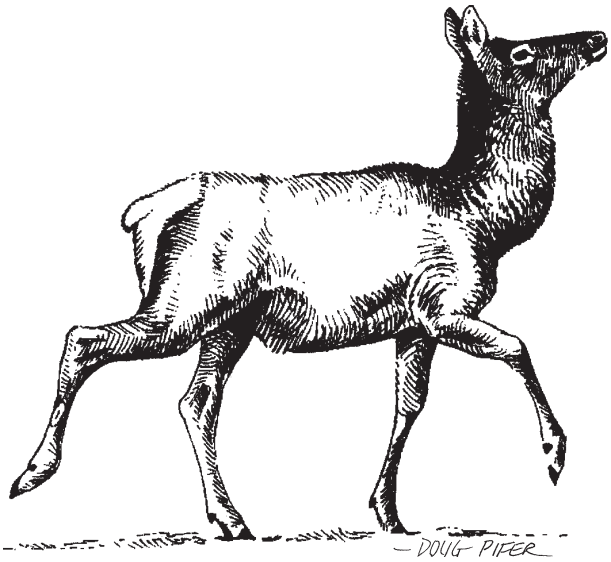
Strong muscular animals, elk can run 30 miles per hour for short distances, and can trot for miles. They jump well and swim readily. Their senses of smell and hearing are keen.

Cow elk often bark and grunt to communicate with their calves, and calves make a sharp squealing sound. The best known elk call, however, is the bull's bugling. Bugling occurs primarily during the mating season. It consists of a low bellow that ascends to a high note, which is held until the animal runs out of breath, followed by guttural grunts. Cows also bugle at times.

Each year, a bull grows large branching antlers that sweep up and back from the head. In May, two bumps start to swell on the animal's skull, pushing up about half an inch per day. The growing antlers are covered with a soft skin called velvet. This covering contains blood vessels which supply growth materials to the enlarging antlers.

Yearlings usually grow single spikes 10-24 inches in length, while older bulls may produce racks with main beams 4-5 feet in length and having 5 to 9 tines to a side. An elk with a total of 12 antler points is called a "royal" bull; one with 14 points is an "imperial." Before the autumn rutting season, the velvet dries and is shed or rubbed off. Bulls carry their antlers into late winter or early spring.

Elk are primarily grazers, eating a variety of grasses and forbs. In winter, they paw through snow to reach grass, or turn to twigs, buds and the bark of trees. Among trees and shrubs, early successional species such as aspen, willow, and flowering dogwood are important to Pennsylvania elk. When available, acorns will make up a portion of elk's fall diet. They also browse oak, striped maple, black cherry, Juneberry and witch hazel. They drink from streams and springs and, if necessary, during the winter they get water by eating snow.




The mating season is September and October. Bulls bugle invitations to cows and challenges to other bulls. The bulls fight with each other, joining antlers and pushing and shoving. Battles rarely end in serious injury; the weaker bull usually breaks off the confrontation and trots away.

Like their western counterparts, Pennsylvania bull elk amass harems of 15-20 cows. Most harems are controlled by large mature bulls, although younger males, which hang around on the fringes of the groups, may also share in the breeding.

About 8 1/2 months after she is bred, a cow gives birth to a single calf rarely twins - in May and June. A calf weighs about 30 pounds and can stand when only 20 minutes old. Within an hour it starts to nurse, and it begins feeding on vegetation when less than a month old.

In spring and summer, bulls go off by themselves, living alone or in small groups. Cows and calves tend to remain in family units composed of a mature cow, her calf, and immature offspring from the year before. Sometimes several families band together. An old cow will lead the group, barking out alarm calls and guiding the band away from intruders. In hot weather, elk bed down in the shade of dense timber. They prefer not to move about in heavy wind.

Potential lifespan for an elk is more than 20 years. Pennsylvania elk die from hunting, old age, disease, vehicle collisions, and poaching.

Brainworm is a parasitic nematode (*Parelaphostrongylus tenuis*) that sometimes kills Pennsylvania elk. The nematode is common in the eastern United States and Canada. Its primary host is the white-tailed deer, which it does not normally harm. Elk pick up the parasite from snails - an intermediate brainworm host - which they inadvertently consume while grazing. The worm eventually reaches the brain and spinal column, causing death.

**Habitat**

Elk are attracted to forest clearcuts, revegetated strip mines, grassy meadows, open stream bottoms, and agricultural lands. Shy animals, they tend to avoid contact with humans, although they will venture into settled areas to reach favored food sources.

Pennsylvania's elk live in northcentral Pennsylvania.

The Game Commission and state Department of Conservation and Natural Resources (DCNR) manage public lands to make them more attractive to elk. The agencies create and maintain high-quality foraging areas and limit disturbance by humans. Elk habitat enhancement projects also benefit deer, wild turkeys, grouse and other wildlife.

**Population**

From 1913 to 1926 the Game Commission released a total of 177 elk in Blair, Cameron, Carbon, Centre, Clearfield, Clinton, Elk, Forest, Monroe and Potter counties. From 1923 to 1931 a hunting season on antlered bulls; hunters took 98. Elk were then protected for 70 years.

By 1940, the released elk and their offspring died or were killed everywhere in the state except for those in Elk and Cameron counties, which was, interestingly, the area where last native elk was killed. In the first elk survey conducted by the Game Commission and DCNR in 1971, 65 were counted by ground and aerial spotters. By 1980, the number of elk counted rose to 114. In 1992, the ground spotters were eliminated from the survey and the herd was estimated to number 183. In 2001, survey work indicated the herd contained more than 700 elk. That same year, the Game Commission once again had an open, but highly regulated elk hunt. Pennsylvania's elk herd continues to thrive and provide unique hunting opportunities for a limited number of hunters each year.

**Wildlife Notes are available from the**
**Pennsylvania Game Commission**
**Bureau of Information and Education**
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**www.pgc.state.pa.us**
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