## Extraordinary Bulls Being Studied In Pa.

Unusual bulls in the vicinity of this rural community "ring more bells" for outdoor enthusiasts than a popular song using the town's name many years ago. The bulls are Rocky Mountain elk which have their primary range about three miles east of the town in the fields and forests bordering U.S. Route 120.

The bulls are part of a protected herd of about 80 elk, one of the two elk herds maintained in the eastern U.S.—the other group featuring 25 animals in the Jefferson National Forest

of Virginia. The Pennsylvania herd is decended from Rocky Mountain elk brought into several northwestern counties between 1913 and 1926. By the early 1930's, the herd became entrenched in southern Elk and Cameron counties where they remain today.

This unusual animals, named wapiti by the Indians, is being studied by Dr. John L. George and associates of The Pennsylvania State University. From two years of continuous field analysis, they have already

determined several herd characteristics for these animals on the Elk State Forest, State game land, and private lands.

The Penn State studies are supported by the Pennsylvania Game Commission and the Pennsylvania Bureau of Forestry. Working on the research are John Eveland, research assistant in the School of Forest Resources, and Nick B. Hunter, graduate assistant from Leechburg.

The Pennsylvania elk live within an area of roughly 70 square miles where Elk and Cameron counties join. Within this range are sections where the wapiti spend about 90 per cent of their time in high-yield feeding areas such as clearcut plots, food plots planted by land managers of the Pennsylvania Game Commission, and other cultivated and uncultivated or fallow fields.

Herd data varies from year to year. Right now there are about 13 antlered bulls, eight spiked bulls, 37 mature cows, seven immature cows, and 12 calves. That makes a herd of about 77 elk as the time for calving approaches.

Except for the mating season in September, most of the older bulls remain on the primary bull range three miles east of St. Marys. Here-with patience, luck, and a good pair of binoculars-travelers can occasionally see a bull or two feeding in the evening along the fields near U.S. Route

Cows, on the other, spend most of their lives some nine miles south of the bull range, in an area north of Benezette. Most mature cows are accompanied by a family group—the year's calf, a yearling from the previous year.

and possibly a two-year-old, either male or female.

Bulls migrate to the breeding grounds near Benezette by mid to late August. The cows and their family groups usually arrive first and are structured as "harems" when the bulls arrive. In the two years of the studies, the breeding area was occupied by six or seven harems with as many herd bulls.

The first "bugling" by the bulls, signaling the mating period, is heard in the breeding area by late August. The bulls are quite vocal in the late morning and early evening—and all night during clear, moonlight nights. The peak of bugling takes place around the 23rd of September. The cows come into heat for 17 hours in each 21 days. The mating period lasts for about five weeks.

The breeding grounds of the Pennsylvania elk herd are confined mostly to a limited area north of Benezette. Due to the small size of the total herd, the number of animals within a harem at breeding time averages about six. This may include, for example, two mature cows and their calves and a yearling cow. It may vary to include three cows, one calf, and a yearling bull.

Harem territories may average about 200 acres in size. No fights were observed between bulls in the two years of studies. However, territories were

respected. Bachelor bulls seldom established territories but mored freely throughout the breeding area in search of cows in heat.

Most calves in the Pennsylvania elk herd are the born during the last week in May and in early June. Thus, the gestation period for elk extends about 8½ months.

In October and early November the cows and their families leave the breeding grounds and follow the bulls north toward the primary bull range east of St. Marys. December marks the return of the cows and families to their primary range north of Benezette, leaving the older bulls in the St Marys area.

As spring approaches, the cow familes move to an area near the Winslow Fire Tower north of Benezette where they are most easily seen Here they feed on new grasses in fallow fields until mid-May, when they return to secluded areas where they can have their calves.

Part of the Penn State studies are comparing the effects of elk, white tailed deer, and small mammals such as the meadow vole upon farm and non-farm habitat. Landowners, foresters, and game protectors want to know what effect such animals have on forest and clearing regrowth.







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