

# Elk Problems in Montana

ROBERT F. COONEY

*Director, Wildlife Restoration Division, Montana Fish and Game Department, Helena, Montana*

THIS paper deals with elk problems in Montana and management practices which are being applied in working them out. Many of the aspects of this discussion appear to apply widely throughout the elk ranges of the west.

We are frank to admit that we have not solved all of our problems. We are working with them and have gained much by observing what neighboring states have done in similar situations. One of the highlights of this program has been the close cooperation with the landholders and public agencies responsible for the management of the land.

## PAST HISTORY

As a basis for this discussion, it would be interesting to glance for a moment into the past. The journals of Lewis and Clark describe an abundance of game 145 years ago that seems almost unbelievable to us. For the most part, these animals were found on the prairie and along the river bottoms. Vast numbers of elk ranged with the buffalo, deer, and other game.

With the coming of white settlement, this huge abundance was soon wiped out. In four years, between 1880 and 1884, the northern herd of buffalo, estimated to number a million animals, was almost completely annihilated by hide hunters. Elk fared little better. By the turn of the century, only small remnants were found well back in the more inaccessible mountain ranges.

With this alarming low, came the thought that perhaps game was not limitless and that it might be possible to

lose entirely an important resource. With the realization came the establishment of Montana's first Fish and Game Commission and Department. The first State Game Warden was appointed in 1901.

For a time, elk were entirely protected. The first plant from Yellowstone Park was made in 1910. This marked the beginning of the trapping and transplanting program that in 25 years accounted for approximately 1,400 elk having been moved. By this program, 32 elk herds were established. Game preserves in several areas aided in bringing back the elk. We now have approximately 40,000 elk in the state.

The restoration of not only elk but other game animals has been accompanied by many problems. This has been due chiefly to the fact that other important uses of the land have developed through the years. These include ranching, farming, lumbering, and mining. Game must of necessity be fitted as harmoniously as possible into this present day complex pattern.

## CONSERVATION COMMITTEES

The development of conservation committees has been one of the most helpful means of working out difficult and sometimes controversial situations. The Galatin Conservation Committee was the first to be formed. It came into being 15 years ago when a heated argument was in progress in that area between big game and livestock interests. It was a case of badly needed winter range for an important elk herd conflicting with well-

established livestock use. A dead-lock had been reached with neither side willing to compromise.

The Committee was formed by clear-thinking individuals who saw that a reasonable give and take on both sides would be necessary. It was composed of representatives of all groups interested in the area, including the cattlemen and woolgrowers, the Forest Service, the Park Service, guides and packers, sportsmen, and the Fish and Game Department. The group met and rode horseback out over the range in conflict. They then sat down and worked out a plan of use that has been operating effectively ever since.

One of the adjustments made at that time was the shifting of several sheep ranges into areas of higher elevation, where forage was inaccessible to elk during the critical winter months.

Twice each year, a field inspection is made on the range. The Committee's recommendations have been considered very carefully in working out other problems which have developed from time to time.

In more recent years, four additional conservation committees have been formed on problem areas. In each, the method of working out solutions has been the same.

Much basic information regarding big game numbers, distribution, sex ratios, annual increase and range condition, has been gained throughout the past several years. In obtaining this information, full advantage has been taken of the Pittman-Robertson program which has made additional funds available within the State for such work.

The Forest Service has cooperated closely in this program.

#### THE GALLATIN CANYON RANGE

One of the most interesting cooperative projects which is being worked out

at the present time is a study of the grazing capacity in terms of elk of the Gallatin Canyon winter range. This area has supported for many years one of the state's most important herds of elk. The numbers have fluctuated through the years between two and three thousand head.

Concentrations of elk, particularly during severe winters have lead to undesirably heavy utilization of forage on exposed ridges and south slopes. In order that this condition could be remedied, it was felt necessary to determine as accurately as possible the carrying capacity of these winter ranges. For this purpose, a range technician has been assigned to the area to prepare a forage inventory using the standard range reconnaissance method. Fortunately, the area had been thoroughly covered by an aerial survey so that aerial photographs were available for typing in the field. The project is of particular interest as it marks the first time that this method has been used in Montana to determine range grazing capacity in terms of elk.

Palatability tables have been prepared for elk by observations made in this area and also on several other game ranges of similar type. Preference for various types of forage shown by elk was similar to that of cattle. As might be expected, however, elk used more weeds and browse than had been indicated for cattle on similar ranges. The cattle forage acre requirements are being converted to elk on a comparative body surface area basis.

It is expected that this project will be completed early this spring so that the information will be available as a basis for setting next year's hunting regulations.

Along with the forage inventory and the elk grazing capacity figure, necessary information is being gained regarding the present condition of important forage

plants on the heavily used sites. Reseeding and browse plantings are being carried out on an experimental basis in an effort to find ways of speeding up range restoration. The results of this project are being looked on with much interest as information gained from it may well be useable on other problem game ranges.

### ELK DISTRIBUTION

Distribution has been found to be one of the most important factors in elk management. Salt has become a commonly used tool here in the West in attempting to draw elk up off winter ranges as early as possible in the spring. This allows the maximum amount of growth on these critical ranges. The airplane has been found to be efficient in the placement of game salt in the more remote and inaccessible areas. In the past, it was difficult to distribute salt on these higher ranges sufficiently early in the spring due to the presence of snow and logged-in trails.

Salt as a management tool in moving elk has been particularly successful on several areas where heavily used natural licks were present on the winter range. In the past, elk tended to remain in the vicinity of these natural licks well into the summer. The effect was serious heavy utilization of forage for some distance around the licks. A very marked lessening in the use of these concentration areas has been noticed following adequate salting at higher elevations. The scars caused by former use about these licks are healing rapidly.

### WINTER RANGE ACQUISITION

The acquisition of vitally needed winter elk range has been found to be an additional important management tool. The Sun River area lying on the eastern slope of the Continental Divide has demon-

strated how a very difficult game problem was solved by the purchase of range.

For many winters the Fish and Game Department had carried on an intensive program of herding in an effort to hold approximately 3,000 head of elk back in the mountains off the private lands along the foothills. Although as high as 10 men had been used during the severe periods during those winters, the program was not successful. Elk were getting out on private lands during storm periods. Also, actual pushing of elk back into the mountains was causing a zone of heavy concentration. The result was the overuse of available forage. The only remedy seemed to be a drastic cut in the herd. Then, three years ago, the elk got a break.

Approximately 12,000 acres of land lying adjacent to the Forest boundary became available, and was purchased by the Fish and Game Department. In addition, state land was leased and also the Bureau of Land Management made available for wildlife use approximately 4,000 acres in the same tract. This unit made up an important part of the foothill range that the elk had been vainly striving to reach during past winters. A minimum of herding was therefore necessary in moving the elk onto this tract of winter range. It has been extremely interesting to watch the use that they have made of this area. It extends from the foothills several miles out into the prairie to the east. The herd of approximately 3,000 elk that have wintered there during the past years has shown a surprisingly even pattern of use.

There has been little difficulty in holding the elk on this range during the winter months. A relief from heavy winter concentrations back in the forest has already been noticed. There has been no serious use of private lands in the area

since the purchased unit has been made available to the elk.

Several other critical winter range areas have been acquired and are being developed. The result in each case has been very encouraging.

### HUNTING SEASONS

Special and extended hunting seasons have been found to be very effective in reducing damage on private property. These special seasons allow the Fish and Game Department to issue a given number of licenses to take elk from areas where the limited numbers do not warrant a general open season. Other degrees of hunting pressure have been obtained by the use of seasons restricted to either branch-horn or antlered bulls. It has been found that this type of hunting is particularly effective where an area is opened up to the hunting of elk for the first time. Extended seasons well into the winter have been used in numerous cases to hold elk off private land. They have also been used to obtain sufficient kill where elk remained in game preserves or closed areas until moved out by the snows of mid-winter. An example of this type of season is found along the northern edge of Yellowstone Park.

### FENCING

The use of haystacks by elk that have moved down onto private pastures presents serious problems in local areas. Fencing of these haystacks has not been practical unless they were in rather isolated locations. With the fencing of one or more haystacks, elk tend to move on to others in the same vicinity. Where this work has been conducted, the movable type panels have been found to be most practical.

Electric fences have been used in a few cases to check elk. The most success-

ful type was a variation of an electric deer fence developed in the State of New York. It is constructed on the outrigger principle; the electric fence itself being located  $3\frac{1}{2}$  to 4 feet out from an already existing fence. This presents a rather formidable barrier and has proven successful in checking the movement of elk onto private pastures where only a short fence of this kind was necessary. The cost of construction and the necessary maintenance would surely make this type of elk control impractical on a large scale.

### HERDING

Herdng as a method of keeping elk away from haystacks and private pastures has not been found particularly helpful. In most cases, where elk have become established, they would return to the stacks soon after the herder had left the area.

### FEEDING

The feeding of elk as a general practice is not considered desirable under Montana conditions. However, during emergency periods, and in limited cases, it is felt that it may serve a useful purpose. Although our experiences with this work are quite limited, it was noticed that carefully selected feeding stations were essential and that better results were obtained by placing hay at these locations every other day. It was noticed that by skipping every other day elk did not lose the urge to rustle, and were often found considerable distance from the feeding stations during the alternate days. Undoubtedly, the amount of hay to be placed out would vary with the conditions. Four pounds per day per animal was found adequate as a maintenance ration for elk in areas where a moderate amount of browse was available.

### COMPETITION WITH OTHER GAME

The conflict or competition that appears to exist between elk and other big game animals on critical winter ranges is an important consideration. Indications have been noticed that competition appeared to exist between elk and white-tailed deer on browse type ranges, particularly in areas where heavy concentrations of both species existed. This relationship is being considered carefully in any plans for the development of elk on ranges now carrying important numbers of white-tailed deer.

A further relationship that needs study is that of the possible competition between elk and mountain sheep on jointly used critical winter ranges. This condition was observed during a detailed study which was made on the Sun River area prior to the acquisition of the elk range.

At the time of the study, both mountain sheep and elk were concentrated upon the reef type emergency ranges during severe portions of the winter. It is planned to re-check these ranges now that competition from the elk has been almost entirely eliminated due to their present migration out to the winter range in the foothills.

There will undoubtedly always be elk problems. It has been encouraging, however, to find that solutions are becoming less difficult. A highlight in this regard has been the increasing use of basic range management information by game administrators.

We are all heading toward the same goal—the best possible use of the range resource. This may be by livestock, game, or a combination of the two. Here, then, is an excellent common ground upon which we all can meet to discuss and work out our problems.



### HORSES AND MEN

The Australian Pastoral Review and Graziers' Record, January 1951, philosophizes about horses and men: The average horse has far more sense and intelligence than the average man and he would tell the latter so if he could, but horses have their own ways of revealing what they know.—Reg'd C. M. Reynolds.