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SUPERVISION – Umatilla
General

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To: Files

From: John G. Clouston, Range Examiner

The problem of properly managing big game in the Blue Mountains of eastern Oregon is acute. There is contention between interested factions as to proper methods of control. This contention arises from lack of definite knowledge of the factors which bear on the case. These factors are: numbers of game animals, distribution of game animals, condition of summer and winter forage for game, and ability of particular areas to produce this forage or carrying capacity of the range. The latter is the most important factor since no more game can be raised than the country can produce feed for. The principal forage used by game, especially in the winter time, is various species of browse or shrubs. Winter range is in more critical condition than is summer range because of the restricted useable area.

During the summer of 1942 an extensive survey was made on the Ukiah district of the Umatilla Forest and the north portion of the Whitman Forest to determine the condition of the forage, especially browse, for winter feed. Concerning this investigation, Mr. Mitchell in charge of Wildlife Management for Region 6 of the Forest Service has the following to say:

> "The summer range includes the high country of the Blue Mountains which are dotted with many wet meadows of varying size interspersed with large areas covered with lodgepole. The wet meadows furnish a considerable part of the feed both for game and livestock, and where both are using the range there is direct competition for feed. The lodgepole areas produce a certain amount of browse, principally huckleberry and some weed feed. Elk use the meadows at night, staying in the cool thickets during the day, and one can travel many miles through the country and not see a single animals. Tracks, however, were numerous and evidence of elk use was found in practically every place that we stopped. In none of the meadows seen did the use appear to be excessive. Generally, the grass and sedge in the meadows were in very good condition. On the other hand, the browse plants were all heavily used or killed. The principal browse plants—are snow brush, curl-leaf mountain mahogany, juniper, willow, elderberry, huckleberry, russet buffaloberry and ocean spray. Elderberry is really an ice cream plant and where elk can get to it, it is quickly killed out.
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> On all browse plants new shoots had been browsed this year. Huckleberry is principally a summer browse and stands much hard usage, but little, if any is available when two feet of snow covers the ground. Everywhere, however, it shows the effects of browsing. Mahogany trees were high-skirted and many of

the smaller stems broken down. Willow, generally, is dead, with the exception of a few large stems too strong for the elk to break down. Snow brush is 50% to 80% dead. Where new shoots appear, browsing has already been done this season. Bitter brush is much hedged, although little use had been made of this year's growth. Juniper is high-skirted and the smaller plants are hedged down, which shows excessive use. Buffaloberry and ocean spray—both have been browsed severely. Some ninebark was found in Pearson Creek but it did not occur in such amounts to be an important browse food. Black moss was quite thin and its presence in any of the areas does not occur in such quantities to furnish a great amount of food.

"When the elk herd was small, elk no doubt were able to winter in the forested areas even with four or five feet of snow; but as the population increased and the browse plants declined in productive food, the elk were forced to the lower open country for winter forage. During mild winters, they can still stay in the timber and feed on huckleberry browse and the small amount of moss available. Damage to farms did not occur until the elk were forced out of the higher elevations to winter. Now they winter principally on grasses found on the dry open ridges of the foothills, most of which are privately owned. The principal damage to farmers is the use of new grass on their lands held for spring pastures and the trampling of the soil. In spring the elk follow the snow line and consume the grass just about as fast as it grows, especially where they occur in large numbers. In some of these places as many as 150 or 200 animals are seen in one band. — The elk come out on these ridges at night and go back to the timber in the daytime, thus causing considerable damage by trailing.

"The area we saw did not show signs of overuse of grass and herbs, but may be used later in the season. The winter forage has been so greatly overused that an estimate of its capacity is impossible. It is not possible to bring back any of the browse plants under the present stocking, and for that reason the range cannot improve from its present condition. Without reduction in numbers, damage to private lands will increase.

"The elk have practically eliminated all beaver from this area because they have consumed or killed out the only food plants on which beaver can live. It is impractical to rehabilitate beaver food in the area because of the presence of the elk. Because elk and deer use about the same foods in winter, the deer population is very much in danger of heavy losses during the next normal winter.

"Beaver Meadows on the La Grande watershed, where no livestock have grazed for many years, is a favorite elk hangout both summer and fall. The wet-land forage plants in the meadow show only normal use but browse plants are all killed on the open areas and in the down timber jungles are hedged back a far as the down logs will permit. Sage is badly hedged on the exposed ridges. The Grand Ronde valley is about depleted of browse species.

> "In places huckleberry was heavily used. Elk sedge was generally used very close. Elderberry was stripped. Fleeceflower, which about covers the steep open slopes above the timber, had the seed stalks nipped on about 50% of the plants. On some localized areas as much as 90% of the plants had been cropped. Elk use in the wet meadows was not excessive at any place. —
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> "The ridge between Desolation Creek and Big Creek shows heavy elk use of aspen, bitter cherry, snowbrush, and sage.
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> — "Bone Point Lookout area which is winter range for both deer and elk. Browse plants are scarce and so overused that the amount of forage produced is very small. —
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> "Generally elk appear to be distributed over the entire area covered by this inspection. They are found singly or in bands of two to twelve. At no place could we definitely determine damage to grass or herbs that would be apparent to one not familiar with the particular conditions. In most places the combined use of livestock and big game is so closely associated that one cannot be separated from the other. Browse, however, is definitely depleted by elk and deer to such an extent that it contributes little to the winter food. Mountain Mahogany is generally high-skirted beyond the reach of deer and young elk. Black moss is thin and high-skirted. Snowbrush is from 60 to 75 percent dead and bitterbrush is dead or closely hedged so that its production of forage is small.
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> "The conclusions are that summer use, though heavy, is so well distributed that its effects are not noticeable except on browse. Winter use is mostly off the forest on dry grass ridges and slopes where snow depth is not too great for the animals. Huckleberry, one of the key species on the entire range, is much browsed and hedged but still furnishes much forage both summer and winter. Willow is killed out to a point where it is unimportant as a source of food. Huckleberry has been carrying the deer population the past few mild winter. A severe winter will undoubtedly cause severe loss in these animals.
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> "As long as private lands are available for winter and spring elk range, the present or a larger population can no doubt be maintained for a few years. But winter trampling and early spring use are causing a cumulative damage which sooner or later will exhaust the private lands and precipitate added elk damage to crops and fields."

Concerning the forage situation for big game in the Grant County area, Mr. Douglas, Assistant Regional Forester in charge of the division of Wildlife and Range Management, has said, concerning a trip made by him, Mr. Mitchell, and Dr. Shantz of the Washington office of the Forest Service, this fall:

> "Our observations showed a favorable seasonal growth where the plants were protected. Some of this year's bitterbrush shoots were 10 to 12 inches long. But

over a large part of the winter range, bitterbrush plants had been killed by mice during last winter. The base of the plants had been girdled and although annual shoots had started, they withered and dried at about half growth. Many old plants thus attacked will die and the loss on some areas will be 80 to 90 per cent. The mice also ate the crown of the bunchgrass stools and those plants are now dead. It was difficult to determine which forage suffered the greatest loss, the bunchgrass or the bitterbrush.

"In addition to this loss, grasshoppers had defoliated those bitterbrush plants missed by the mice, thus preventing seed production and maturity of the seasonal shoots. Not only were the leaves eaten on this season's terminals but the bark of the new shoots was consumed. This damage was serious over large areas in eastern Oregon and while the plants will no doubt recover, their production for this season was much curtailed.

"Mice damage was also prevalent in other parts of eastern Oregon and the damage may be much more widespread than we saw.

"Conditions therefore are greatly changed and there appears little we can do to improve or increase the winter forage on those critical ranges. In the event the approaching winter is normal according to previous standards, it looks like a heavy winter loss is imminent."

The numbers of elk and deer estimated to be using the Umatilla Forest on the Ukiah district (and this does not comprise all of Umatilla County by any means) for the past five years are as follows.

| | 1941 | 1940 | 1939 | 1938 | 1937 |
|---|---|---|---|---|---|
| Elk | 3700 | 4100 | 2500 | 2000 | 2000 |
| Deer | 5500 | 5850 | 2100 | 2400 | 2000 |

The large increase in 1940 over 1939 was due to winter counts which showed more game than were formerly thought to exist. The drop in 1941 was due to the belief that the 1940 estimate had been place too high.

Population of elk for the entire Umatilla Forest was estimated in 1941 to be 8,500 head while the carrying capacity for elk was estimated at 6,400 head. In order to bring population down to carrying capacity with a three year period and calculating the increase at 18% the following annual kill should be made: 1942, 2230 head; 1943, 2100 head; 1944, 2000 head. A sustained kill could then be maintained at about 1100 head for 1945 and thereafter. This presupposes of course the taking of females as well as males and would be basing management on the forage producing capacity of the range instead of numbers of animals.

It may be said that the grazing of livestock is producing the shortage of feed for game. No doubt there is competition for forage between domestic livestock and game on

summer ranges. However, reduction in numbers of domestic stock over the past years indicate that on winter ranges at least the game itself is responsible for depleted range condition. A record of these reductions on the entire Forest covering the same period for which game statistics are quoted above, follows:

Total number of animal units* permitted

| 1937 | 1938 | 1939 | 1940 | 1941 |
|---|---|---|---|---|
| 32,077 | 30,976 | 26,147 | 25,233 | 22,270 |

*An animal unit includes all cattle plus sheep converted to cattle at a ratio of 5 sheep = 1 cow.

This is a reduction of nearly 10,000 animal units in the past 5-year period.

The all-time high occurred in 1907 with 85,444 animal units while the war-time high in 1918 was 57,156. In addition, there has been a reduction in seasonal use not reflected in the above figures, which on an animal month basis would show even greater reductions.

{signed} John G. Clouston