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THE STATUS OF WILDERNESS GAME IN ALASKA

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The commonly held belief that wilderness types of wildlife cannot exist in close proximity to man or his land developments has helped to stimulate the recent establishment of immense game refuges in Alaska and a continuing agitation for additional wilderness areas and national parks. The belief stems from the early and permanent declines outside of Alaska suffered by wilderness species such as the timber wolf, grizzly bear, mountain sheep, and caribou which apparently coincided with the advance of civilization. In most cases it has been difficult or impossible to precisely identify proximate causes for such declines, though direct killing by man, diseases, change or usurption of habitat, or simply the presence of man or his cultural elements in the environment were undoubtedly involved. In Alaska at this time we have an opportunity to observe the reaction of various species and populations of wilderness types of wildlife to known influences. Our game research and management programs in most instances were initiated prior to significant human intervention in the ecology of these forms.

The present status of wilderness types of wildlife in Alaska often reflects the response of these animals to known levels and types of exploitation or other disrupting influences. A knowledge of these responses will aid greatly in efforts to both manage the wildlife and influence the nature of land usage and development to the ultimate benefit of man. Our planning is also aided by the results of studies recently completed which predict the growth of human population and industrial and other development in Alaska for the next several decades. For example, the population of the state should increase from the present 225,000 to between 800,000 - 1,000,000 by the year 2000. It is probable too that man's land developments will increase at least proportionately, and perhaps more than that because of the relatively primitive state of the land and its resources at present.

In discussing the status of Alaska's game here, I will make reference only to selected species which are of much concern and importance to the public. Animals known to be reasonably compatible with man, such as deer and black bear, will not be considered.

MOOSE

The present Alaskan population of moose is estimated at 90,000 animals, which is probably the highest level of abundance in historic times. The annual harvest may not have exceeded 4,000 animals prior to 1960, though in the past three years we have liberalized seasons and bag limits with the result that our 1962 harvest reached about 9,000.

Control of one important moose population in south central Alaska has been achieved by manipulating hunting pressure, but in most of the state there are simply not enough hunters to influence natural population trends. Range limitations and wintering conditions are still the major controlling factors.

Moose have shown themselves to be extremely compatible with man. A substantial population exists within the city limits of Anchorage, and they are a genuine nuisance in many locations. The animal withstands heavy harvests very well, particularly where only bulls are taken. In the Matanuska

Valley, 50 miles from Anchorage, the sex ratio (excluding calves) was altered by selective shooting to five bulls per hundred cows, but the natality rate remained as high, or higher than that in undisturbed populations. It is already apparent that Alaska's moose populations will not be endangered by substantial increases in our human populations or even by fairly extreme habitat disturbances. Proper manipulation of stocking levels through adequate protection and appropriate harvests will assure the moose of a prominent place in Alaska's fauna well into the future.

CARIBOU

There are presently about one-half million caribou in Alaska. The largest single herd occurs on the Arctic Slope and represents slightly more than half of our total population. Smaller herds exist south of the Brooks Range and there are scattered animals on nearly all suitable caribou habitat in the state. From historic records, it appears certain that caribou were far more abundant at certain times in the past than they are today. We tend to discredit old estimates of millions of caribou, however, for herds of known size presently appear to be excessively large in relation to the capacity of rather vast expanses of range to sustain them in good condition.

Neither direct exploitation (which amounts to an annual harvest of 20,000 - 30,000 animals) nor predation by wolves appear to be influencing caribou population trends at present. The animals also seem little affected by the usual extremes of temperature and snow, despite serious losses in southwestern Alaska during the 1930's and again in the 1940's due to heavy icing which sealed off the forage. We have recently found a rather high incidence of brucellosis, approaching 30 percent, in the Arctic caribou herd. This disease has also been found, though at a lower incidence rate, in the Nelchina herd which is the second largest in the state. Our studies of brucellosis in caribou indicate that this disease may be a powerful population control and that the Arctic caribou herd may be in imminent danger of collapse.

It is encouraging to note, however, that caribou populations apparently withstand direct exploitation by man without disruption of migratory movements or routine feeding and breeding habits. Similarly, they show no unusual fear of roads or other land developments. However, caribou are certainly not in a class with white-tailed deer as far as wariness and adaptability are concerned, and they will not adjust to altered habitat as well. Proper management will sustain caribou populations on large tracts of habitat that is not unduly disturbed. Refuges and parks may be useful or necessary to retain them in close proximity to centers of human populations, though the habit of wandering widely will always pose uncertainties about holding caribou on specific ranges.

SHEEP

The present population of Dall sheep in Alaska numbers between 35,000 and 40,000 animals. This is the greatest abundance of sheep that has existed in the state since the early 1940's when severe winter conditions drastically reduced their numbers. It appears that, with very local exceptions, sheep populations are still increasing.

We do not presently know what factors may be important in limiting the further increase of sheep aside from unusually severe winter conditions. Our 1962 harvest was only 666 animals and these were all mature rams. We are confident that wolf predation is of little significance and our range studies indicate that even the most abundant stocks are not approaching the

carrying capacity of their range. Diseases such as actinomycosis, coccidiosis, brucellosis and lung worm infestations are present and may become important factors at some high level of sheep abundance.

Sheep habitat in Alaska is not subject to development or alternate uses, and the future of these animals appears bright. We do not expect to ever deliberately manipulate sheep numbers through hunting pressure, and in consequence large natural fluctuations will undoubtedly continue. While drastic declines may be viewed with alarm by the public, biologists do not feel much concern. Our conservation education section, however, has a job cut out for it.

MOUNTAIN GOAT

The goat population in Alaska is virtually uninfluenced by man. From a population conservatively estimated at 15,000 animals, fewer than 600 are taken annually. Because goat habitat is seldom suited to development it will probably remain largely undisturbed in the foreseeable future.

GRIZZLY BEAR

We have little basis for estimating the total number of grizzly bears in Alaska, though it is evident that several thousand, perhaps at least 5,000 exist. The annual legal harvest averages about 140 animals. Regulations prohibit the taking of cubs or sows accompanied by cubs so the legal harvest has very little impact on the productivity of the bear population. We believe that intra-specific strife tends to limit bear density. It is also apparent that these animals shy away from roads and other land developments. They are highly incompatible with the presence of man and will decline drastically in the face of advancing civilization. Alaska's vast expanses of wilderness will, however, provide secure habitat for grizzly bears long into the future and the enormous park and refuge areas already established insure that substantial populations of grizzlies will always be maintained.

BROWN BEAR

Alaska brown bears are believed to number at least 11,000. The annual harvest averages between 350 and 400 animals. On Kodiak Island approximately 12 percent of the population is harvested annually and this take has been sustained for a number of years: hunting pressure elsewhere is considerably lighter. As with the grizzly bear, it seems most probable that intra-specific strife is the dominant controlling factor.

Except on parts of Kodiak and the Alaska Peninsula, brown bear habitat is typically timbered. This affords much protection to the animals and permits them to exist in closer proximity to man than is the case with grizzly bears. In addition, it appears that there is a marked psychological difference between brown and grizzly bears with the former being much less wary of man and his disturbances on the land.

We are now experiencing a problem on Kodiak Island involving bear depredations on cattle. It is expected that this type of strife will be increasingly common in the future though it will be of a localized nature. Most brown bear habitat will probably not be adversely affected by man and the future of the species is bright.

POLAR BEAR

Fears have been expressed that polar bear stocks in the seas adjacent to Alaska have been and are still being over-exploited. While all existing information contradicts the above view, certain conservationists have achieved the introduction of legislation in the Congress on several occasions to give the Federal Government complete jurisdiction over these animals. Since statehood, Alaska has accelerated polar bear research efforts and has imposed an active management program that assures against overharvests. Passage of Federal legislation which would cause abandonment of our present polar bear program and replace it with a static, remote control type of management would be a giant stride backward for the cause of conservation.

Actually the annual harvest of bears prior to about 1950 averaged about 120 animals, which were taken mainly by Eskimos. In the last decade the annual harvest has increased to about 160 animals, though trophy hunters using aircraft are taking an increasingly large percentage each year. However, the sex ratio of the Eskimo harvest was about fifty-fifty, whereas trophy hunters take at least 80 percent males. In consequence, the larger harvests of recent years probably have a lesser impact on the productivity of the polar bear population than the earlier harvests taken by Eskimos.

It is evident that the Arctic Ocean and adjacent seas provide ample and secure habitat for polar bears, and the only threat to their future welfare is over-exploitation. The regulation of harvests is a relatively simple matter and is already practiced by the governments of countries having access to polar bears. Methods are known and indeed are being practiced to assure the proper conservation of polar bear stocks.

TIMBER WOLF

The Alaska Board of Fish and Game recently classified the timber wolf as a big game animal. This, I believe, is a genuine expression of the enlightened attitude which Alaskans have toward their game resources. It is true that the State still pays a bounty on wolves, though the bounty is generally recognized as being no more than a subsidy to trappers. The Board of Fish and Game restricts the harvest of wolves in some areas and prohibits it altogether in other areas. Except for a few wolves taken by the Branch of Predator and Rodent Control of the Fish and Wildlife Service to alleviate predation on reindeer, neither the Fish and Wildlife Service nor the State has engaged in wolf control activities in the years since statehood was achieved.

The annual harvest of wolves is about 800 animals. This harvest has been sustained for many years and is apparently not excessive. However, hunting by use of aircraft in the Arctic has reduced wolf numbers in that region to a relatively low level and we have recently imposed a bag limit of two wolves for aircraft hunters operating there. Elsewhere in the state healthy populations of wolves seem compatible with the present stocks of big game animals and, surprisingly enough, with civilization. Numerous wolves are taken each year within ten miles of the City of Fairbanks by recreational hunters and trappers, and we have had no complaints from the public about the close proximity of these animals.

The wolf is an extremely intelligent and adaptable animal, and if Alaskans maintain the attitude toward it that is common today, the future welfare of the wolf is assured.

Having observed the responses of these several species of wilderness wildlife to known levels of exploitation and to pioneering land developments, I believe we can draw some tentative, though reasonably confident, conclusions:

1. With proper protection and appropriate harvests, all species of Alaskan game can be maintained at satisfying population levels where the habitat remains intact. I should add that our present management and research programs and the attitude of Alaskans toward their resources offer assurances that proper conservation measures will be observed.

2. Land developments such as roads and homesteads will cause loss of grizzly bear and caribou habitat, although large expanses of suitable environment will remain, both on the public domain and in already reserved lands in the foreseeable future.

3. Direct strife between man and brown and grizzly bears will cause permanent but local reduction in numbers of these animals. Such strife will probably also involve wolves as cattle ranching becomes more widespread.

4. Perhaps the greatest reason for optimism is an increasing public realization that wildlife and wilderness habitat have unusual and great values to man and that destruction or degradation of these natural endowments is not a worthy challenge to pioneers in our modern age of technology.