

Idaho Wildlife 2000
Pronghorn Antelope

by

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Russ is a Wildlife Management Biologist and wildlife program leader for the Idaho Falls District. His responsibilities include protection and enhancement of crucial winter ranges, fawning grounds, and migration routes for the largest pronghorn antelope herds in Idaho. Part of this program has included the intensive development of antelope water sources through both pipeline storage tanks and catchment "guzzlers".

**PRONGHORN ANTELOPE
HABITAT IN IDAHO
WILDLIFE 2000**

I. Population

A. Past

Early accounts indicated many antelope inhabited the state in the late 1890s and early 1900s; however, the Lewis and Clark journals indicated the antelope (and all big game) were scarce when they went through the state. A lack of adequate habitat may have been the biggest reason that populations were low. Populations reached an all-time low sometime in the 1920s; then as large range fires changed the habitat from tall brush to annual grasslands the population began to expand. The population again took a plunge in the middle 1950s. This die-off coincided with a severe winter of low temperatures and high snowfall.

B. Present

Antelope populations are at an all-time high in recorded history and continue to expand annually. The current population is about 25,000 animals. The number of large fires in recent years have improved the antelope summer range to a structure more suitable for antelope. Winter habitat may now be the limiting factor. Four of the past six winters have been severe and there has been some unusual pronghorn movements (some over 100 miles) and some corresponding unusually high mortality. Probably close to 100 pronghorn have been killed by the railroad in southcentral Idaho and an undetermined number by motorists throughout the state. This mortality can be directly attributed to the unusual winters, lack of suitable winter habitat and the unusual movements as the animals sought suitable food and cover.

Many of Idaho's pronghorn herds have reached optimum levels in many of their habitats. The density and productivity of pronghorn herds vary considerably in Idaho. In general, both density and productivity increase as precipitation increases because wetter habitats supply more nutritious forage and provide better hiding cover for new-born fawns. Annual fluctuation in precipitation can markedly affect pronghorn habitats, populations, and production.

C. Future

The goal of the Idaho Department of Fish and Game (IDFG) is to expand the antelope population in some areas to provide more recreational opportunity. They will attempt to keep the buck:doe ratio in August at or above 30:100.

II. Importance of BLM Habitat

Pronghorns are found scattered throughout the semi-arid areas of Idaho. Major populations are found in valleys of the Big Lost, Little Lost, Pahsimeroi, Little Wood and Lemhi rivers, Birch and Medicine Lodge creeks and the upper Snake River Plain in central and eastern Idaho. Smaller populations occur in parts of southwestern and southcentral Idaho. In certain localities, pronghorn range into higher elevation foothills or mountain ranges during the summer months.

Most of Idaho's pronghorn habitat is managed by the BLM (5,445,284 acres) but significant amounts are also managed by private landowners (2,001,223 acres), US Forest Service (854,897 acres), Idaho Department of Lands (382,721 acres), IDFG (23,188 acres), and others (615,928 acres).

Eighty percent of the pronghorns in the state receive year-long habitat requirements on BLM managed lands. This amounts to about 7300 hunter days with a value to the Idaho economy of about \$467,000.

III. Range/habitat status

In general, Idaho's pronghorn habitats do not support the densities which are characteristic over much of the best habitat in Wyoming and Montana. However, Birch Creek, Medicine Lodge, Little Wood and Little Lost areas support high density herds. Of the BLM administered lands 10 percent is in good condition, 35 percent is in fair condition and 55 percent is in poor condition for antelope.

IV. Problems/Progress

Weather and range conditions affect reproductive success and overall population levels more than any other combination of factors. Proper consideration for antelope in livestock management plans, potential land disposals, mining, and oil and gas exploration, can ensure quality habitat for future generations. However, population levels will vary depending on climatic conditions.

Winter ranges appear to be somewhat traditional, but antelope generally migrate only as far as necessary for good range. Winter distribution depends on weather conditions. During winters of 1975-1976 and 1976-1977, the antelope stayed in the valley mouths in areas where the snow depth was less than up the valley or on the Snake River Plain. Although some antelope wintered at the valley mouths during the mild winter of 1980-81, many stayed on summer ranges near the valley summits. During more severe winters, when snow depth exceeds 10" to 15", antelope may experience difficulty in obtaining sufficient forage.

While improving summer range, or at least the habitat structure, range fires often remove the shrubs necessary for winter survival and to a lesser degree the shrubs necessary for fawning cover. The Wildhorse Greenstripping/Shrub Restoration Plan proposes to improve 10,000 acres of former antelope and mule deer winter and summer range that has been burned. Implementation began in 1987 with about 500 acres of greenstrips and rehabilitation plantings. The main objective is to reduce the frequency of fires, protect any existing shrub areas, and rehabilitate key wildlife areas with a mixture of grasses, forbs and shrubs in the Wildhorse area.

Spring and summer distributions are also variable, and locations are more difficult to document due to wider dispersal of antelope. Spring migration generally coincides with break-up of snow cover. Vegetative cover is a key factor on fawning areas. Vulnerability to both avian and mammalian predators increases when vegetative cover decreases. Native range conversions to crested wheatgrass through seeding for livestock production in the late 1950s and early 1960s has reduced the plant diversity and cover in portions of antelope habitats. Many of these seedings remain as monotypic stands although some have been reinvaded by

native browse, forbs and grass. Most of these seedings are used by antelope, but the quality of habitat is generally less than on adjacent native ranges.

Extensive fencing, roads, farming, and human occupancy have restricted antelope migrations. Hay and grain fields that are used by antelope for foraging during spring and summer lack winter habitat requirements. Antelope are excluded from some farmland with woven wire or multi-strand barbed wire fences. These fences have restricted antelope movement because they are antelope-proof and allow passage only when poorly maintained or when antelope have learned to jump them.

BLM fences built before adopting the antelope specifications are difficult for antelope to negotiate and have caused some mortality. More fences have been built recently as livestock management on public lands becomes more intensive and crop depredation by antelope on private lands increases.

Highway right-of-way fences have also restricted antelope movements. Between Idaho Falls and Dubois the fence along I-15 has created a migration barrier that has kept antelope from their traditional winter range for a number of years. This population has dropped from about 700 animals to less than 70 because of this fence. BLM, IDFG and the State Department of Transportation are negotiating a modification in this fence that should allow antelope passage.

The presence of livestock on antelope range affects the habitat and behavior of antelope. Habitat is altered when there is direct competition for forage resources and when plant composition is altered by livestock grazing. Antelope behavior is affected when the presence of livestock and/or associated improvements cause stress and displacement. In some areas sheep bands have monopolized water sources forcing the antelope to other water.

Grazing systems should improve antelope habitat; however, some aspects of intensive livestock management may be in conflict. Pastures grazed before June 15 may influence antelope distribution during the fawning period. Compatibility between antelope and livestock is related to the number of animals using the same range, season of use, water availability and condition of the forage. Antelope usually move from pastures heavily grazed by cattle to ungrazed areas. Grazing pastures beyond 50% of the grass production before June 15 reduces forb availability as well as cover during this critical reproductive period.

Livestock pasture movements during the fawning period can be detrimental to antelope when livestock are concentrated and herded through fawning areas. Livestock on antelope winter ranges and migration routes can influence antelope movement, especially when livestock concentrations occur on preferred range.

Antelope summer distribution is greatly influenced by water availability. Although midsummer observations show antelope miles from the nearest water source, high density summering areas are associated with abundant water from springs, streams and seeps. In drier areas, livestock watering systems can improve antelope distributions where other habitat components

are present. However, special consideration is difficult under intensive grazing systems where livestock will be controlled by water manipulation. The placement of both sheep camps and large numbers of cattle at water improvements excludes antelope use. Rancher maintenance of water facilities can result in troughs being shut off after the livestock have left, but before the end of the dry summer. Breeding behavior could be disrupted when buck antelope set up territories around these water sources and then the water is shut off. As the troughs dry up, antelope are forced to move to other water sources.

Rangelands maintaining high antelope numbers have water available every 1 to 4 miles. BLM is installing self-sufficient wildlife waters in areas where the water is limited. More than 100 guzzlers are in place or will be in the next few years. Wildlife storage tanks off of livestock pipelines have also been installed. These are filled periodically from the pipeline and then the antelope are not dependant upon the operator keeping the pipeline full all the time.

Increasing antelope populations and more widespread agricultural activity have caused antelope to feed on crops. Many private hay fields receive heavy use from antelope, especially in summer and fall when irrigated hay provides high quality succulent feed and most adjacent rangeland is dry.

Developing energy and mineral resources and post-development land use practices will significantly alter antelope habitat in both developed and nearby undeveloped range. The impacts of these developments will be compounding and cumulative.

V. Public Interest

Public concern was expressed at meetings throughout the state to maintain and enhance the area's antelope habitat.

Hunter demand for antelope is high and is managed by a controlled permit system for firearm hunters. Controlled hunts have from 1.25 to 1.5 hunters applying for every permit. Archery hunts traditionally have been general seasons with low success rates. Recent high interest in archery, as well as better equipment and techniques, is increasing hunter pressure.

IDFG's objective is to provide maximum recreational utilization and hunting of antelope while maintaining or increasing current population levels. Recent population surveys indicate harvest levels are too restrictive and the permits are expected to be increased over the next 5 years. Because of the permit system it is easy for IDFG to obtain hunter success reports. Hunter success exceeds 70% in most hunts (statewide average is about 80%) and the proportion of bucks in the harvest usually exceeds 75%.

IDFG has identified concerns in the state that have been formulated into portions of the goals in IDFG Five Year Management Plans. Coordination between field level personnel from both agencies is essential to carry out the planned actions. Allotment management plan evaluation, water development for wildlife, and brush control will be coordinated through proper channels in IDFG according to the Master Memorandum of

Understanding between IDFG and BLM. Project development to enhance antelope habitat will be coordinated with IDFG before any project is initiated.

VI. References

Little Lost-Birch Creek Antelope Habitat Management Plan, Idaho Falls District, Big Butte Resource Area.

Curlew Habitat Management Plan, Burley District, Deep Creek Resource Area.

Wildhorse Greenstripping/Shrub Restoration Plan, Shoshone District.

Pronghorn Antelope, Species Management Plan, IDFG.

VII. Major Needs

Goal: Maintain vegetative diversity and cover in antelope areas primarily in the fawning areas.

Objective: All new vegetation manipulations in antelope areas will be planned under the antelope guidelines that have seed mixtures and sufficient leave areas for antelope.

Goal: Reduce restricted antelope movement and mortalities due to antelope proof fences.

Objective: Modify highway right-of-way fences which restrict antelope movements to allow antelope passage. Fences shall be modified to antelope specification, designed as take-down fences during peak migration periods, and/or designed to guide animals to safe passage corridors.

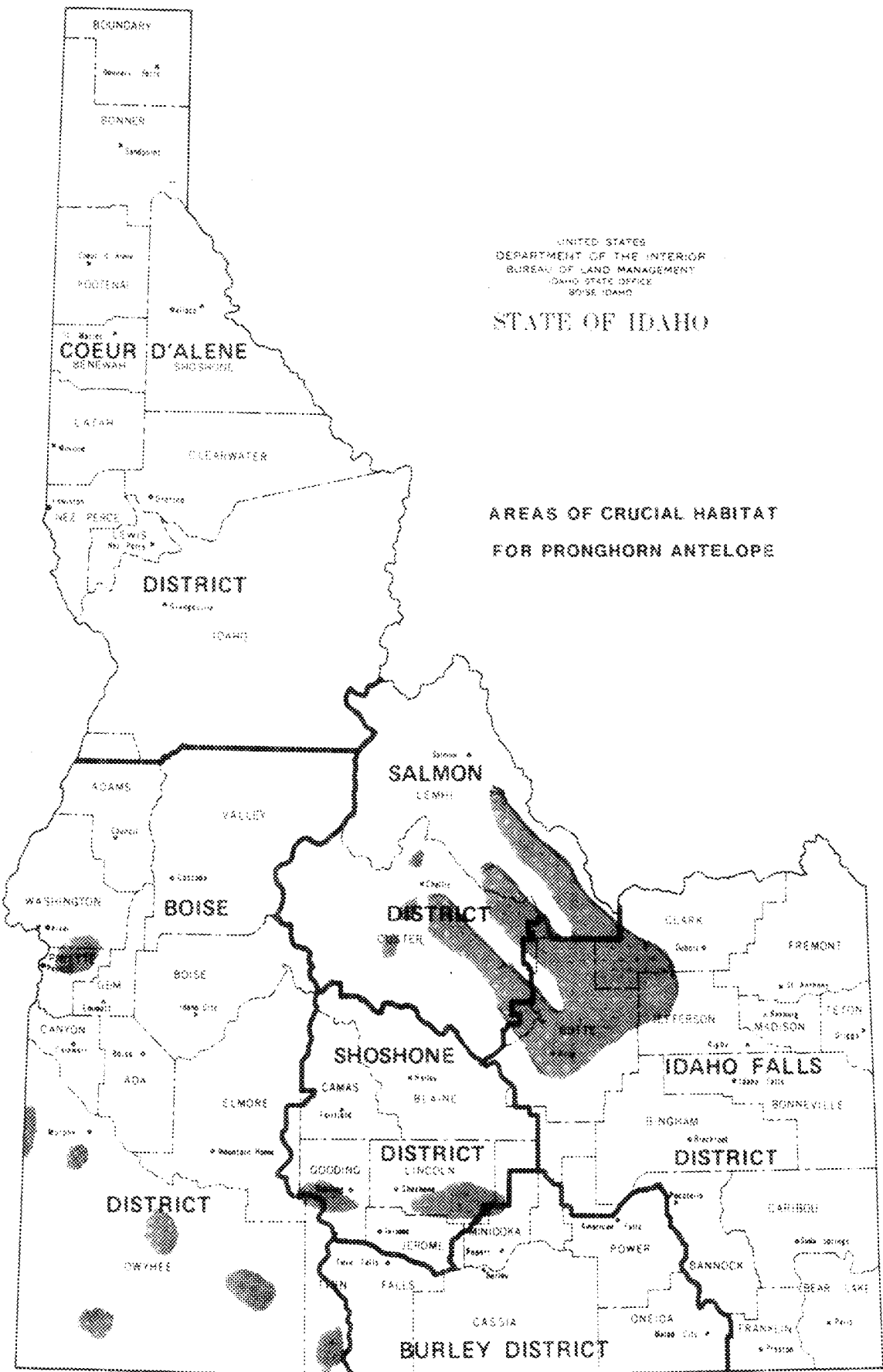
New pasture and allotment division fences in antelope areas will also be constructed to antelope specifications. Old fences on BLM lands are being modified to antelope specifications as money and manpower permit.

Goal: Reduce livestock-antelope conflicts for forage before June 15 and reduce livestock pasture movements during the fawning period.

Objective: Monitor allotments to insure that the pastures are not grazed beyond 50% prior to June 15. Work with the IDFG to review the allotment management plans and to take antelope needs into consideration. Work with the operators in allotments with fawning areas to avoid these important areas.

Goal: Increase water availability in antelope areas.

Objective: Install self-sufficient wildlife waters in areas where the water is limited. Work with outside groups and organizations to fund these waters where it is feasible.



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