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GAME ANIMALS

of COLORADO



STATE OF COLORADO — DEPARTMENT OF GAME AND FISH

Game Animals of Colorado

Text by HOWARD STIEHM Drawings by LYNDLE DUNN

Introduction

HUNTING AND FISHING are big business in Colorado. In 1958, sportsmen spent more than 81 million dollars—excluding license fees—in pursuit of wildlife. This money finds its way into many pockets. Sporting goods dealers, service stations, garages, restaurants, motels, dude ranches and grocers are among those who benefit directly. And at least one-third of this money is tourist money, new money spent here by out-of-state sportsmen. Your standard of living is higher because of our wildlife resource.

Our game animals, then, are worth worrying about from the most practical standpoint—the dollar sign. Add to this value the immeasurable pleasure that thousands find in the sight of a magnificent elk or deer, and we can agree that the wildlife resource is worthy of our best management efforts.

This job of maintaining wildlife populations is limited today by other uses of the land—agriculture, lumbering, watersheds, grazing, to name a few. The task is both complicated and important, and if it is to be done well, it must have the support of the people of Colorado.

This little booklet has been prepared to show you how the management of game animals is a job that requires careful, intelligent planning and work by trained and experienced people. With your understanding of the problems we face, we will be able to do a much better job of managing our valuable wildlife resource for this and future generations.

Charles Hjelte, *Editor*
Colorado Outdoors

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Managing Our Game Resource

IT WAS GOLD that first focused the attention of the world on Colorado and set the stage for the building of towns and cities. But it was beaver pelts that brought the first wandering trappers, and it was the meat of the bison, deer, elk and antelope which kept the mountain men alive through the long cold months of the trapping season. Later, the first permanent settlers depended upon these animals for most of their food.

As more and more settlers poured in—as ranching and mining grew into larger, more prosperous enterprises and cities mushroomed—wildlife, which was considered inexhaustible at first, began to disappear. The dwindling range and senseless killing, sometimes for only choice cuts of meat, for hides or antlers—or in the case of elk for their teeth—cut herds to a critically low point. Grazing game animals of the grassy plains, the bison and antelope, were on the verge of extinction for years. Elk and deer, browsing (brush-eating) animals, moved farther into the mountains.

With characteristic indifference the threat of extermination was ignored until shortly after the turn of the century when people realized that soon game animals might be completely destroyed. Hunting seasons were closed, predators such as coyotes, lions, wolves and bobcats were destroyed.

Slowly the herds began building back up. Deer began to increase rapidly in the twenties and are now found in every county in the state. Elk have spread over most of the state's mountainous country. An extensive transplanting program by the Game and Fish Department has boosted the antelope and bighorn sheep populations.

Many of the fundamental principles involved in better managing our game in the future can be illustrated by study of the mule deer, Colorado's most important game animal. The mule deer faces danger from a new quarter today, far different from the hunters' guns that nearly eliminated him before. The new threat arises from a single fact; there are too many deer for the amount of food available to them in winter.

During the summer, deer find practically unlimited food in the broad stretches of our high mountains. But as fall comes on, the deer migrate again to the lower valleys just ahead of the snow.

The total area of snow-free winter deer range is tiny in comparison



to the area of the summer range. Huge herds of deer compete with each other for browse. They are forced to compete with domestic livestock, too; wild and domestic animals share the same limited area. Under such pressure, the range begins to deteriorate. Preferred browse plants begin to die out. As the browse disappears—and the grass dies under pressure of cattle grazing—the soil is exposed to erosion, and washes off the hills and slopes into the rivers below. When the soil is gone there is nothing left to support either browse or grass. The result is the loss of three natural resources: the plants which protect the watershed, the soil and finally the game.

Colorado's mule deer may ultimately prove to be their own worst enemies. The overgrazing problem has but one practical solution—deer populations must be kept in balance with available food supplies. This can be accomplished by allowing hunters during open seasons to reduce each herd to a level that will allow the range to replenish itself. The problem cannot be solved by winter feeding, which intensifies the overconcentration and hastens the destruction of range in the feeding area.

One significant fact that many people do not realize—or refuse



PHOTO BY GEORGE D. ANDREWS

Deer depend upon sage brush for much of their food during the long winter.

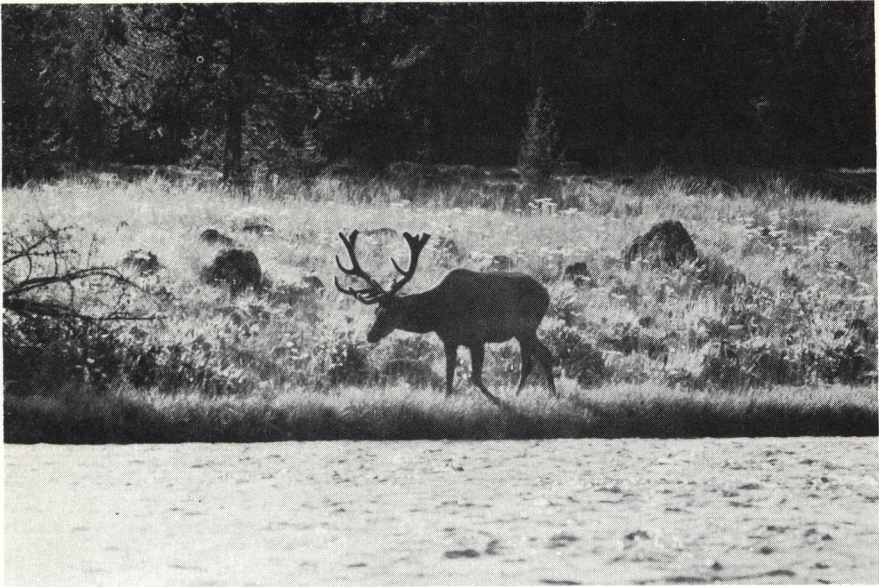


PHOTO BY GEORGE D. ANDREWS

Elk graze as well as browse, supplementing their grass diet with shrubs.

to recognize—is that the presence of a certain number of animals in a certain spot today does not ensure their presence there next week. Animals simply cannot be stored up like money in the bank.

If the animals escape death from predation, disease, drouth, starvation and everything else, they still must face the problem of old age, and even in a well-balanced population the old ones soon lose out and die. Harvest by hunters is certainly more humane than starvation. The men who take part in the hunt gain, beside food and sport, a heaping measure of healthful relief from tensions. The state's economy receives a hearty boost.

In any consideration of conservation, we cannot go wrong if we keep in mind the real definition of that word. Conservation means "wise use," and wise use means that if we are to be true conservationists, we must use the game on our wild lands just as we use the grass and timber. Therefore, conservation demands that we harvest our game in a wise manner and not let it fall prey to nature's harvest. It is in this manner, through management for wise use, that we can realize the greatest benefits from our great wildlife resource.

Mule Deer

COLORADO is host to three members of the deer family—deer, elk and a relative newcomer, the moose. Impressive sets of antlers borne by the males are their outstanding characteristics. They have hard, split hooves—and four stomachs!

Mule deer are the most common deer in Colorado, averaging one to every four persons in the state. As you can see on the drawing, mule deer are named after their large mulish ears.

Each year during January and February, with the battles of the mating season safely behind them, the bucks shed their antlers. Within a few weeks new antlers begin to grow. This growing bone is encased in "velvet," a live skin growth which the buck rubs off as he polishes his new combination of fenders and weapons on handy trees.

As weapons, the antlers are used mainly during mating season. When threatened by lions, bobcats, coyotes and eagles, deer depend on their keen sense of smell and hearing, their protective coloration and four-footed bounding gait to make their graceful getaway.

Mating, or "rutting" season extends through October and November into December. Young are usually twins born in May or early June. By fall they are weaned and remain with the doe until the following spring. Overbrowsed winter range takes the largest toll of fawns.

Mule deer run by making long, high jumps. Sometimes they hold their legs stiff when they walk. When they walk like this they almost always nod their heads and flap their short tails.

While feeding (browsing) mule deer prefer a brush diet that includes such plants as sagebrush, bitterbrush, mountain mahogany and serviceberry. Deer can usually be seen actively browsing in the subdued light of early morning or late afternoon.

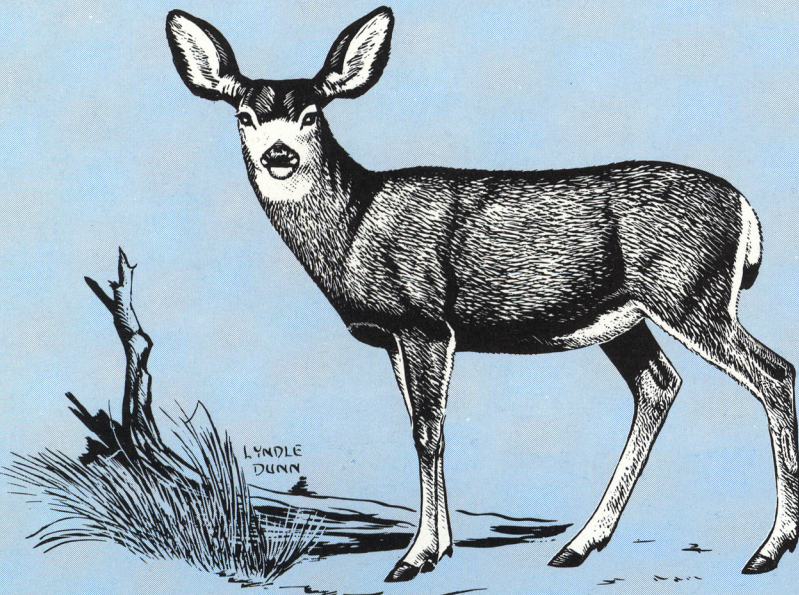
Deer sometimes travel long distances for food. Colorado's White River deer herd in northwestern Colorado travel as much as 100 miles from their high mountain summer ranges to their lower winter ranges on Piceance Creek. For a real thrill visit Piceance Creek country west of Meeker any afternoon in mid-April and see upward of 2000 mule deer.

Big game season is every fall and hunters take thousands of mule deer in Colorado. If they didn't the deer wouldn't have enough food to eat and would starve to death during the winter.

The white-tailed deer and the moose are shown on page 14.



MULE DEER BUCK



MULE DEER DOE

Elk

COMMONLY CALLED wapiti by the Indians, elk are much larger than the mule deer, ranging in weight from 400 to 1000 pounds. Color over the back and along the sides is yellowish-brown. The legs, neck and head are dark brown. Elk have a very well defined light-colored rump patch. Both bulls and cows have maned necks.

In the summer time elk inhabit grassy meadows at high elevations up to timber line. Then as winter approaches, the herds move to lower elevations, usually the valley floors. Here they remain throughout the winter, following the receding snow line back to the high country in spring.

Colorado is famous for several large herds of elk which can be found in the Gunnison, White, Elk and Troublesome river drainages, in the San Juan and La Plata mountains, and in Saguache park. Although elk have spread over most of Colorado's mountainous country, the important herds listed above play the most prominent role in setting management policies.

Elk commonly graze as well as browse, supplementing their grass diet with shrubs such as serviceberry, mountain mahogany, bitterbrush, snowberry and others.

The breeding season reaches a peak during September. A single calf is born, usually during June. Cows and calves frequently remain solitary during the summer but do occasionally band together with other cows and their calves.

In common with most wild animals wapiti are blessed with natural camouflage and excellent senses of hearing and smell.

Wapiti, unlike other members of the deer family, have canine teeth in the upper jaw. These canine teeth, called "elk teeth" or "buglers," are highly prized by man as a trophy of the hunt because they resemble beautiful agates.

The rigors of winter do not commonly take a heavy toll of elk. They are larger and stronger than deer, and can search farther and in much deeper snow for the food they require. However, unless wapiti herds are kept in balance with the amount of natural food produced each growing season, they soon overbrowse the available plants and destroy their own supply.



BULL ELK



COW ELK

Antelope

THE PRONGHORN antelope, an inquisitive creature that is something of a curiosity itself, was once nearly as numerous as the bison. At the turn of the century, only a few remained but today, after many years of intensive protection and transplanting, there are around 11,000 in the state, and a limited hunt is allowed each year.

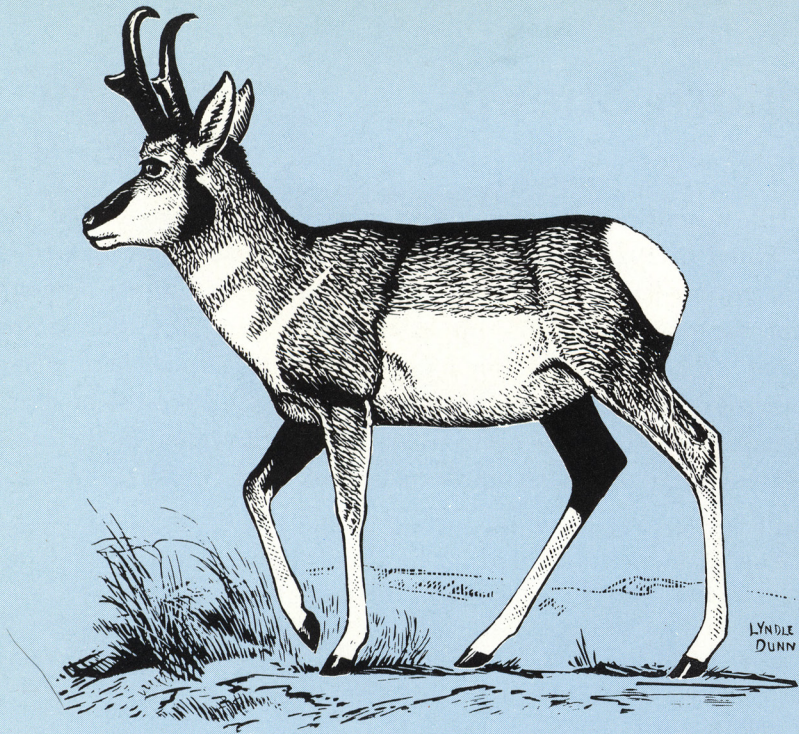
Curiosity played a part in reducing antelope numbers. Hunters attracted them within easy range by waving a handkerchief from a concealed position. The antelope was bagged as he approached to investigate the disturbance. Its hair is long, brittle and hollow. The horns are true horns, not antlers like those of the deer, with permanent bony cores. The outer sheath is shed just following the mating season in November and December. A new sheath begins growing from the tip of the permanent core downward toward the head. With the completion of this growth the point grows out from the tip. The does as well as the bucks grow horns. The doe's horns may be as large as a buck's, or she may have none at all; more often they are the size shown here.

Colors of the family group are generally alike, except that fawns are lighter. They are not spotted.

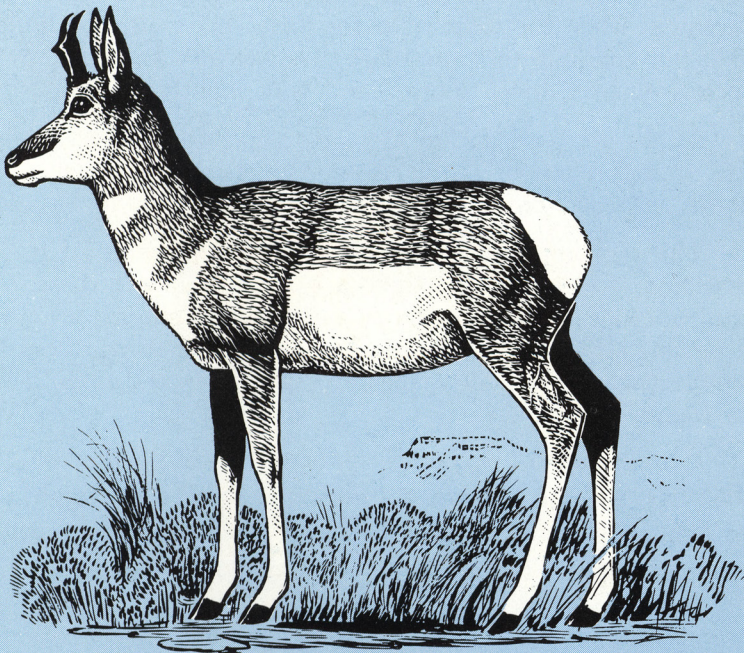
Antelope are primarily plains animals but are known to inhabit the pinon-juniper stands of the foothills regions. The most prominent herds in Colorado are located on the eastern plains, with the greatest concentrations in the Limon-Hugo area. The Chico basin east of Colorado Springs and the Warren Livestock Company lands northeast of Fort Collins also support considerable numbers. Somewhat smaller groups range in northwestern Moffat County and in South Park.

The pronghorn's diet consists of a broad variety of plants. They seem to have a definite fondness for browse, weeds, herbs and cactus fruit. Game and Fish Department biologists studying food habits frequently find stomach walls punctured by cactus spines, much as a pin cushion. Animals apparently suffer no ill effects from this diet.

Being small and rather delicate, pronghorns must depend largely upon their speed to escape their natural enemies, the coyote and the eagle. They are incredibly swift, often clocked by autos at speeds up to 50 miles per hour.



BUCK ANTELOPE



DOE ANTELOPE

Bighorn Sheep

OUR magnificent bighorn sheep were almost wiped out in the winter of 1923-24 under the ravages of disease. Protection from hunters and predators and a major trapping and transplanting program brought the population back up to about 5500 in 1952, but in the winter of 1952-53, over 150 bighorns died in the Tarryall herd alone, and other herds suffered smaller losses. The immediate cause of death was pneumonia caused by overconcentration each winter in the same small area where they suffered from lack of food.

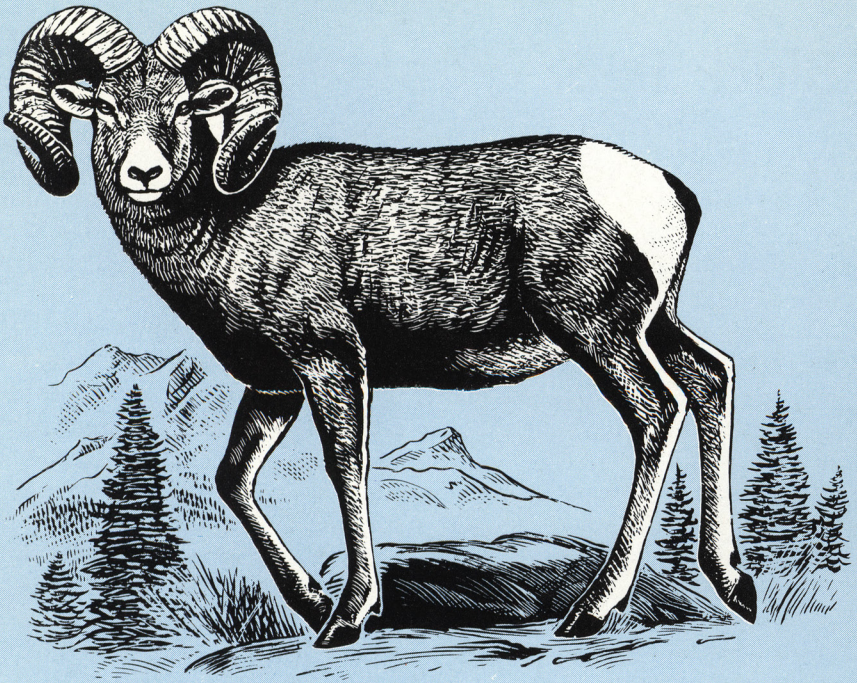
Still another factor threatens the bighorn. At best, the annual lamb crop in the average herd numbers only about 10 per cent of the total population. But in some herds, even this number is not produced. The bighorn is a polygamous animal, and each ram may number as many as eight or ten ewes in his "harem." If there are too many rams, the competition among them for the ewes may be so great that only a few lambs are produced.

Bighorn rams often weigh 200 to 300 pounds. The horns and skull alone may weigh 50 pounds. The massive horns are used as battering rams before and during the mating season of November and December when the rams fight for their "harems." The horns are not shed, but continue to grow more massive with age. The ewe's horns are less massive, much shorter, and only slightly curved.

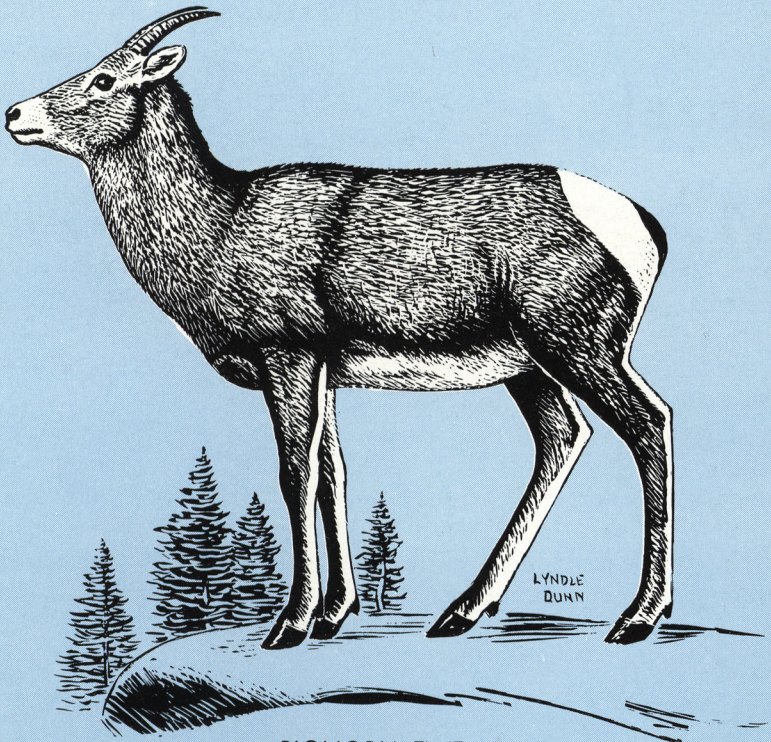
Lambs are born during May, June and July on inaccessible ledges safe from predators. Three days after birth the lamb can rival its mother in agility on the cliffs.

The bighorn relies largely on the granite crags of its home for protection, for no other animal is so nimble in the rocks. Food and weather conditions are also important to the bighorn. Seventy per cent of our bighorns live on the eastern slope, where their necessities of life—protective rocky country, plenty of winter food and mild weather—are found.

First described by Spanish explorer Francisco Coronado more than 420 years ago, the bighorn has always been a prized trophy. In 1961 the State Legislature voted the bighorn the official big game animal because it typifies the grandeur of Colorado's Rocky Mountains.



BIGHORN RAM



BIGHORN EWE

Black Bear

TAGGED by scientists as the "black bear," you'll find this bruin in cinnamon, brown and sometimes with white patches as well as in black. That is, if you see this bear at all, because the black bear is extremely shy and sight, scent or sound of humans will send him into hiding.

Cubs are born during the mother bear's long winter nap. They weigh only 10 ounces at birth in sharp contrast to the 250 to 450 pounds they attain in adulthood. Usually, twins are born, but sometimes there are triplets. By spring the cubs are ready to travel and join their parents in their feasts on fresh or decaying meat, grasses, berries, insects, honey or whatever is at hand at the moment.

Bruin is extremely popular with sportsmen and highly regarded for ridding the countryside of old carcasses of dead animals. Stockmen regard him with disfavor ranging into hostility because he is suspected of killing livestock. In most instances this is erroneous because the stock often die of other causes, and the big tracks of an innocent bear doing his job of disposing of the carcass often incriminates him.

By using dogs to track the real culprit whenever stock is killed, the bear's life would be spared so he could go on enjoying his life.

Grizzly

MORE hair-raising stories have been told about the grizzly bear than any other wild animal—some of those tales are true. Early day trappers and explorers had two fears; one was of Indians, the other of grizzlies. Now, if there are any grizzlies at all in Colorado, there are not more than a dozen or so in remote parts of the San Juan mountains where a management area has been set up by the Game and Fish Department, and they are protected by law.

Distinguishing characteristics of the grizzly are the concave facial outline (the black bear's is almost a straight line), the maned hump over the shoulders and its unusually long front claws. Their color ranges from yellowish to black, with a mixture of yellow which shades into black being characteristic. The hairs of a true grizzly are silver-tipped which gave him some of his early day names of "silver tip", "grizzles" or "grizzle" bears.



BLACK BEAR



GRIZZLY BEAR

White-Tailed Deer

ALMOST every hunting season there are hunters who report the sighting of a white-tailed deer or two high in the mountains.

That may be true, but the few that remain are found mostly in grassy river bottoms or along the foothills of eastern Colorado.

When frightened, these deer erect their tails, which are snowy white underneath. This danger signal makes it easy for the deer to follow each other and the leader when their safety is threatened. And it is this "flag" that gives the deer its name.

Unlike other deer, the white-tailed species slips quietly into the brush or timber when alarmed. There is no crashing retreat to betray its presence.

Moose

MOOSE are not native to Colorado, but like many other outsiders, they have found our state has many worthwhile attractions. Moose have wandered south out of their Wyoming habitat to enjoy the lush meadows and spruce-covered hills around Hahn's Peak and Clark, Colorado, north of Steamboat Springs.

These awkward-looking animals, uniformly dark brown or black in color, with scoop shovel horns and flat, curved-down noses, feed on foliage and bark of such trees as willow and birch. Another of their delicacies are aquatic plants for which they often submerge their heads or even their entire bodies.

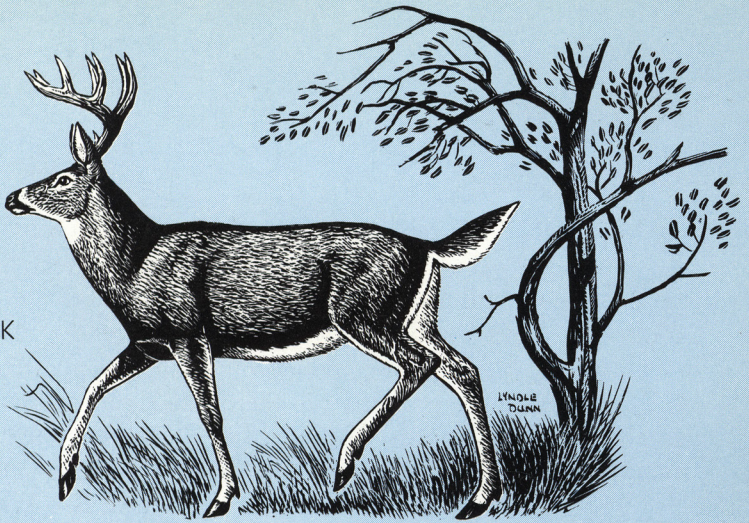
Rocky Mountain Goat

ROCKY MOUNTAIN goats are also newcomers to Colorado, having been brought down from Montana, South Dakota and Idaho and planted in the collegiate peaks and the Mount Evans areas.

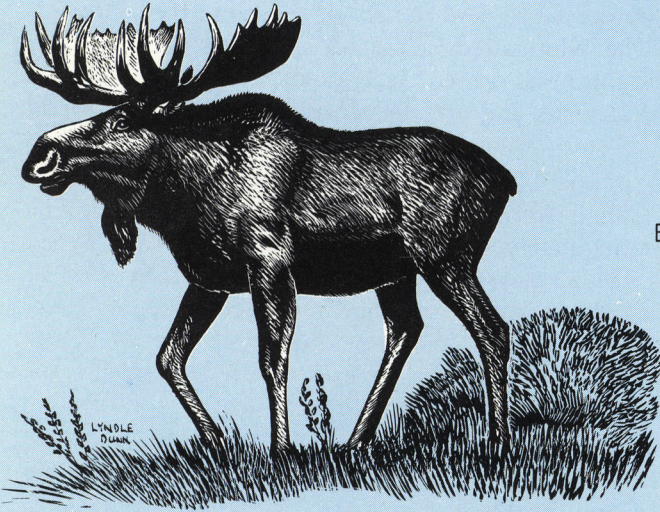
When it comes to climbing sheer cliffs, these mountaineers take a backseat for no other animal. They are slow, ungainly, but even the bighorn cannot follow where they go.

These goats, whose closest relatives are the serow of Japan and the chamois of the Alps, have long hair, guardhair, and a dense, woolly underfur, often stained to a yellowish tinge. Their coats are admirably adapted to keeping out cold, but do not shed water.

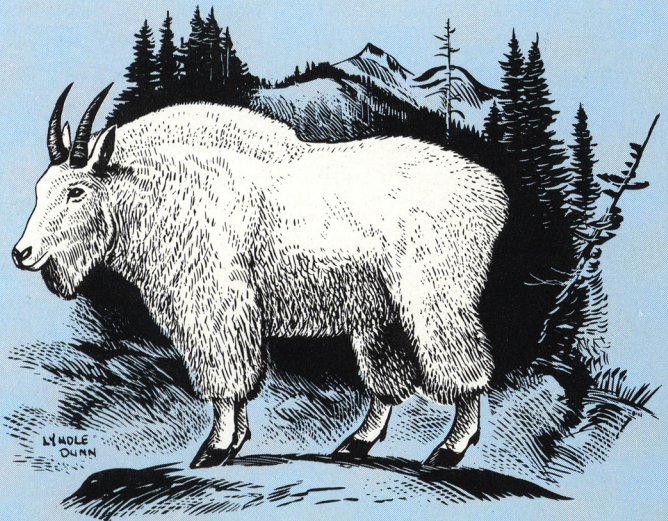
WHITE-TAILED BUCK



BULL MOOSE



ROCKY MOUNTAIN
GOAT



Rabbits

COTTONTAIL rabbits long held the distinction of being the most popular game animals. All classes of hunters from the novice to the expert and from grandpa to Willy hunt them. Over 250,000 cottontails alone are bagged every year by Colorado hunters.

There are two other species of rabbits (actually true hares) in Colorado which are important in their own right. The snowshoe rabbit, usually found in forests at the higher elevations, appeals as game to mountain men. Approximately 14,000 to 15,000 are bagged annually.

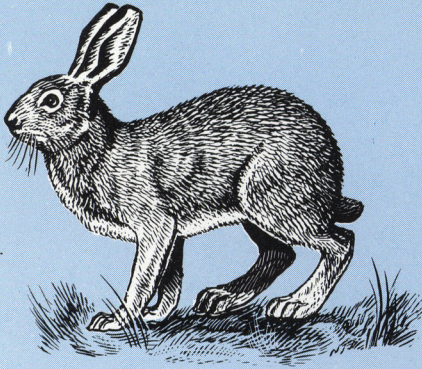
The other hare is the jackrabbit. We have two kinds in Colorado—the blacktailed and the whitetailed. The blacktail jackrabbit is found from the Wyoming border south, and in low elevations in the southwest part of our state. The whitetailed jackrabbit is found over most of our state except in the southeast corner. Jackrabbits can become a serious nuisance in agricultural areas and are therefore exposed to year round hunting.

Prolific as well as popular, cottontails produce two to four litters annually, normally mating from late winter until early summer. The young, weighing approximately one ounce, number from four to six in the average litter. In 15 days they become furred, their eyes open, and they are weaned. They shift for themselves after a month or so. Not so with the jackrabbits and snowshoe rabbits, however. Their young are born fully furred and with their eyes open. They suckle for a few days and then forage their own food.

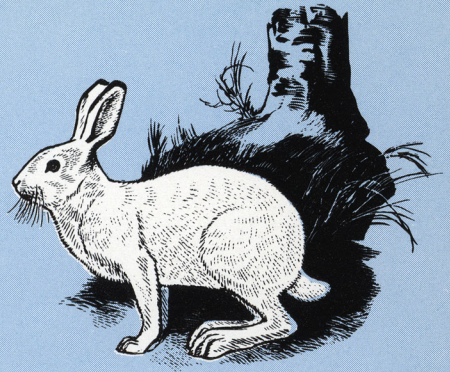
Being strictly herbivorous (plant-eating) animals, rabbits can cause serious damage to shrubbery and fruit trees. This threat can be reduced to some extent if the prunings from fruit trees are left on the ground.

Rabbit populations vary regularly from high to low and back on an eight-year rotation. The highs and lows occur in spite of long open seasons or complete protection, or any other management steps that have been devised.

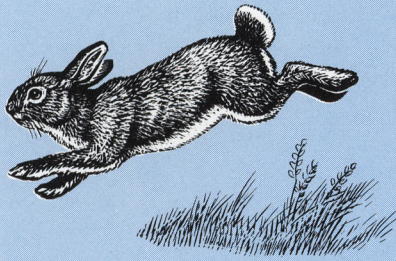
Many predators such as hawks, owls, coyotes, skunks, weasels and even mice prey upon rabbits and their young. Man is a more destructive enemy. Automobiles, hunters and so-called "clean" farming practices make huge inroads into the population. We can help even the odds by planting brush, building artificial burrows and brush piles and allowing some natural food and cover to stand in cultivated fields.



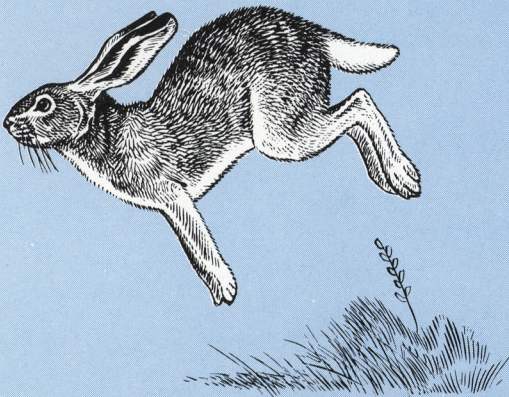
SNOWSHOE (Summer Coat)



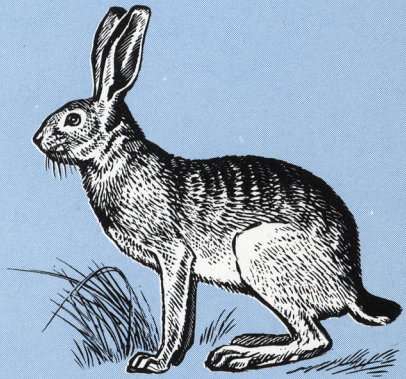
SNOWSHOE (Winter Coat)



COTTONTAIL



WHITE-TAILED JACKRABBIT



BLACK-TAILED JACKRABBIT



Conservation Pledge

I give my pledge
as an American to save
and faithfully to defend from
waste the natural resources of
my country - its soil and
minerals, its forests, waters,
and wildlife.