

4. Freed from the need of regular water supply, elands would be able to browse over a much larger area than cattle, thereby making more efficient use of arid or semiarid regions.

National Parks are traditionally opposed to the introduction of nonindigenous fauna in the natural environment they have pledged to preserve. Some wildlife reserves, however, have been less rigid and have experimented with the controlled introduction of alien animals. Contrary to the gravest fear, the presence of exotic animals has not been detrimental to the local faunas nor destructive to the native plants.

An experiment was started in southern New Mexico in 1970 where the Persian Ibex was released in the steep, rocky, and isolated slopes of the Florida Mountains. In the same year, a herd of about 100 gemsbok, an animal indigenous to the Kalahari Desert, was accepted by the U.S. White Sands Missile Range and was released in the eastern foothills of the San Andres National Wildlife Refuge. Of restricted access to the general public, the area offers excellent opportunities for

scientific studies of the released animals in an undisturbed environment. Such kinds of studies add greatly to the usefulness of National Parks and Wildlife Refuges.

All those who have tasted eland meat have praised its high quality and excellent taste. It is lean and has a high protein content. The commercial marketing of game meat will have to overcome the long-standing eating habits of people accustomed to beef. Approved slaughter and inspection rules have to be established. The acceptance of eland meat or other venison for regular consumption could perhaps be speeded up if served in reputable restaurants and made available in regular market places.

The day when an eland steak can be found at the meat stand of a supermarket or eland milk in the dairy section may still be a long way off. But some ranchers are spearheading something that may prove very important not only as a profitable investment but as a desirable alternative source of food at the time when replacement foods may be needed. •

Fee Hunting for Nebraska Big Game: A Possibility

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Wildlife populations are dependent upon suitable habitat, and maintenance of optimum wildlife habitat is dependent upon land management. Consequently, in states which are primarily in private ownership, wildlife populations are dependent upon the private landowner. Therefore, the private landowner not only determines accessibility to many acres of hunting, he also determines availability of the game.

With present economic conditions, now may be the time for hunters, landowners, and state agencies to look at existing fee hunting systems. By examining and adopting one of these systems, the landowner is not expected to subsidize public recreational activities, and the hunter can expect a better chance of filling a permit and possibly a better chance of obtaining a trophy.

Much of the public has assumed that there is no expense associated with raising wildlife. Many also assume that hunting is a right not restricted by landownership boundaries, and that good wildlife management is an obligation of the landowner to society. Ranching is a business, and all aspects of a ranching operation must be evaluated on an economic basis; this includes the wildlife. The costs to the landowner may be direct because of forage used by wildlife or the "inconvenience" costs associated with hunting. The hunting or nonhunting public that enjoys wildlife should not expect



White-tailed deer are becoming more predominant in western Nebraska. (Photo courtesy of the Nebraska Game and Parks Commission).

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Pronghorn antelope are a common sight in western Nebraska. (Photo courtesy of Nebraska Game and Parks Commission).

the private landowner to absorb these costs alone. The landowner may, in fact, desire productive habitat and diverse wildlife populations, but they may not be affordable. Without appropriate management, wildlife populations will not flourish. Landowners should be afforded some economic incentives to provide the wildlife management necessary for viable wildlife populations.

Nebraska currently does not have a widespread fee hunting policy for deer and antelope (big game) on the western ranges. The Nebraska big game hunter relies on the free and easy access to private land, since only a very small percentage of the state is publicly owned. The current economic constraints which burden Nebraska ranch and farm enterprises create stress on all private land to provide an economic return, resulting in a much more critical view of the wildlife habitat by private landowners.

Fee hunting is not a new nor untried management practice. The lack of fee hunting in Nebraska apparently indicates a lack of knowledge about the successes and modifications of existing fee hunting programs. It is important that this practice be emphasized and considerations of its feasibility be encouraged.

Landowner and Hunter Rights

Certain rights are associated with land ownership. "The right to use the property as the owner wishes as long as the use does not interfere with another's rights nor violate any federal, state or municipal law" (Berger et al. 1970) is the most cherished right of land ownership. Every landowner and tenant is legally free to choose who may come upon the property while restricting others (Berger et al. 1970). Someone violating this right without permission or invitation from one authorized to give such permission would be guilty of trespass. All trespassers are liable in a court of law to the landowner for any injuries done to the land or property as a direct result of unlawful entry. Berger et al. (1970) defined the penalties for trespassers when these acts are committed. Nebraska statute treats virtually all trespassory crimes as misdemeanors.

According to the Nebraska Game and Parks Commission, the hunter does not have any basic hunting rights. No one person has a right to hunt; it is a privilege which can be

denied at any time.

Livestock and Wildlife Competition

Management for livestock and big game are not mutually exclusive. In the late 1940's and early 1950's, information became available dealing with dietary overlap between deer, antelope, and domestic livestock. The extent of overlap determines the degree of competition. Several factors affect the extent of dietary overlap. Of these factors, the season of use, severity of weather, and grazing intensity have the most marked effect. When herbivores have sufficient selectivity, there is minimal overlap. Overstocking an area with livestock or having a high population of big game will generally force each to consume less desirable plants, which can increase the dietary overlap. A range area in high range condition and properly stocked will maintain a diverse species composition and dietary overlap between livestock and big game will be minimized.

Cost of Production

Determining the cost of production of a deer or antelope is very difficult. The landowner's cost is not in the form of "out-of-pocket" expenses, but in forage losses if and when diets overlap. Estimating the economics of forage consumption for deer and/or antelope is difficult.

The forage value consumed by big game on a per head basis will be dependent upon the degree of dietary overlap, AUM value, and harvest ages of the population. Forage consumed by big game animals which is suitable for livestock represents an income denied the landowner. This expense is often most conspicuous in the winter when heavy snow cover forces big game into hay yards. In addition to the actual cost of the forage, indirect costs associated with nuisance factors resulting from big game hunting must be considered. Nuisance factors include such things as increased labor for fence repair, closing gates that were left open, patrolling the land, and giving directions and permission at all hours of the day and night (Gartner and Severson 1972).

Wildlife as a Cash Crop

Until 1900 almost all hunting on private land was done through free access. However, in the 1920's free access

became limited. One reason free access was restricted by some landowners was because with increased hunting pressure, hunter control exceeded landowner capabilities for regulation. Nuisance factors added to the frustration of free access (Gartner and Severson 1972).

Economic incentives will encourage landowners to allow access to private land for hunters. Presumably if landowners realize an income from the big game, they will be more willing to consider that wildlife resource in their ranch management plans (Severson and Gartner 1972). In some areas of the United States, fee hunting has been practiced for many years. In Texas, landowners have been charging a trespass fee since the early 1920's (Teer and Forrest 1968). Fee regulation and generation of revenue prompted the Texas legislature to pass a shooting preserve law in 1925 (Teer and Forrest 1968). The law stated:

The law requires all landowners accommodating hunters on their lands for pay must buy a shooting preserve license and record the names, license numbers, addresses, and game killed by all paying hunters.

Legislation allowed the State of Texas to obtain better harvest data and, therefore, enabled them to control and manage the deer herds more efficiently. The law also allowed the state to monitor the preserves. The number of shooting preserve permits sold increased from 1,500 in 1929 to 14,250 in 1965 (Teer and Forrest 1968). The large number of permits sold was due in part to Texas' trespass statutes, the lack of free public land, and restricted access to private land. Shooting preserve permits shifted the "responsibility" of the state's wildlife away from the state and placed it directly in the hands of private landowners (Teer and Forrest 1968).

Leasing Arrangements

According to Teer and Forrest (1968) there are 4 basic types of hunting lease arrangements. The first of these is a season-long lease. In Texas, this is the most common type of lease. It requires more of the landowner's time because, in most cases, lodging is supplied for the hunter. The form of lodging may vary from tents set up in small outlying camps to a large lodge with all the comforts of home in a single base camp. Many times the landowner acts as a guide for the hunter, and under this type of lease the landowner may set harvest quotas as long as these quotas remain within the limits of the law.

The second system is a day-long lease. In this arrangement a hunter is given a specified area on a cost-per-day basis. Usually in this type of lease, the landowner only provides the land. This type of lease is most frequently used when a hunter is after a single big game species. Some landowners will provide a blind along known deer trails.

The third system is a hunting broker, or outfitter, arrangement. An individual leases a large tract of land from several landowners and apportions it to other hunters. This lease is usually season-long and the broker, in turn, sells day-long leases. Under this system, the landowner receives his payment and does not have to provide services for the hunter. The outfitter is responsible for providing services, including guides, accommodations, and vehicles. This type of system is used for about every species of game in Texas.

The fourth type of system is used only on introduced species on big game ranches and involves a direct charge on a per-animal basis. Since the animals are purchased and raised by the landowner he can sell that animal because by law it is not considered "game." "Game" animals belong to the public and therefore cannot be sold.

Under a fee hunting system in South Dakota, landowners gained not only financial rewards, but also new social contacts, elimination of livestock losses attributed to deer hunters, better range management for both livestock and wildlife, and the use of this "crop" as a hedge against bad markets or natural disaster (Gartner and Severson 1972). Hunter advantages included a place to hunt, availability of game in a defined area, and improved hunter safety. Many landowners in some ways act as their own conservation officer within the state statutes because they lose money if game is poached. The wildlife also receives benefits; one is better habitat. A second benefit results from restricting excessive hunting in prime habitat. Spreading hunting pressure over a large area gives animals a slightly higher edge of escaping the hunting season.

Problems Encountered.

Many problems are encountered in fee hunting systems. The largest of these is the social aspect of fee hunting. Since most hunters are used to having free access at any time, the problem of paid access is the largest that hunters must overcome. Sportsmen must realize that the people of the state own the big game, the Fish and Game Departments control the harvest through the number of licenses issued, but only the landowner controls the habitat and the access to the animals, and therefore, the sport of hunting.

In western South Dakota hunters had always had free access to private lands. When deer and antelope populations reach high levels, they become a liability to ranchers because of the amount of forage they consume. In 1966, five ranchowners united in an attempt to change this liability into an asset (Gartner and Severson 1972). They decided to sell a "hunting experience," so they restricted deer hunting on their lands. Ultimately deer populations became excessive due to under-harvesting. In 1969, three other ranchowners joined the original five and formed the corporation "Dakota Safaris." Originally, the landowners charged \$35 per day while providing food, lodging, transportation, and guide service for deer hunters on their lands. They had many problems with reservations and excess supplies left over when hunters filled their permits early and left. The day-long lease system was changed to a 3 or 4 day "package" hunt, and deer hunting, per se, was modified to trophy buck hunting. At the same time the "package fee" was increased to \$250 in 1970, yet hunter demand continued to increase. "Package fees" in excess of \$300 were projected in the early 1970's.

Conclusions

In Nebraska, over 90% of the land is privately owned. The landowner controls access to his land and therefore access to wildlife on his land. The presence and abundance of wildlife are controlled largely by habitat. Under a fee hunting system the landowner would have an incentive to maintain or improve habitat for big game animals which in many cases would also be beneficial for livestock. By offering a fee hunting system the landowner gains reimbursement for making improvements, maintaining game habitat, and forage consumed by the game animals. He also provides benefits for the hunter. The hunter is assured of a place to hunt, likely increased hunting success, and increased hunter safety. Both parties benefit from the experience and social contact with one another. With a fee hunting system the landowner would not allow over-harvest of the game population which

may endanger the survival of the "crop."

The State Game and Parks Commission could gain from a fee hunting system by working with the landowner to enable better management of big game populations. The landowner could gain benefits by allowing local offices of the Game and Parks Commission to direct hunters with specific permits to landowners desiring harvest of that species and sex.

Of the types of fee hunting systems described, the day-long lease or broker lease, would be the best types to establish in Nebraska. The length of Nebraska's deer and antelope seasons lends itself to these types of systems. With 9-day firearm seasons, landowners would be able to entertain more hunters with day-long leases. If the landowner does not feel sufficient time is available to maintain a day-long lease, the brokerage system would assure landowners and hunters most of the benefits available from fee hunting systems. In working together from the beginning all parties concerned would be able to establish ethical and sound fee hunting systems in Nebraska.

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Editor's Note: One of the authors had this to say about the reasons for writing this article. Editor concurs. He said, "Our intent is to not allow private landowners to lose sight of past research and apparent success of fee hunting systems. It is a very viable alternative to restricted access or loss of wildlife habitat on private land, which has not received recent attention or emphasis. The lack of fee hunting in states like Nebraska does not necessarily mean such a system does not apply. We felt it only indicated that the public is unaware. Our major goal is to attract attention to fee hunting."

Grace

We ask thy presence Lord today
With friends from near and far away
As stewards we are gathered here
To give accounting for this year
as rangemen.

On every side across the land
Richly blessed on every hand
We see Thy handiworks are good
And try to keep it as we should
be rangemen.

Wide valley slopes are lush and green
The hills beyond renewed and clean
Flowers pleasing to the eye
Mountains treed up to the sky
our rangeland.

Wild roses out across the plain
By fields wide spread with golden grain
Beyond the pronghorns quickly run
On grass that stretches to the sun
all rangelands.

We would that all men everywhere
Remember that within their care
The future of the land does rest
And we must try to be the best
of rangemen.

And now we humbly, quiet bow
To ask thy blessing here and now
For this food, and that ever Thee
Make us strong, and always be
your rangemen.

Amen.

Art McKinnon