

INITIAL PROGRESS OF THE COLORADO MOOSE REINTRODUCTION<sup>1</sup>

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The Colorado Division of Wildlife reintroduced 24 moose (*Alces alces shirasi*) into the state in 2 groups of 12 each. The first group was released during March 1978 and the second group was released during January 1979. Before the reintroduction a detailed analysis of release site environment, release action, public interest, and possible controversies was completed. Funding was provided by public donations. All moose were radio collared. There were no mortalities among the reintroduced animals, and all moose remained within 21 km of the release location. Six of 7 cows in the first release group produced 6 calves during spring 1978. A special effort was made to protect moose from illegal killing during deer and elk hunting seasons by intensive hunter education and increased law enforcement.

Reintroduction of moose into Colorado has been a topic of interest for over 20 years. However, not until 1964 was serious consideration shown when the Colorado Division of Wildlife (CDW) evaluated several tributaries of the Gunnison River (Fig. 1) for habitat suitability (Denney 1967). In 1970 the CDW, in cooperation with the Bureau of Land Management (BLM), conducted an additional investigation of the

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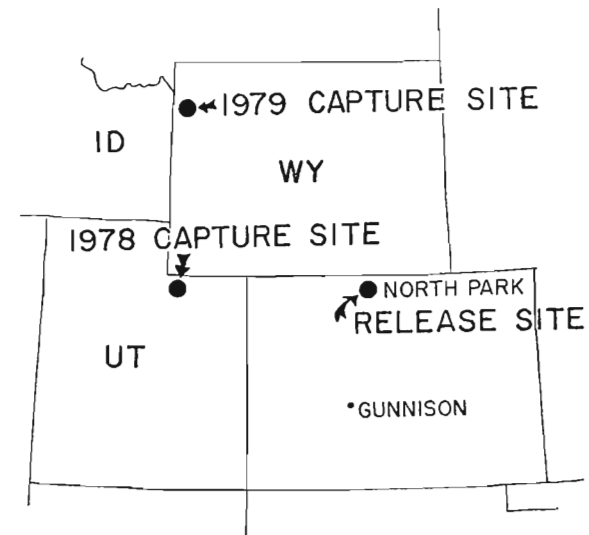


FIGURE 1. Moose capture sites in Utah and Wyoming and the release site in Colorado.

Powderhorn area of the Gunnison River (McGowan 1970). Although the area was found to be suitable moose habitat, the idea of a release was dropped because the BLM feared moose depredations on agricultural lands and did not want to jeopardize primitive area considerations which were in progress for part of the area. Staff planners and biologists of Rocky Mountain National Park discussed the possibility of the reintroduction of moose in their 1973 Master Plan and Wilderness Proposal, but decided not to follow through with it in 1974. CDW and Routt National Forest personnel examined the feasibility of moose translocation into North Park in the winter of 1974-75, but no decisions were made.

An additional stimulus was provided in December 1975, when the John B. Farley Foundation of Pueblo, Colorado offered the CDW a \$5,000 grant to reintroduce moose into Colorado, provided the animals were released on Colorado soil during 1976. In January 1976, moose biologists from Idaho and Wyoming were brought in for on-site inspections and evaluations of several potential habitats. They believed that the Powderhorn-Cebolla-Cochetopa area of the Gunnison River was ideal and was capable of carrying a population of up to 500 moose. Contact with the primary land use agencies, the U.S. Forest Service (USFS) and the BLM, yielded a negative reaction, primarily because of their interpretation of the Wilderness Act of 1964, and their belief that moose were not native in that area.

Armed with this insight, the CDW narrowed down possible release sites to areas of documented moose occurrence, concentrating on the North Park area because of apparent habitat suitability. North Park constitutes the headwaters of the North Platte River, which flows to the north, and is traversed by the Colorado-Wyoming state line at the north end. North Park had never been considered seriously as a translocation site because it was felt that any moose released might move northward with the drainages. However, because of the Gunnison area rejection by BLM and USFS, the south end of North Park was examined more closely during summer 1976, particularly the Illinois River and associated drainages in the southeast corner of the Park (Fig. 2). The habitat, land status, and a survey of the landowners in the Rand area suggested more intensive evaluation. A study area of 7 townships was delineated, range and timber types were determined from USFS inventory surveys, and 40 man-days were spent in September on a sampling survey

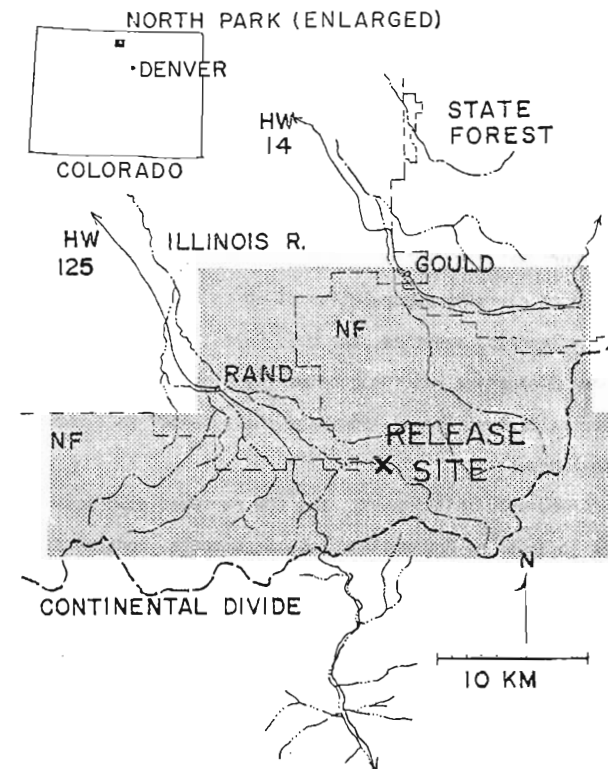


FIGURE 2. Moose reintroduction study area (shaded).

of riparian willow (*Salix* spp.) vegetation by a team of CDW, USFS, and BLM biologists. Results of this interagency evaluation suggested the Illinois River area was excellent moose habitat (Denney 1976). Therefore, a formal proposal was prepared and delivered to the USFS (the primary land use agency) in December 1976 outlining the plan. The proposal followed USFS guidelines required for an environmental report (EAR) as required by the National Environmental Policy Act of 1969,

so that the USFS could include their agency specific data and expedite the evaluation process. USFS approval was granted in February 1977.

#### STUDY AREA ENVIRONMENT

The selected release site was in the Routt National Forest in an area called the Big Bottom of the Illinois River (Fig. 2). Eighty-five percent of the 65,270 ha study area is public land, containing over 1,497 ha of willow, 1,902 ha of aspen (*Populus tremuloides*), 11,736 ha of spruce-fir (*Picea engelmannii-Abies lasiocarpa*), with most of the remainder in lodgepole pine (*Pinus contorta*). Potential moose carrying capacity was based solely on the riparian willow habitat and was calculated by the air dry forage and caloric value techniques. Each technique indicated a year-round carrying capacity of approximately 150 moose on willow alone with 50 percent utilization (Denny 1976).

Other big game in the study area include elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), bighorn sheep (*Ovis canadensis*), black bear (*Ursus americanus*), and mountain lion (*Felis concolor*).

Domestic livestock currently on public land in the study area include cattle and horses utilizing 7 grazing allotments and deeded land. One sheep allotment received no use for 2 years, and is currently vacant.

Private lands within the study area are primarily forested or undeveloped grazing land and native hay meadows. The predominant timber management practice is even-aged cutting. There are over 3,200 ha of clearcuts primarily in lodgepole timber in various stages of regeneration. The study area is traversed from north to south by

Colorado State Highway 125 for approximately 17 km, with a mean annual traffic use of around 300 vehicles per day (Denney 1976). The streams in the area are very popular summer and fall trout fisheries, and other recreational uses include horseback riding, backpacking, cross-country skiing, camping and snowmobiling. The study area represents less than one-third of Big Game Management Unit 17, which during the period 1971-75 supported a mean harvest per year of 43 mule deer, 173 elk, 3 black bear, and less than one bighorn sheep. Rocky Mountain National Park lies east of the Never Summer Mountains in the southeast portion of the study area, the Colorado State Forest lies in and north of the northern portion of the area, the Rawah Wilderness begins about 9 km north, and the Arapahoe National Wildlife Refuge lies about 16 km north along the Illinois River.

Average data are as follows: winter temperature, -7.7°C; annual temperature, 2.2°C; annual precipitation, 36 cm; annual snowfall, 528 cm; and winter snowdepth, 76 cm (Denney 1976).

#### PUBLIC INTEREST AND CONTROVERSY

During August and September 1976, Richard Denney, CDW Big Game Manager, and Don Gore, CDW Wildlife Conservation Officer (WCO), contacted the 9 major ranchers in the study area and found that all but 1 were interested in, and in favor of, the proposed moose reintroduction. Also, the Routt National Forest Grazing Advisory Board, which was composed of stockmen, approved the reintroduction after a CDW slide lecture and field trip. However, the majority of ranchers owning property in North Park, outside the study area, were neutral or against it (Denny 1976).

Also, the North Park Stockgrowers Association (and the Colorado Cattlemen's Association) passed a resolution in opposition. The stock-grower's animosity stemmed from a number of interrelated feelings: association of moose with other big game species, specifically elk, which have a long history of haystack depredations in certain areas; dissatisfaction with Colorado's game damage statute (CRS 33-3-101 through 110); and a lack of faith in the CDW to follow through on the reintroduction program over the long term (10-20 years).

Some ranchers were concerned that moose might compete with their livestock for forage on both private and public land. It was pointed out to them that basic differences in food habits and preferences between livestock and moose made this unlikely (Denney 1976). Most ranchers were also worried about haystack and fence damages. To allay this fear, they were given the results of a survey of Idaho, Montana, Utah, and Wyoming on such damages, showing little to insignificant occurrences. Moreover, the survey revealed that when crop and fence damages did occur, usually only 1 or 2 animals were responsible. Haystack damages were controlled by panelling the stacks, a management practice commonly used in North Park, and fence damages were minimized by placing a pole along the top wire of fences. Ranchers were also reminded that the Colorado game damage statute (CRS 33-3-101 through 110) did provide for reimbursement for any haystack damage incurred after stacks were damaged.

Several methods were used to sample general public opinion about the reintroduction. During December 1976, the CDW put out news releases outlining the proposed program and inviting public comment, and a 30-minute CDW television program requested viewer comment by

either telephone or letter. In January 1977, public meetings were held by the CDW in the 2 North Park communities of Rand and Walden. The USFS also held a public meeting in Walden in February 1977. The general public supported the program in approximately 95 percent of the responses (Denney 1976).

The question most often asked by the general public concerned possible competition for space and forage between moose and elk and mule deer. The CDW felt any competition would be insignificant because of different food habits and habitat preferences during the critical winter months, and because of the spatial separation of winter ranges due mainly to the moose's ability to travel in deeper snow (Denney 1976).

Automobile-moose conflicts were of limited concern. ReflectORIZED signs (1.2 m x 1.8 m) were designed and built in cooperation with the Colorado Highway Division and installed at the north and south boundaries of the study area on Highway 125. The signs advised motorists that they would be travelling through an experimental moose study area.

The proposed moose reintroduction sparked the interest and enthusiastic support of the general public. Reasons advanced for wanting to see the reintroduction completed ranged from wanting to hunt moose at some time in the future, wanting to study and/or photograph them, just wanting to see them some time, restoring a once-present animal to Colorado's wildlife scene, wanting them to be there for their children to enjoy, and just knowing the moose were there even if they never got to actually see one.

Use of the term "reintroduction" to describe the program has often been questioned. In response, the CDW pointed out that the occurrence

of moose in Colorado has been documented for well over 100 years. The incidence of sightings and known killings has been greatest in the past 30 years. Though moose have been in Colorado, we must admit that they probably did not represent a breeding population. Most of them were undoubtedly transients, and terminal ones at that, for the fate of almost every moose wandering into Colorado has been to end up in someone's pot or to be shot and left.

"Reintroduction" was used purposely and advisedly. If moose had never been known to occur in Colorado and the CDW brought some in, it would be termed an "introduction". Inasmuch as they had occurred here in the past and moose were brought in, it is logically a "reintroduction". The prefix "re-" in this case does not imply a second introduction, because they originally occurred here naturally. Granted, there were psychological reasons for using the term "reintroduction", and it may have been less controversial to use the term "re-establishment".

#### FUNDING

The reintroduction of moose was originally stated as a CDW goal in the division's strategic plan (CDW 1974). The reintroduction was further mandated by the Colorado Wildlife Commission in January 1976. However, the Joint Budget Committee (JBC) of the state legislature refused to allocate \$15,000 from Wildlife Cash Fund finances for the 1977-78 fiscal year budget for the moose reintroduction. In spite of this, the JBC did say that the program could continue if state funds were not used.

This financial development made it necessary to seek private funding. The Farley Foundation indicated that its \$5,000, pledged

during 1976, could be counted on, even though the moose were not reintroduced in that year. A special account was set up by the CDW as the Moose Fund; and letters were sent to businesses, organizations, and individuals explaining the financial plight of the project and requesting their consideration of support for the Moose Fund. Thanks to national organizations, such as the National Wildlife Federation, the Wildlife Management Institute, and Safari Club International; Colorado corporations (Energy Fuels, Colorado Fuel and Iron, Public Service Company of Colorado, and others); sportsman organizations; and many individuals, the costs of the 1977-78 fiscal year were met. In addition, the Denver Chapter of the Safari Club International acquired insurance to cover any moose damages, other than personal injury, not specifically covered by the game damage law.

Additional funding to meet the cost of the 1978-79 fiscal year were provided by bumper stickers sold by the Loyal Order of Moose, by a grant from Shikar Safari International, and by purchase of radio transmitters by Safari Club International.

#### CAPTURE AND RELEASE

The moose were reintroduced in 2 groups of 12 each during 1978 and 1979. All animals were radio collared and ear tagged. Both collars and tags were color coded and numbered to aid visual identification of individual moose. Blood samples were also obtained from the animals to test for leptospirosis and brucellosis. All tests were negative.

## 1978 Operations

The first group of 12 moose were captured on 13, 16, and 17 March 1978, in the Unita Mountains of northeastern Utah (Fig. 1). It included 3 bulls, 7 cows, 1 yearling male, and 1 female calf. The entire capture operation and transportation to Colorado were handled by the Utah Division of Wildlife Resources.

Moose were immobilized from a helicopter with projectile syringes fired from a Palmer Cap-Chur gun. The immobilizing drugs used were M99 (Etophine hydrochloride) and ROMPUN (Xylazine hydrochloride). Dosages followed Gasaway et al. (1978). After immobilization, moose were placed in a sling and air lifted by helicopter to nearby access roads where they were radio collared, ear tagged, and placed in individual wooden crates (2.13 m x 1.22 m x 2.13 m). M 50-50 (Diprenorphine), the antagonist to M99, was then administered, and the crate was closed for transport to Colorado. The cow and calf were placed in a slightly larger crate to allow additional room. All animals adapted well to the crates once they had recovered from immobilization. Most lied down, and none showed signs of severe stress.

The capture and crating proceeded during daylight hours, and the moose were dispatched by truck at dusk on the 560 km journey to the release site. They arrived in the early morning hours and were held in the crates until daylight. Then, the males were released, and the females were transferred into a holding enclosure.

The enclosure was built because the CDW believed that holding the moose for 1 to 2 weeks would help acclimate them to the new area. It was 60 m x 122 m and was constructed of nylon netting suspended from a steel cable which was 2.4 m above the ground. The cable was anchored

by trees, posts set in the ground, and tripods with all three legs outside the enclosure. Dominant vegetation in three-fourths of the enclosed area was riparian willow, and the remainder was a combination of aspen and lodgepole pine.

Bulls and cows were not held together in the enclosure because of agonistic interaction between the sexes. When the first group of moose arrived at the release site, several cows were transferred into the enclosure. These were followed by a bull, who immediately encountered a cow displaying the headlow threat posture (Geist 1963). The bull retreated and immediately jumped the netting, leaving the enclosure.

Three of the females transferred into the enclosure escaped within 2 days. The remaining 5 moose were held until 22 March, when a section of netting was dropped, and they were hazed out. The release was prompted by concern that 1 animal, who exhibited symptoms of pneumonia, might infect the other healthy animals. The possibly infected moose recovered after being released.

No mortality resulted from the capture, transport, and release operation described above. However, prior to it in early January, a capture attempt in Utah resulted in several mortalities because of drug related problems. Adherence to the dosages recommended by Gasaway et al. (1978) solved those problems and the operation proceeded as described.

## 1979 Operations

The second group of 12 moose were captured on 15 and 16 January 1979, inside Grand Teton National Park on a private ranch (Fig. 1),

It included 1 bull, 6 cows, 3 female yearlings, and 2 female calves. The capture operation was conducted by the Wyoming Game and Fish Department.

The moose were captured using a corral trap baited with alfalfa hay (Fig. 3). The trap was erected on a domestic livestock feeding ground which the moose habitually visited. Once inside the trap, the animals were hazed into a narrow runway for radio collaring, ear tagging, and blood sampling. From the runway, they were easily moved into fifth-wheel stock trailers for transport to Colorado. The trailers were partitioned into compartments (at least 2.4 m x 2.4 m x 1.98 m), and modified to decrease visibility to the outside and to eliminate sharp edges inside. A maximum of 2 moose were placed in each compartment without regard to sex or age, except for isolation of cow-calf groups. This grouping of animals did not seem to create any additional stress, and they adapted well to the compartments.

Capturing and loading was completed each day by noon, and the moose were immediately dispatched on their 660 km journey to the release site. They arrived late at night on the same day and were released immediately.

No enclosure was constructed to hold the moose because radio relocations of the animals released in 1978 indicated it was of no value for encouraging the moose to remain near the release site. There were no significant differences in movements between animals not held in the enclosure (including escapees) and those that were held.

As with the 1978 capture and release, no mortality resulted from this operation. In fact, the moose were much easier to handle and

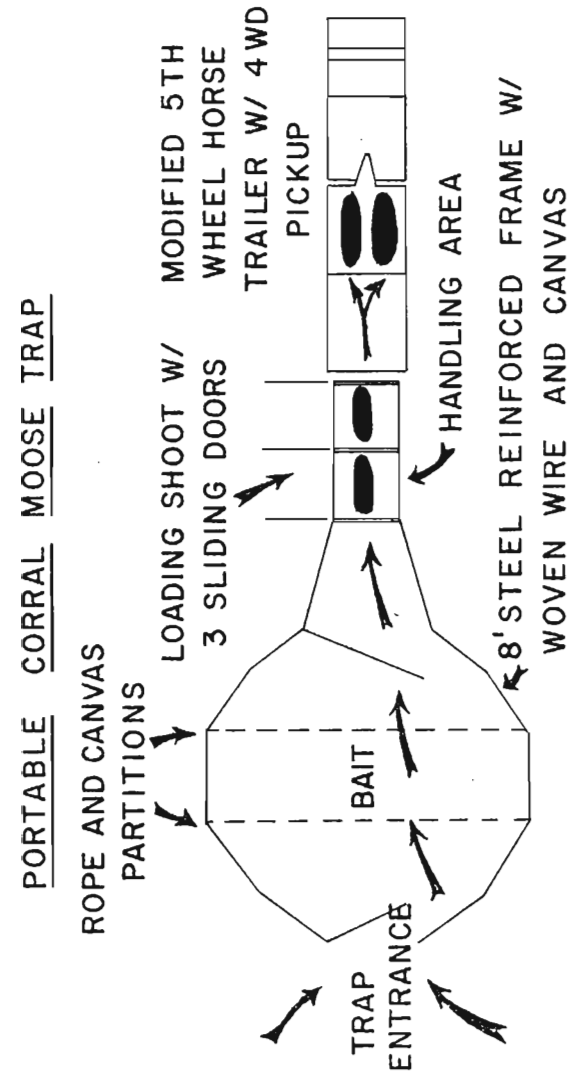


FIGURE 3. Corral trap used to capture moose in Wyoming.

appeared to be much less stressed than those obtained from Utah. Undoubtedly, the national park and feeding ground environment habituated the animals to the presence of humans, as well as other moose, and thereby contributed heavily to the success of the operation.

#### DISPERSAL AND POPULATION DYNAMICS

All of the Utah moose released in 1978 remained within 21 km of the release site, with the exception of 1 long range movement by a bull (Fig. 4). It traveled 35 km south of the release site during May 1978 and spent 4 weeks before returning to within the 21 km distributional range.

There have been no mortalities among the Utah moose, and 6 calves were produced by the 7 cows during May and June 1978. To date, 2 of the calves have died, 1 of unknown causes sometime between 8 January and 14 February 1979, and the other accidentally during a collaring operation in February 1979.

All of the Wyoming moose released in 1979 have remained within 5 km of the release site, and there has been no mortality.

#### HUNTING SEASON PRECAUTIONS

In its initial proposal for the reintroduction of moose into Colorado, CDW declared its intention to continue regular elk and mule deer hunting seasons in the big game management units occupied by the moose. These units were 6, 17, and 18 (Fig. 5). Big game hunting seasons that took place in these units during fall 1978 are summarized in Table 1. No special season structure was proposed by the regional wildlife manager to "protect" the moose. However, extensive

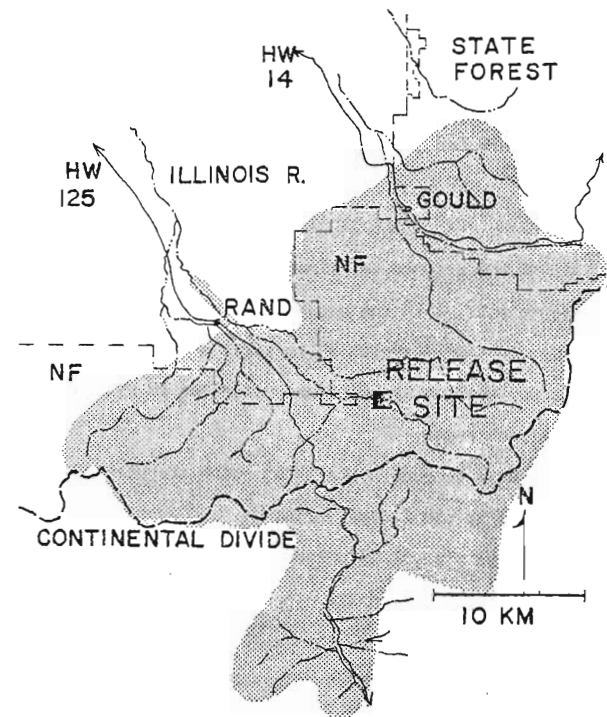


FIGURE 4. Distributional range (shaded area) of moose released in 1978.

precautions were taken to insure that no hunter mistakenly shot a moose for an elk or deer during the big game seasons. These precautions were sparked by illegal kill problems in other western states. In Wyoming, illegal kill of moose probably equals 20 percent of legal kill (J. Straley, pers. comm.); and in Idaho, during 1973 to 1975, the legal harvest accounted for 42 percent of the total mortality, and illegal kills accounted for 31 percent (Ritchie 1976).



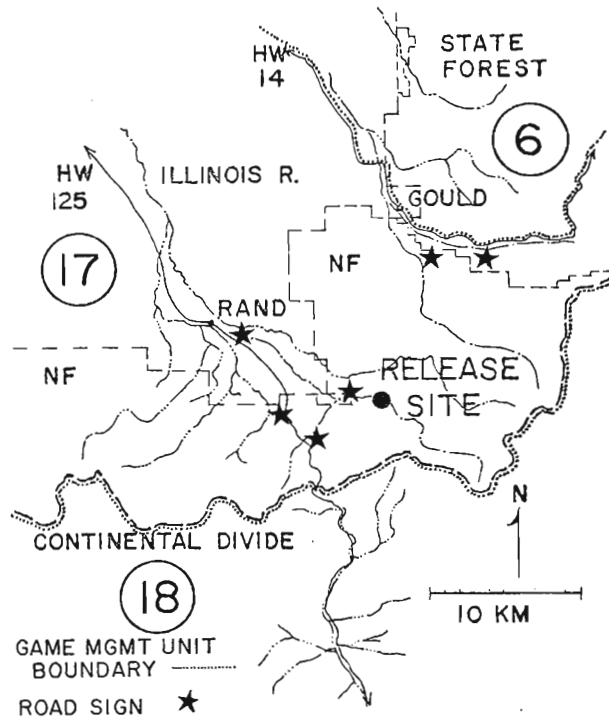


FIGURE 5. Locations of big game management units and road signs warning hunters of the presence of moose.

The CDW Information and Education Section had 6 television news reports and 4 radio news stories on 55 radio stations in Colorado (many of which were received in parts of Nebraska, New Mexico, Utah, and Wyoming). This coverage (1) warned hunters planning to hunt in or near the release area of the presence of moose, (2) explained the similarity of size between elk and moose, and (3) discussed the penalty for the illegal taking of a moose. In 1978, the Colorado

TABLE 1. Colorado Big Game Rifle Seasons held in Big Game Management Units 6, 17, and 18 (Fig. 5), the Units Occupied by 18 Moose in Fall 1978.

Season <sup>a</sup>	Date	License Type	Unit	No. Permits Issued
Separate deer only	Oct. 14-18	Antlered Antlerless	6, 17, 18 18	Open <sup>b</sup> 291
Separate elk only	Oct. 21-31	Antlered Antlerless Either-sex	6, 17, 18 18 6, 17	Open 451 260
Combined deer and elk - deer	Nov. 4-14	Antlered Antlerless	6, 17, 18 18	Open 213
Combined deer and elk	Nov. 4-14	Antlered Antlerless Either-sex	6, 17, 18 18 6, 17	Open 249 440

<sup>a</sup>Colorado has an "either-or" season. A hunter may hunt a deer and/or elk in the separate October season (separate deer and separate elk) or he or she may hunt a deer and/or elk in the combined November season, but he or she may not hunt 1 animal in a separate season and the other in the combined season.

<sup>b</sup>With the exception of the several specified units, antlered deer and elk licenses are unlimited. Antlerless and either-sex permits are limited and were obtained by application before June 6.

Legislature enacted legislation that made the maximum penalty for the illegal taking of a moose a \$1,000 fine 3 years in jail or both.

Numerous magazine articles appeared in local, state, and national outdoor magazines such as *Outdoor Life* and *Colorado Outdoors*.

Before, during, and after the moose were released, there was extensive coverage in newspapers circulating in the Rocky Mountain region.

Seven attractive road signs (1.2 m x 1.2 m) were placed at strategically located vehicle access roads leading into the moose release area. These signs alerted elk and deer hunters to the strong likelihood of encountering moose in the area and warned of the \$1,000 fine for illegally taking a moose.

Three hundred informative, colorful, posters (43 cm x 28 cm) were placed in conspicuous places such as in windows and on bulletin boards of service stations, bars, restaurants, and sporting goods stores in northcentral Colorado shortly before the first hunting season opened. These posters (1) requested hunters to "look before you shoot", (2) told of the moose reintroduction, (3) warned of the illegality of taking a moose, and (4) illustrated the general distribution of the moose in big game management units.

In addition to the above precautions, over 3,000 single page flyers (Fig. 6A and B) were mailed to all applicants for elk antlerless and either-sex permits in management units where the moose were found. This flyer was also furnished to over 30 license vendors in north-central Colorado for distribution to hunters purchasing antlered deer and elk tags.

During the big game hunting seasons, law enforcement efforts were increased, especially on the opening weekends. The 2 WCO's assigned to the release area spent only their normal 23 man-days of enforcement time during the 14 days of the season. However, their efforts were supplemented by 2 CDW staff members from the Denver central office who

**!! ATTENTION !!**  
**ELK AND DEER HUNTERS**

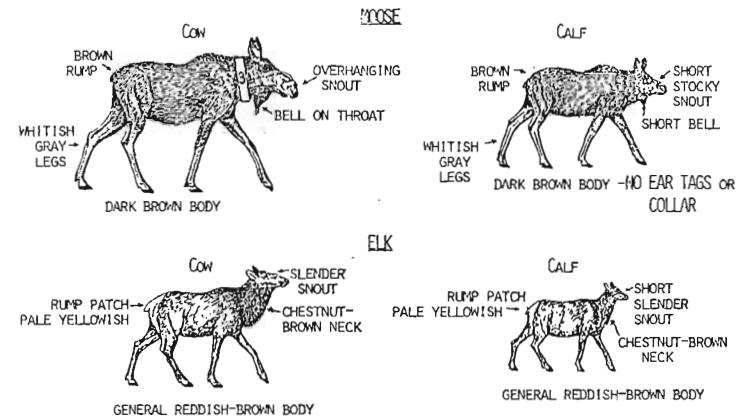
IF YOU THINK YOU SEE A MOOSE WHILE AFTER DEER OR ELK, YOU MAY BE RIGHT. 12 MOOSE WERE REINTRODUCED THIS WINTER IN THE ILLINOIS RIVER DRAINAGE NEAR RAND, COLORADO (BIG GAME UNIT 17 - SEE MAP ON REVERSE SIDE). THE MOOSE ARE MARKED WITH COLORED EAR TAGS AND RADIO COLLARS:

BULL MOOSE - WHITE EAR TAGS AND RADIO COLLARS

COW AND YEARLING MOOSE - ORANGE EAR TAGS AND RADIO COLLARS

5 CALF MOOSE WERE BORN THIS SUMMER AND ARE NOT MARKED - BE ALERT!

WHAT TO LOOK FOR:



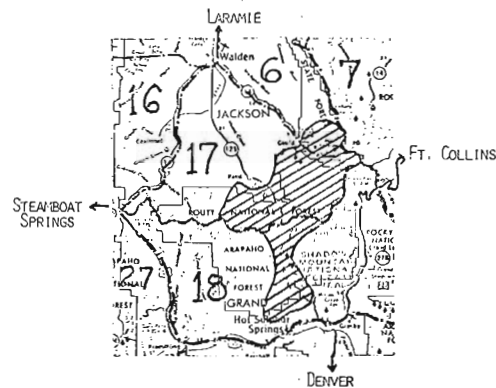
PLEASE LOOK BEFORE YOU SHOOT!

THERE IS A \$1,000 FINE AND A POSSIBILITY OF 3 YEARS IN JAIL FOR THE ILLEGAL KILLING OR THE POSSESSION OF A MOOSE IN COLORADO. COLORADO MOOSE WERE CAPTURED IN UTAH USING THE DRUG, M-99. THE FDA PROHIBITS HUMAN CONSUMPTION OF MEAT TREATED WITH M-99!

FIGURE 6A. Flyer mailed to hunters to inform them about the moose reintroduction and urge caution while hunting in the release area.

WHERE MOOSE ARE FOUND:

MOOSE WERE REINTRODUCED IN COLORADO NEAR RAND (LOWER PART OF BIG GAME UNIT 17) ALONG THE ILLINOIS RIVER IN ROUTT NATIONAL FOREST:



IT IS HIGHLY LIKELY THAT PERSONS HUNTING IN THE CROSSHATCHED AREA ON THE MAP WILL ENCOUNTER MOOSE - PLEASE USE CAUTION NOT TO KILL OR CRIPPLE ANY OF THESE ANIMALS. REMEMBER - THE MOOSE CALVES ARE NOT MARKED AND CAN EASILY BE CONFUSED WITH ELK COWS AND CALVES!

IF YOU SHOULD FIND A DEAD MOOSE OR SEE SOMEONE KILL OR CRIPPLE A MOOSE IN COLORADO, PLEASE CONTACT OR CALL COLLECT:

Colorado Division of Wildlife  
 Don Gore, District Wildl. Mgr., Walden (303)723-4264 OR Roy Nowlin, Graduate Student, Co. State Univ., Rand, Co (303)723-4431  
 John Wagner, District Wildl. Mgr., Walden (303)723-4676 OR  
 Jackson County Sheriff, Walden (303)723-4242



FIGURE 6B. Flyer mailed to hunters to inform them about the moose reintroduction and urge caution while hunting in the release area.

spent a total of 6 man-days in the release area for the sole purpose of moose protection. In addition, the senior authors each spent 1 opening weekend in the release area conducting hunter interviews. While they had no law enforcement authority, the presence of another CDW vehicle in the area may have acted as a deterrent to potential violators. On 20 October, the day before the start of separate elk only seasons, Don Benson, CDW Area Supervisor, and the senior author conducted a flight over the release area and located the 12 moose equipped with radio transmitters. Nearly all the elk hunting parties in the release area were then advised of the general location of each moose and shown line drawings of cow and calf moose and elk.

No moose were illegally shot during the hunting season. To judge how effective the various precautions undertaken by the CDW to protect the moose were, the WCO's, CDW central office staff, and Colorado Cooperative Wildlife Research Unit personnel conducted brief hunter surveys during the 1978 elk and deer hunting seasons. One hundred twenty parties with 414 hunters were contacted. Of the 414 hunters, 355 were interviewed. All 242 resident hunters interviewed in hunting camps located in the release area had heard about the moose. reintroduction. Only 7 of 113 (6 percent) nonresident hunters contacted in the field had not heard about the moose release. Those hunters familiar with the moose reintroduction were asked to select the source(s) of information from which they learned of the reintroduction. They were shown 9 sources from which to choose: television, radio, magazine, road signs, poster, mail flyer, newspaper, friend, and other. Response combinations for residents and nonresidents are summarized in Table 2.

TABLE 2. Sources of Information for Resident and Nonresident Elk and Deer Hunters regarding Colorado's Reintroduction of Moose. Responses are From Hunters Contacted in the Release Area During Elk and Deer Hunting Seasons, Fall 1978. The Key to the Source Numbers is as follows:

Sources <sup>a</sup>	Resident			Nonresident		
	Freq.	%	Sources	Freq.	%	Sources
6	43	17.8	1-8	8	3.3	6
4	21	8.7	7	7	2.9	4,6
1	13	5.4	1,6	7	2.9	5
3,4,7	10	4.1	1,2	5	2.1	4
4,7	10	4.1	2,4,7	5	2.1	5,9
4,6	8	3.3	4,8	5	2.1	
1,3,4,7	8	3.3				
						1,2
						1,4
						1,4,6
						8
						3
						3
						3
						3

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<sup>a</sup>Only combinations of sources of information with a frequency of five or more responses are presented.

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Over 17 percent of the residents and 16 percent of the non-residents listed the mail flyer (Fig. 6) as their sole source of information. Road sign and television ranked second and third, respectively, with residents. With nonresidents, road sign and mail flyer together ranked second, and poster was third. When the responses were analyzed by the number of times a source was chosen regardless of combination, road sign ranked first with both resident and nonresident (Table 3). Television, road sign, mail flyer, and newspaper accounted for 73 percent of the resident responses and 77 percent of the nonresident responses. As might be expected, television was not an important information source with nonresidents. Radio, as a media source, ranked low for both resident and nonresident hunters.

TABLE 3. Sources of Information for Resident and Nonresident Elk and Deer Hunters Regarding Colorado's Reintroduction of Moose. Responses Are From Hunters Contacted in the Release Area During Elk and Deer Hunting Seasons, Fall 1978. Responses are Summarized by Source Regardless of Combinations Chosen in the Field.

Sources	Responses (%)	
	Resident (N=576) <sup>a</sup>	Nonresident (N=172)
Road Sign	24.8	26.7
TV	17.2	6.4
Mail Flyer	16.5	26.2
Newspaper	14.2	5.2
Magazine	8.8	4.7
Poster	7.5	17.4
Radio	5.2	1.7
Friend	4.9	5.2
Other Sources	0.9	6.5
TOTAL	100.0	100.0

<sup>a</sup>Sample size (N) is the number of times source was listed by each respondent.



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