

MEETING THE CHALLENGE

MULE DEER MANAGEMENT ON THEODORE ROOSEVELT MEMORIAL RANCH

On the Rocky Mountain Front, as in other regions of Montana, mule deer herds have recovered from a statewide decline in the mid-1970's. The era of restoration is now over for most of these herds: game surveys and harvest statistics show that mule deer now occupy most suitable habitats in the state and that herd numbers are stable. Conservation strategies are now directed at maintaining the health and productivity of mule deer herds while offering a multitude of recreational opportunities for the public. This strategy has required different approaches to management from those used in the 1980's to restore herds. Current mule deer management on the Front is tailored to the uniqueness of this situation.

The decline of Montana's mule deer in the 1970s involved many factors, which often compounded one another. These factors included high hunting pressure, low fawn survival, poor habitat quality,

and competition from an increasing number of whitetail deer. The decline was pronounced in mule deer herds of mountainous regions. In these environments additional factors played a role such as rougher climatic conditions, higher competition from other ungulates and, possibly, unfavorable forest succession due to fire suppression.

THE BOOM AND BUST YEARS

The recovery of mule deer on the Front and in other mountainous regions of Montana in the 1980s resulted from changes in hunting regulations following the decline of deer numbers in the 1970s. Experience has shown that mule deer numbers can vary greatly from year to year as a result of hunting. Reducing hunting pressure by implementing a more conservative hunting season and restricting access to private lands helped mule deer herds to recover. Also, more attention was given to distribution and

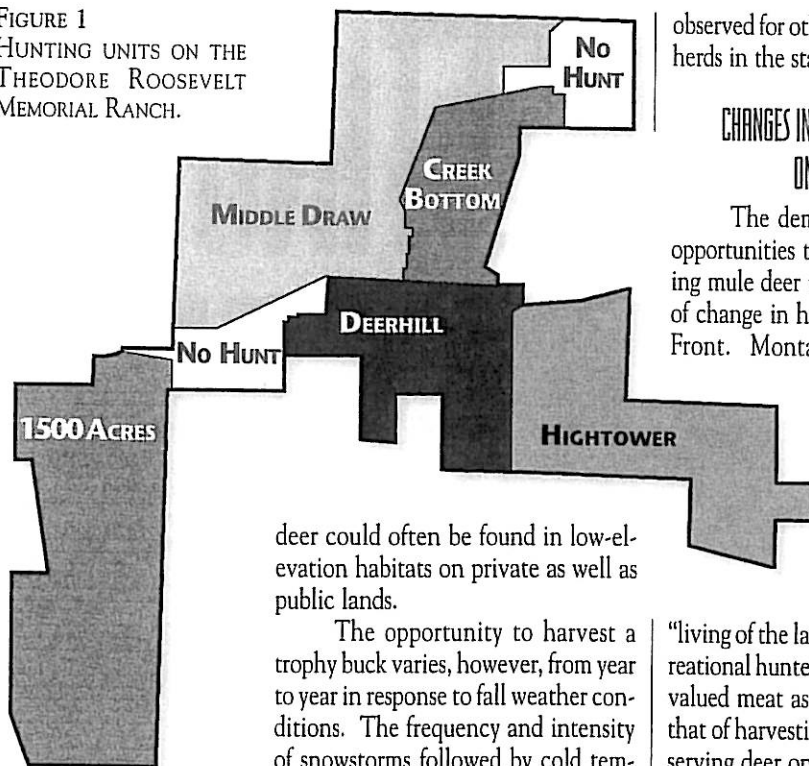
use of habitats to better coordinate hunting opportunities with biological requirements of mule deer.

In the mid-1980s, Montana's mule deer hunting increased statewide as well as along the Front. Deer hunting has always closely followed fluctuations in deer numbers; when numbers are high more hunters participate than in years of low numbers. The success rate of harvesting a deer follows a similar trend.

During the 1980s the Front was renowned for producing trophy mule deer bucks. The nutritional quality of habitats and the genetic make-up of the deer were and still are favorable for growing healthy animals. This region also earned a reputation for its unique opportunity to hunt in areas easily accessible to hunters. Different from other mountainous regions in the state, a hunter's success on the Front was not necessarily tied to the ability to explore the back country for a trophy buck. Instead, an abundance of mule

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FIGURE 1
HUNTING UNITS ON THE
THEODORE ROOSEVELT
MEMORIAL RANCH.



deer could often be found in low-elevation habitats on private as well as public lands.

The opportunity to harvest a trophy buck varies, however, from year to year in response to fall weather conditions. The frequency and intensity of snowstorms followed by cold temperature triggers migration of mule deer out of the high country to lower elevations. Deer migrate either directly to these winter ranges and are utilized by deer until snow depth forces them to move to lower elevations. In most years, fall weather conditions are not severe enough to force all deer to migrate, providing fewer opportunities for hunters to harvest deer in accessible areas.

Hunting is a major mortality factor for mature bucks. Mule deer bucks are vulnerable to hunting after migrating into open areas during the hunting season. These areas are composed of prairie grassland intermixed with patches of open coniferous forest and bottom lands. This landscape provides excellent forage and thermal cover during winter but little in terms of security cover during the hunting season. The occurrence of rut during the latter part of the season further increases the vulnerability of bucks to hunting.

The buck age structure of mule deer on the Front is largely the result of harvest-caused mortality patterns. In years of early migration, harvests sometimes reach more than 400 bucks, including the majority of the mature bucks in the herd. These years are then followed by seasons in which fewer bucks, often less than 100, are harvested most of which are immature. Similar fluctuations have also been

observed for other mountain mule deer herds in the state.

CHANGES IN MULE DEER HUNTING ON THE FRONT

The demand for more hunting opportunities to capitalize on increasing mule deer numbers came at a time of change in hunting attitudes on the Front. Montana's hunters were no

longer predominantly meat hunters; hunting had instead become a recreational activity. In the past, hunting was often viewed as an expression of

"living of the land." The emerging recreational hunter of the 1980s, however, valued meat as a secondary motive to that of harvesting a trophy buck or observing deer on winter range after the season.

The demand for more bucks also came at a time of declining hunting opportunities on private lands. Access to these lands had been the key to a quality hunt and a chance of harvesting a trophy buck. However, through the 1980s private landowners found fewer and fewer incentives for providing access.

Hunters may have contributed to this change in attitude. The shift in motivation from meat to recreational hunting changed the role of hunting as a tool used to control deer and to alleviate crop damage on private lands. Landowners quickly recognized that removing trophy bucks did little to reduce crop damage from deer on their lands.

With less access to private lands, more hunters concentrated on fewer places. This higher hunting pressure reduced the number of mature bucks in easily accessible lands, such as State Wildlife Management Areas. As a consequence, hunters complained about fewer mature bucks.

In 1985, Montana Department of Fish, Wildlife and Parks established a permit system on the Front to increase the number of mature bucks in the herds. These permits were valid on private lands only during the last two weeks of the five-week general session. Hunters, however, were still allowed to hunt

bucks on the general deer tag for the first three weeks on both private and public lands. This change in season structure helped increase the number of mature bucks.

In 1985, Montana Department of Fish, Wildlife and Parks also assessed the overall opportunity to hunt mule deer in the state. The Department concluded, after reviewing game surveys and harvest statistics, that mule deer numbers had reached historic highs with a relatively high proportion of bucks, sufficient to sustain existing hunting pressures. The difficulty of obtaining access to these herds, however, was the challenge that needed to be addressed.

ADDRESSING THE CHALLENGE: MULE DEER MANAGEMENT ON THE THEODORE ROOSEVELT MEMORIAL RANCH

The Theodore Roosevelt Memorial Ranch is located on the Front and encompasses 6,000 acres of prime mule deer winter range in Teton County. The ranch is surrounded by state and privately-owned land except for national forest lands to the west. The landscape pattern on the ranch is typical for the Front, a diverse transition zone between plains and mountains. The ranch is currently operated as an economically viable livestock operation that also provides seasonal wildlife habitat.

Mule deer management on the TRM Ranch is an example of good stewardship for wildlife on private lands on the Front. The ranch has been operated, since its purchase by the Boone and Crockett Club in 1985, to provide high quality winter habitats for wildlife and opportunities for the public to enjoy recreational hunting. Since then, mule deer hunting on the ranch has been regulated by quotas to prevent overharvest of mature bucks. Access permission has been granted to the public annually to harvest 40 mule deer bucks. Since 1993, the quota has been reduced to 30.

These quotas are specifically designed for the ranch following a detailed analysis of harvest trends, winter counts and field observations. This process is conducted in close cooperation with Montana Department of Fish, Wildlife and Parks. Harvest quotas

have been set conservatively to compensate for potentially more liberal hunting regimes on adjacent ranch properties and to meet the dual objectives of wildlife conservation and livestock production for TRM Ranch management.

Since records of hunts have been kept in 1989, a total of 950 access permits have been issued for the TRM Ranch. Hunting pressure has been distributed across 5 units that comprise 90% of the ranch (figure 1). Hunting in each unit is limited to one party per day to provide some security for mule deer and other wildlife. Hunters can reserve the exclusive right to hunt for one day and harvest deer consistent with ranch quotas and Montana Department of Fish, Wildlife and Parks' hunting regulations. Hunters typically contact the ranch manager prior the general hunting season and reserve a unit free of charge. The hunter can reserve a unit for a party of his choice of up to three hunters. Hunters are required to hunt on foot or horseback only; designated parking areas must be used. The ranch manager reserves the right to modify harvest and access regulations without notice.

Since establishing hunt management, a total of 340 mule deer have been harvested on the TRM Ranch, other ungulates include 45 whitetail deer and 20 elk. Sixty percent of the mule deer harvested on the TRM Ranch were bucks: thirty to forty percent each year had antler spreads of more than 20 inches. The buck harvest gradually increased through 1992, as a result of increasing mule deer numbers and harvest quotas. The harvest has since declined as a result of lower quotas set in response to overall lower buck numbers in this region.

THE FUTURE OF MULE DEER MANAGEMENT ON THE FRONT

Mule deer management on the Front will continue to be difficult. Current hunting regulations evolved over years of trial and error. These constitute the best compromise between providing recreational opportunities and restricting harvests to sustain a mature buck harvest. However, mule deer management will always be challenging since unpredictable weather conditions make the optimization of

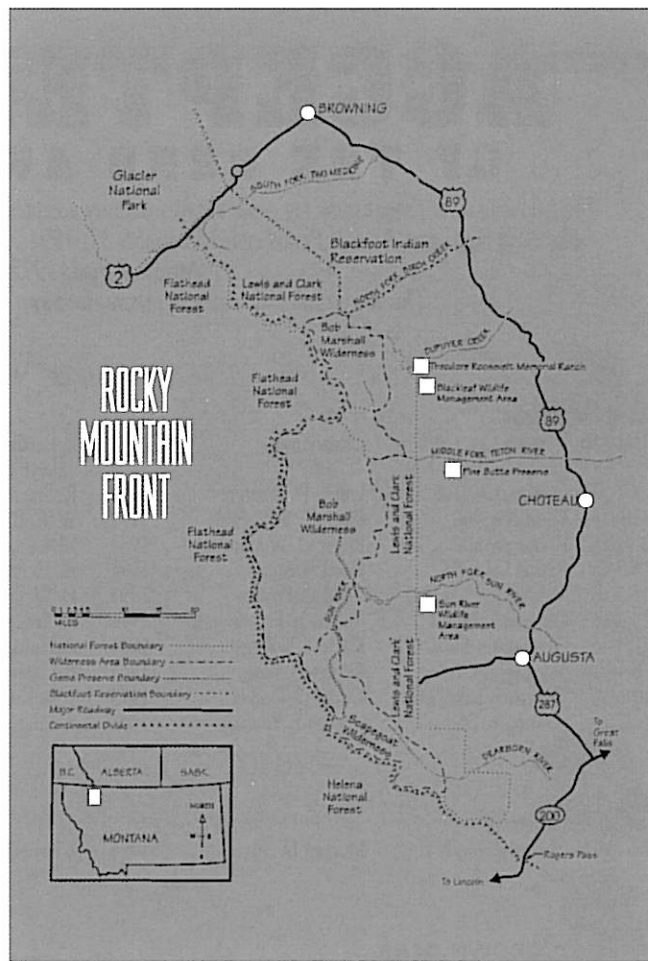
hunter satisfaction with ecological realities difficult. Under mild to average fall weather, the harvest will continue to be moderate and many mature bucks will avoid hunting pressure. In years of more severe conditions, existing hunting regulations will not provide sufficient protection for early migrating bucks.

Mule deer management on the TRM Ranch is an example of how public hunting on private lands can be ensured while maintaining healthy and productive mule deer herds. The opportunity to exclusively hunt for trophy mule deer on the ranch free of charge in an area of abundant wildlife and scenic beauty is unsurpassed on the Rocky Mountain Front. The public, both resident and nonresident, values the ranch for these recreational opportunities.

Achieving optimal hunter access on the ranch is, however, difficult and time-consuming and requires a strong commitment by ranch management and the Boone and Crockett Club to public hunting. Management strategies on the ranch are designed to ensure a quality experience to hunters, while maintaining the integrity of the ranch and ensuring a sustainable harvest of mule deer.

Hunting on the TRM Ranch comprises roughly forty to fifty percent of the harvest of the local "Scoffin Butte/Dupuyer" mule deer herd. Thus, harvest quotas on the ranch will not significantly alter overall harvest and age structure for this herd. Further, mule deer management to protect mature bucks on the TRM Ranch would likely be lost if adjacent lands had more liberal harvest regimes. This would be true particularly when harvests in November put added pressure on mature bucks that are more mobile in response to breeding behavior. Hunters could help mitigate these effects by reducing hunting pressure on bucks and harvesting more does.

Since the purchase of the TRM Ranch by the Boone and Crockett Club in 1985, harvest quotas have resulted in a more consistent deer harvest compared to the "boom and bust" trend for the Front as a whole. Harvest quotas on the ranch have helped mitigate the effects of hunting in years of early winter weather. For such a condition to occur regionally, quotas would need to



be established and managed on all lands accessible to hunters. This would require consensus and cooperation among landowners to identify commonly defined herd objectives. Furthermore, current incentives to initiate landowner cooperation in such a strategy are weak. Some form of compensation for providing quality deer habitat and public hunting access on private lands might encourage better cooperation among landowners.

Current attempts by the state to increase hunter access to private lands by providing incentives to landowners require careful evaluation. Without well managed quotas such a program might increase hunting pressure to levels detrimental to the long term goal of maintaining healthy and productive herds. Providing additional hunting opportunities for mule deer requires a strong commitment by landowners to the deer resource. It is the responsibility of both hunters and the state wildlife agency to assist landowners in accomplishing this task. Thus, mule deer management on the Front is a challenge that can only be addressed through close alliances between hunters, landowners and the state wildlife agency.