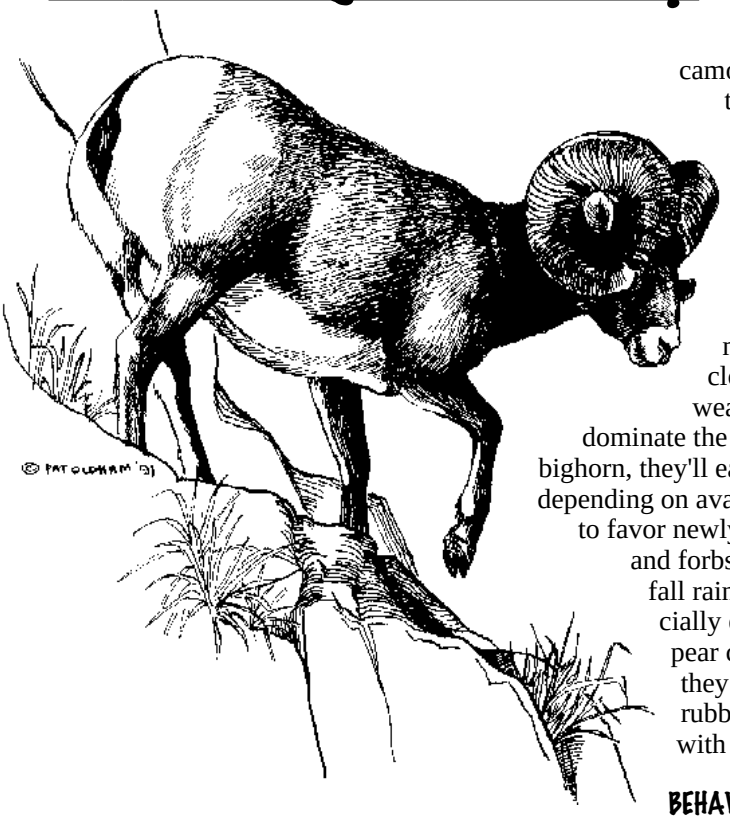
WILDLIFE NOTES

Endangered Species

Desert bighorn sheep



Although transplant programs have boosted numbers of desert bighorn sheep (*Ovis canadensis mexicana*) throughout New Mexico, they are still vulnerable because there are so few of them. The desert bighorn sheep was added to the state endangered species list in 1980.

DESCRIPTION

This handsome native sheep stands about 30 to 39 inches at the shoulder. The crowning glory of adult desert bighorn rams is their majestic set of horns. Ewes, young males, and lambs have much smaller horns. Their coats are generally buffy brown, but coloration will vary from pale cream to dark chocolate. Like their close relative, the Rocky Mountain bighorn sheep, desert bighorn may be spotted against camouflaging terrain by their characteristic white rump patch.

FEEDING

In New Mexico, most desert bighorn are found within one mile of water, even closer in hot dry weather. While shrubs dominate the diet of desert bighorn, they'll eat a variety of plants depending on availability. They tend to favor newly emergent grasses and forbs during the summer-fall rainy season. Especially enjoyable is prickly pear cactus pulp, which they ingest after first rubbing off the spines with their horns.

BEHAVIOR AND BREEDING

Desert bighorn are social animals that live in groups much of the year. In August and September, rams and ewes come together for the rut (breeding season). After breeding, most adult rams leave the ewes and travel together in bachelor bands. They seek out gentler habitats not used by ewes, thus reducing competition for available resources. In New Mexico, desert bighorn typically breed at age 2-1/2. Females give birth to one lamb after a gestation period of six months. Most lambs are born in January and February, although they may be born anytime during the year. Unlike other species that disperse their grown young, desert bighorn stay together and pass along home range knowledge from one generation to the next.

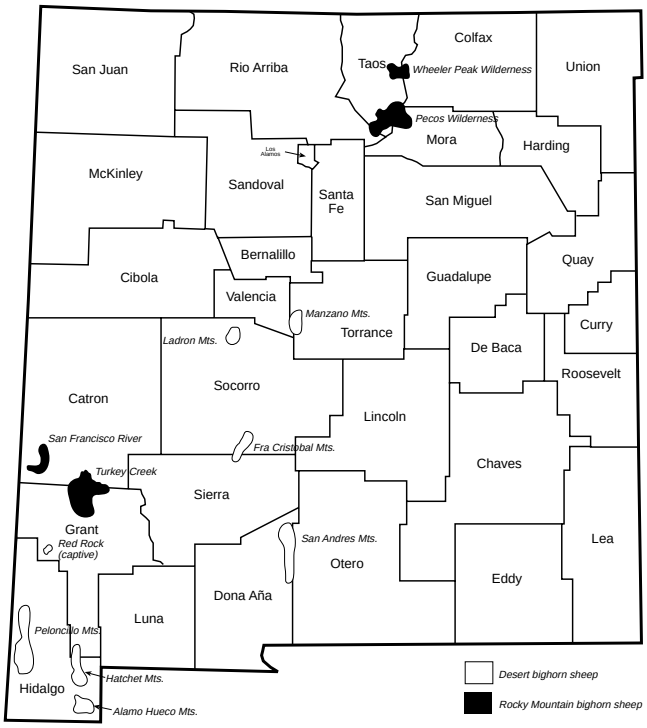
HABITAT

Desert bighorn require open, mountainous, or canyon country, close to what is termed 'escape' terrain (cliffs of 60 percent slope or greater). Their keen eyesight allows them to spot predators and escape into rough country where predators are not as agile. Escape terrain is particularly important for ewes in lambing and rearing their young. Rams will use areas of dense vegetation and stray further from escape terrain than maternal groups.

DECLINING NUMBERS

While desert bighorn currently live in the American Southwest and Mexico, 160 wild sheep occurred in New Mexico in 2001. By the early 1900s, most New Mexico populations were extinct due to indiscriminate hunting, over grazed habitat, prolonged droughts, and food competition and disease from domestic sheep. By 1955, only a few indigenous sheep remained at the San Andres and Big Hatchet mountains.

Because New Mexico desert bighorn continued to decline, the New Mexico Department of Game and Fish (NMDGF) established the Red Rock Wildlife Area in 1972. Red Rock's 450-acre fenced impoundment (later increased to 1,300 acres) was established with 22 animals from the San Andres herd and from Sonora, Mexico. Here, bighorn feed on natural vegetation, are exposed to predators, and roam freely over five miles of cliffs, canyons, springs, and slopes. Red Rock's carrying capacity is about 150 animals, allowing for periodic transplants to other areas. Until wild populations are large enough to be used as sources of transplant stock, Red Rock will continue to be the



foundation of the New Mexico restoration program. As of 2001, about 80 desert bighorn live at Red Rock.

TRANSPLANTED POPULATIONS

• Ladron Mountains - Although the Ladrons are a relatively small range, they have excellent forage, numerous water sources, and plenty of escape terrain. Twenty-three sheep were transplanted into the Ladrons in 1992 and eight more in 1993. Despite the augmentation, the population is only 26 animals.

• Peloncillo Mountains - This population was established in 1981 with 20 bighorn transplanted from Red Rock and from refuges in Arizona. For the first 10 years after the transplant, the population fluctuated due to pneumonia brought in by the Arizona bighorn. By 1991, the disease had run its course, but in spite of supplemental transplants, the herd only stands at about 30 individuals.

• Alamo Hueco Mountains - This population was established in 1986 with 21 bighorn from Red Rock. The population expanded to 30 individuals, but since 1996 the greatest number observed has been 7. Three more rams were released in 1999, but they are now sighted in the Big Hatchets. Therefore, this population is considered extinct.

• Fra Cristobal Mountains - The October 1995 release of 37 desert bighorn in this range was a major step toward down-listing desert bighorn from endangered to threatened status. These mountains are part of a vast private ranch with supplemental water catchments constructed specifically for the desert bighorn and other wildlife. This is the only population with an increasing trend, with the current number estimated at 66.

INDIGENOUS POPULATIONS

• Big Hatchet Mountains - A long-established bighorn population in the Hatchets declined from 125 in the early 1950s to less than 20 in 1960, due to severe drought and competition for the reduced forage by cattle and deer. Supplemental transplants helped increase the present herd to about 40, but predation remains a significant cause of mortality.

• San Andres Mountains - This former stronghold of desert bighorn in New Mexico had a population of 200 prior to 1979. However, during that year, a scabies mite epizootic decimated the population from 200 to 75. Subsequent years brought further declines from scabies and cougar predation with only one ewe remaining. Six rams were introduced in 1999 for a two-year study to asses the appropriateness of re-introducing a herd. These bighorn remained scabies free for two years and they did not find any additional bighorn. We are now ready to start a new population there.

FUTURE TRANSPLANTS

Desert bighorn do not easily disperse and colonize new mountain ranges on their own. Humans must facilitate the process. Historically, desert bighorn have occurred in at least 14 mountain ranges in southern and central New Mexico. While additional habitat is available, the current goal is to increase the existing herds until they are stable. One hundred individuals is considered the minimum population number for long-term survival. The San Andreas is the biggest and best desert bighorn habitat in New Mexico and can host up to 400 bighorn, so establishing a population there is critical because it can then serve as a source herd for other populations.

THREATS AND CONCERNS

Desert bighorn populations continue to decline in New Mexico. Many factors continue to threaten their survival: habitat degradation, cougar predation, disease, livestock, poaching. NMDGF is working to increase numbers and distribution of desert bighorn to at least 500 animals in three geographic areas so they may be removed from the state endangered list.

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