



# WILDLIFE NOTES

## 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. From July to 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

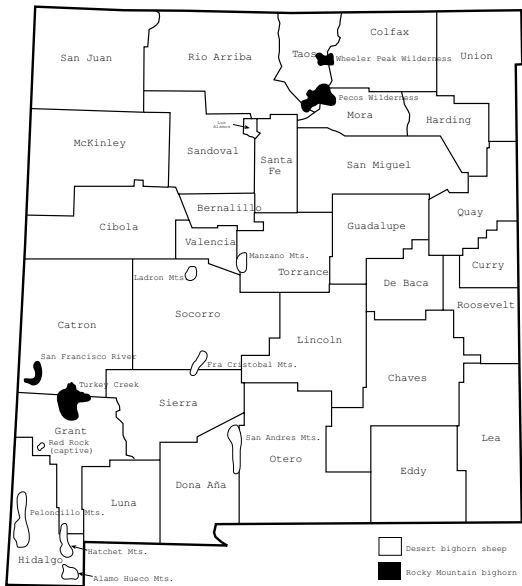
are born from January to March, although they may be born anytime during the year. Unlike other species whose young disperse as they mature, desert bighorn stay together and pass along home range knowledge from one generation to the next.

### 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 higher quality vegetation and stray further from escape terrain than maternal groups.

### DECLINING NUMBERS

While desert bighorn currently live in the American Southwest and Mexico, there are not nearly as many as there were historically. What was once several thousand desert bighorn sheep in New Mexico declined until they almost went extinct in the early 1900s. Overhunting, overgrazing, and disease transmission from livestock to bighorn sheep are principal causes of the decline. By 1955 bighorn remained only in the San Andres and Hatchet Mountains, and by 1980 they numbered less than 100 individuals. Numbers fluctuated over the next 20 years, rising to over 200 in the 1990s, but falling to less than 170 by 2001. Mountain lions were the primary cause for low numbers, with 85% of known-caused radiocollared bighorn sheep mortality caused by mountain lion predation. Management efforts from 2001-2007



lead to a population increase to over 400 desert bighorn sheep in New Mexico.

### POPULATION HISTORY AND STATUS

**Red Rock** – This captive herd was established in 1972 with 22 animals from the San Andres herd, and from Sonora, Mexico. This 5 km<sup>2</sup> enclosure is home to bighorn sheep who feed on natural vegetation and supplemental feed, are exposed to predators, and roam freely over cliffs, canyons, springs, and slopes. Red Rock is allowed to grow no larger than about 100 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 New Mexico's restoration program.

**Ladron Mountains** – This mountain range marks the northern most extent of the current desert bighorn sheep population in New Mexico, and as such is not as high quality bighorn sheep habitat as found in other parts of the state. Twenty-three bighorn were transplanted into the Ladrones in 1992, and 8 more in 1993. The current population is 25-35 animals.

**Peloncillo Mountains** – The herd got off to a difficult start in 1980 when 20 bighorn from Red Rock and the Kofa National Wildlife Refuge in AZ were combined and it resulted in a disease die-off. After several additional transplants, the herd is now

slowly growing on its own, with an estimated 80-85 animals in the population.

**Fra Cristobal Mountains** – The 1995 release of 37 desert bighorn in this range was a major step towards recovering the species. These mountains are part of a vast private ranch owned by New Mexico Ranch Properties Inc. that is dedicated to protecting wildlife. The joint management efforts have resulted in an increasing population with 80-90 bighorn. Within the past few years, a group of bighorn sheep in this herd travelled to the Caballo Mountains. This self-started herd is estimated between 10-20 individuals.

**Hatchet Mountains** – A long-established bighorn population in the Hatchets declined from 125 in the early 1950s, to less than 20 in the 1960s. Multiple transplants since then have met with varied success, but the transplants in 2005 and 2006 have resulted in a slowly growing population of 100-115 animals.

**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 assess the appropriateness of reintroducing a herd. These bighorn remained scabies free for two years and they did not find any additional bighorn. From 2002-2005, 81 bighorn sheep were transplanted from Red Rock and the Kofa National Wildlife Refuge in AZ to the San Andres to restart the bighorn sheep herd. The population has suffered from several setbacks, and the current population estimate is 80-90 animals.

### FUTURE TRANSPLANTS

Desert bighorn do not easily disperse and colonize new mountain ranges on their own. Historically, desert bighorn have occurred in at least 14 mountain ranges in southern and central New Mexico. One hundred individuals is considered the minimum population number for long-term survival. Expanding the San Andres and Caballo Mountain populations are critical because each range can hold several hundred bighorn sheep.

### THREATS AND CONCERNS

Desert bighorn populations are increasing in New Mexico, however many factors continue to threaten their survival: cougar predation, habitat degradations, disease, livestock, and poaching. The New Mexico Department of Game and Fish is working to increase numbers and distribution of desert bighorn to at least 500 animals in at least 3 geographic areas so that they may be removed from the state endangered species list.

Wildlife Notes are published by the New Mexico Department of Game and Fish.

This note and many others are available online at [http://www.wildlife.state.nm.us/education/wildlife\\_notes/WildlifeNotes.htm](http://www.wildlife.state.nm.us/education/wildlife_notes/WildlifeNotes.htm)

You may download, copy and distribute these.

For further information call the Conservation Education Section at (505) 476-8119 or (505) 476-8095

