



California State Parks

Video Transcript



The Desert Bighorn of Anza-Borrego

The story of the desert bighorn sheep of Anza-Borrego starts thousands of years ago in the mountainous lands of Eurasia. Mountain dwelling sheep migrated from the Old World ranges across the ancient land bridge into the New World. They dispersed into the lofty Rocky Mountains, Cascades, Sierra Nevada; on into Baja California and Sonora, Mexico. Hundreds of thousands of bighorn made the mountain ranges of the Southwest their home.

The Peninsular Ranges of Anza-Borrego proved ideal habitat for the newly arrived bighorn sheep. They found steep terrain, abundant water supplies, and ample forage. The bighorn thrived in the Peninsular Range, especially on the sparse desert slopes. Above them in the dense chaparral roamed herds of mule deer, while in the valleys below moved large numbers of pronghorn antelope.

The bighorn of prehistoric Anza-Borrego crossed the valleys of Borrego, Coachella, and the Salton Trough to find adequate feed and water during hard times. Disease, drought, predation, and subsistence hunting by Native Americans posed little threat to the prehistoric bighorn. As the populations expanded, the bighorn found suitable habitat by moving freely to take advantage of the available range.

However, when Europeans entered the Southwest, bringing with them herds of cattle and horses, the free movement of the bighorn began to change. Ranchos were claimed or granted, and fences went up. Cattle and domestic sheep moved in on the range of the desert bighorn. With them came diseases previously unknown to the New World bighorn. Without natural immunities to the new strains of viruses and bacteria, the herds of desert bighorn declined in many areas.

In the late 1800s and the early 1900s railroads entered the vast valleys between bighorn range. Canals were dug to deliver water to some of the richest farmlands in America. Highways were built along the Mexican border through the Peninsular Range and through the San Geronio Pass. Cities such as Palm Springs sprang up and reached into the homeland of the bighorn.

Today the desert bighorn is isolated, unable to move freely to neighboring mountain ranges as it once did. The habitat is broken into islands of home range. Today, drought, predation, disease, grazing, and continued encroachment of civilization pose threats to the future of the desert bighorn.

Life for a bighorn sheep begins as a lamb in early spring, usually high on a steep rocky slope far from human disturbance. Lambing has evolved to coincide with the first green-up of spring

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grasses and annuals. The female bighorn, known as a ewe, has carried the lamb since late summer, when she was pursued by one or more large rams during the mating season, or rut.

By January, ewes have moved to traditional lambing areas to form nursery groups. The rams have moved to the high country to form bachelor herds, separate from the ewes until the following summer. There is safety in numbers—more keen eyes searching the slopes for danger, which may come in the form of the coyote or the mountain lion.

The first lambs appear by mid-February, with the peak of lambing occurring in March. Ewes take advantage of the emerging annuals and flowering shrubs to produce milk and stores of body fat. Growth is rapid in healthy lambs, and it is an advantage to be large and vigorous before summer arrives. The lamb is weaned in about four months. In Anza-Borrego it's not uncommon for over half of the lambs to succumb to disease, predation, or other hardships by June. By the end of the first summer only two or three of every ten lambs born will still be alive.

Summer signals a time to move toward canyon waters. With temperatures well over one-hundred degrees for five months, usually topping out at one-hundred-and-eighteen to one-hundred-and-twenty, access to water is essential. Being mostly active during the day, bighorn will work their way down the rocky slopes very carefully, usually in the morning. Because of predators, going to water may be the most dangerous activity in a bighorn's daily life. Often an older dominant ewe will lead the small band of ewes, lambs, and yearlings to water, using her experience and keen eyesight to know when the right time to move toward water, or flee, might be.

Steep slopes offer escape terrain for bighorn, and they are usually not far from them, even when feeding in canyon bottoms or out on alluvial fans. Soft hooves offer the steady grip needed by bighorn to move with confidence amid their lofty homeland.

The desert bighorn needs a tremendous amount of wilderness to ensure survival. Ewe bands often wander six to eight miles along a mountain range during the season to find adequate water, forage, and lambing sites. A ewe's home range may cover from ten to thirty square miles and often includes alluvial fans near the desert floor up to forty-five-hundred feet in the piñon and juniper woodlands.

The home range of rams is usually expanded by their wanderings during the mating season and may average thirty to fifty square miles. Rams are known to cross the Borrego Valley through orchards, across paved roads, and sometimes even back yards to get to an adjacent mountain range. For this reason it is essential to maintain open movement corridors to allow bighorn, and other wildlife, to maintain the time-honored migrations of their prehistoric predecessors. Fences, highways, canals, and uninterrupted housing tracts can change the natural movement of the desert bighorn forever.

The one great reason behind the wide-ranging movements of a bighorn ram is, as you may have guessed, the mating season. In the Borrego desert the height of the rut coincides with the hottest, most inhospitable time of summer—August and September. Water is scarcest, the food supply is at its lowest level, the air temperature is usually about one-hundred-and-ten

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degrees in the daytime, and temperatures underfoot may reach one-hundred-eighty degrees or more on the dark granite boulders of a Borrego hillside.

Dominance among the males plays a major part of the ritualized mating behavior. Large, heavy-horned rams, weighing up to two-hundred-twenty-five pounds, display their huge curved racks to discourage lesser males from pursuing receptive ewes. Should a challenger appear who is not impressed by the horn display, nuzzling, pushing, and even kicking may progress into a much more aggressive form of combat--one which is rarely witnessed on the blazing desert slopes. One of the greatest displays of the wildlife kingdom occurs right here in Anza-Borrego, when the horns of two massive rams come clashing together in head-to-head combat, sending a resounding echo through the deep canyons which can be heard a mile away.

Rams will most often be on their own during the rigorous mating season, wandering between canyon springs in search of females. A ram may remain with a ewe group for a day or a week and then move on to search for another canyon and another band of ewes. As cooler nights signal the arrival of autumn, rams tend to gather into their bachelor herds, which may number from two to a dozen or more. They'll seek out high slopes full of boulders and remote ranges where they may reside until the long, hot days of summer return.

Some work was done as early as the 1950s to census the park's bighorn populations, but little was known about their numbers, range, food habits, survival rates, and habitat until the late 1960s and early 1970s. Since then, much has been revealed about the habits and condition of the park's namesake--the "Borrego cimarron," Spanish for "wild bighorn sheep."

Cycles of population increase and decrease have been noted over the decades. High lamb mortality, disease, decreasing habitat, increased human encroachment and recreation, competition with cattle, and dwindling water resources have combined to cause declines in many areas. In the 1970s the estimate of the Peninsular bighorn population, between Palm Springs and the Mexican border, was over eleven-hundred animals. By the mid-1990s, that number had plummeted to about four-hundred bighorn.

The program to restore health to the desert bighorn populations of these desert mountain ranges involves a wide-ranging approach. Studies have shown that human activity in prime bighorn habitat can have negative effects on their use of these critical areas. Some seasonal or permanent closures of primitive roads have occurred to relieve bighorn of the constant intrusions of vehicles, picnicking, and camping. Groundwater pumping, early cattle and mining operations, homesteads, and even the invasion of exotic plants have caused the demise of many bighorn watering sites. Cattle take a heavy toll on fragile desert vegetation and transmit diseases to the desert bighorn. Park personnel use modern capture methods to move them outside bighorn habitat. Exotic plants, such as the Middle East tamarisk tree, are being removed from springs and streamside habitats throughout Anza-Borrego to provide the return of native plant communities and free-flowing water. And the park, with assistance from hundreds of volunteers, conservation groups, and sportsmen's clubs, has constructed water catchment guzzlers. These guzzlers catch rainfall and store it for use during the summer months. The restoration of historic springs and seeps allows bighorn the continued use of many areas of Anza-Borrego.

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In an effort to estimate the park's sheep population, an annual summer waterhole census has been conducted since 1971. The census has given biologists a better understanding of the status of the sheep herd. And other methods are being used today in order to manage the entire Peninsular Range to benefit wildlife, especially the desert bighorn. Many agencies and interested organizations have banded together to seek out solutions to the problems facing the bighorn and their habitat. Range-wide plans have been created with the cooperation of the California State Parks, the Bureau of Land Management, the Department of Fish and Game, and the U.S Forest Service. Additional research has been funded and conducted by the Bighorn Institute, the University Of California system, the San Diego Zoological Society, and the Anza-Borrego Desert Natural History Association.

Researchers have renewed their efforts to study the desert bighorn in their native ranges to determine population, health, and factors influencing declines and increases. Radio collars have been placed on over one-hundred bighorn throughout the Peninsular Range to assist researchers in learning more about bighorn behavior, predation, movement corridors, and critical habitats. To be ultimately successful in restoring this magnificent wilderness and animal to its natural health and splendor will require continued efforts. Agencies and organizations will continue to assemble volunteers and funding. Researchers will track the health and population trends. Vital lands will continue to be acquired. And the long-term restoration of the desert habitat will be continued.

The future of the desert bighorn sheep depends upon vast tracks of land, set aside forever, for all generations. Set aside for its own sake, in all its splendor and wildness, where the processes known to the earth will continue to dominate; where coyotes will work in the willow thicket, and the sharp-eyed ewe will lead her born lamb down a precarious slope toward life-giving water; where massive rams can cross vast valleys, and the life history of the wild sheep that began thousands of years ago in the mountainous lands of Eurasia can continue here in Anza-Borrego Desert State Park—this land of the desert bighorn of Anza-Borrego.

Running Time: 16 minutes
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