Rocky Mountain

National Park
Colorado

National Park Service
U.S. Department of the Interior

Bighorn

The recent history of bighorn sheep in Rocky Mountain National Park is a dramatic story of near extinction and encouraging recovery.

In the mid-1800's, the population of bighorn in the area numbered in the thousands. As hunters and settlers moved into Estes Valley in the late 1800's and early 1900's, the bighorn population declined rapidly.

Initially, market hunters, encouraged by the high prices paid for the prized horns and meat, shot bighorn by the hundreds. When ranching moved into the mountain valleys, important bighorn habitat was altered and domestic sheep were introduced. The domestic sheep carried scabies and pneumonia, which proved fatal to large numbers of bighorn.

Under the pressures of disease, hunting, and habitat alteration, the bighorn population declined until the middle of this century, when research in the 1950's indicated that about 150 bighorn remained in the area of Rocky Mountain National Park.

The surviving bighorn herds were found in areas less accessible to human contact. Their range was limited to the isolated, high country regions of the Mummy and the Never Summer mountains, and along the Continental Divide. The migrating, low-country herds were gone.

As the pressures of hunting and disease declined in the 1960's and 1970's, bighorn populations increased. In an effort to stimulate population growth and promote diversity, wildlife managers reintroduced bighorn sheep to their historic ranges along Cow Creek and the North St. Vrain River in 1978 and 1980.

These new herds of bighorn along the eastern boundary of the park and the surviving native herds have continued to grow. Today, as many as 800 bighorn sheep live in the Rocky Mountain National Park area.

BIGHORN ADAPTATIONS

Bighorn sheep are well adapted to survive in the rugged terrain and harsh climate of the Rocky Mountains.

Their keen eyesight, highly developed sense of smell, and sharp hearing enable bighorn to detect potential dangers at great distances.

Specialized hooves, soft and flexible on the inside, aid sheep in precarious jumps and breath-taking climbs on sharp cliff faces, as they seek shelter and escape from predators in their rocky habitat.

To survive the bitter winds and chilling temperatures of winter, bighorn sheep have developed thick, double-layered coats of hair. These rich, tan coats, which grow anew late each summer, are shed in spring.

The digestive system of bighorn sheep is an unseen, but nonetheless essential, survival mechanism. In the initial phase of digestion, sheep benefit from teeth which grow throughout life, grinding down coarse, dry grasses and grit, without being worn down themselves.

A complex, four-part stomach allows sheep to gain important nutrients from hard, dry forage. Sheep are able to eat large amounts of forage rapidly, then retreat to cliffs or ledges to thoroughly rechew and digest their food, safe from predators.

Bighorn sheep, with their unique and spectacular combination of adaptations for mountain survival, are a fitting symbol of Rocky Mountain National Park.

HORNS

Both male and female bighorn sheep have true horns. Unlike antlers, which are shed yearly, sheep retain their horns throughout their lives. The size and shape of the horns are useful keys in determining the age and sex of individuals.

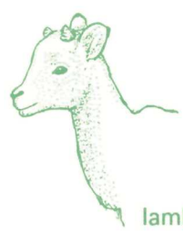
In the males, or rams, the horns grow continuously, from a small spike as lambs, to nearly a full curl at around eight years of age. The horns of the females, or ewes, grow to a sharp, straight point, eight to ten inches long, in their first four years, with negligible growth in adulthood.

The large, curled horns of the mature male play a vital role in bighorn mating. When the rams and ewes come together in the autumn breeding season, the strong, dominant rams with the largest horns vie for the right to females. As part of the mating ritual, males charge one another, clashing together at speeds of 40 mph (64 km/hr.). The resulting crashes of horns can be heard up to one mile (1.6 km) away.

mature ram

mature ewe

3 year old male



lamb

SHEEP LAKES BIGHORN CROSSING

During late spring and summer, bighorn sheep descend from the alpine areas of the Mummy Range into the meadows of Horseshoe Park, around Sheep Lakes. Here, they graze and eat soil to obtain minerals not found in their high mountain habitat. The minerals are essential in restoring nutrient levels, depleted by the stresses of lambing and a poor quality winter diet.

To reach the meadows, the sheep must cross Highway 34 on the north side of Horseshoe Park. Crossing the highway creates high levels of stress in bighorn. Studies have shown that this kind of stress can reduce their resistance to disease, thereby increasing sheep mortality.

In an attempt to protect the sheep, the park created a "Bighorn Crossing Zone" in Horseshoe Park. In the late spring and throughout summer, rangers are on duty at the crossing to control traffic as sheep attempt to move to and from the meadow.

The efforts to make highway crossings easier for the sheep, decreasing the stressful contact between sheep and visitors, have been successful. Since the crossing program began, sheep visit the meadow more frequently and stay in the meadow for longer periods of time.

Researchers believe this has increased the intake of important minerals by the sheep, thus improving the health of the bighorn herd.

BIGHORN WATCHING

Bighorn are most easily seen at low elevations in late spring and early summer, when they descend from the Mummy Range to Sheep Lakes in Horseshoe Park. Their visits generally occur between 9:00 a.m. and 3:00 p.m.

Groups of from one to sixty sheep move from the ridge on the north side of the valley, across the road, and into the meadow. They often stay two or three hours before recrossing and moving back to the high country.

To witness the sheep in their alpine range, a short but strenuous trail near Milner Pass leads the bighorn enthusiast to the edge of The Crater, where sheep may be viewed from a distance. This trail is closed during the spring lambing season in May and June. The closure is necessary so sheep can move to and from The Crater to the feeding grounds of the alpine tundra.

Occasionally, visitors may also see bighorn sheep in alpine habitat along Trail Ridge Road, between Forest Canyon Overlook and the Alpine Visitor Center.

Rocky Mountain National Park provides protection for all wildlife. Because bighorn are sensitive to human disturbance, your help in protecting the sheep is essential.

- Drive slowly and cautiously on Highway 34 along the north side of Horseshoe Park.
- Do not enter the "Bighorn Crossing Zone" by vehicle or on foot when sheep are present. Allow the sheep ample space to cross the road.
- Stay by the roadside when sheep are on the hill or in the meadow at Sheep Lakes.
- Obey all signs and closures.
- Do not attempt to approach sheep or make loud noises in their presence.

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