

Separation is part of the Solution



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Early naturalist Ernest Thompson Seton estimated there might have been 2 million bighorns in North America in 1800. By the mid-1950s when Buechner wrote his monograph on “Bighorn Sheep of the United States”, fewer than 17,000 bighorns were estimated in the western United States; perhaps fewer than 25,000 remained, range-wide. Today, through active restoration, including translocation of 20,000+ bighorns in 1,400+ transplants in the U.S. and Canada, bighorn sheep numbers have increased from fewer than 25,000 to more than 80,000.

“...as many as 2 million bighorn in North America in 1800...”

“...by mid-1950s...fewer than 25,000 remained...”

“...through active restoration... more than 80,000 bighorns today...”

Similar to impacts experienced by Native Americans from diseases carried by European explorers or settlers, bighorn sheep in western North America did not, and do not, possess natural immunity to many diseases carried by domestic



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sheep and goats. Respiratory disease, largely caused by bacteria (including *Mannheimia haemolytica* & *Mycoplasma ovipneumoniae*) remains the single most important factor influencing bighorn sheep restoration in North America.

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Domestic sheep and goats are carriers of bacteria that may cause substantial bighorn mortality, often with little to no illness to themselves. Between 75 to 100% of a bighorn herd may die in a short period of time following contact with domestic sheep or goats. Bighorn sheep are unable to mount the same immune responses to respiratory-tract diseases as domestic species do.

Population recovery of bighorn sheep after pneumonia die-offs is usually prolonged, due to chronically-depressed lamb survival. While large-scale die-offs of bighorn sheep may occur in the absence of contact with domestic sheep or goats, die-offs following interaction are more likely to occur, and are typically of greater magnitude.



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“...Dall’s sheep and Stone’s sheep...are considered particularly naïve to respiratory disease...”

Dall’s sheep and Stone’s sheep in Alaska and Canada are considered particularly naïve to respiratory disease. If contact with domestic sheep or goats occurred in thimhorn sheep range, results could be devastating.

The Wild Sheep Foundation (WSF) has engaged for decades in restoration and management of wild sheep in North America & beyond, raising or contributing more than \$90 million towards wild sheep conservation over the past 36 years. Millions of privately-raised conservation dollars have been spent researching and documenting adverse consequences of contact between domestic sheep or goats and wild sheep.

“...the Wild Sheep Foundation has... raised or contributed more than \$90 million towards wild sheep conservation over the past 36 years...”

WSF supports multiple uses of western public lands, including grazing by domestic sheep and goats. However, public and Crown lands provide the vast majority of wild sheep habitat in the western U.S. and Canada; alternative habitats for wild sheep simply do not exist. WSF acknowledges there is room on western landscapes for domestic sheep and goats, and for bighorn sheep, but they cannot occur together. Based on the most current scientific findings and published, peer-reviewed literature, west-wide management recommendations focus on managing for effective temporal and spatial separation between domestic sheep and goats and wild sheep.

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Even with increased education and awareness, bighorn sheep are still at risk. In just the past 4 years, multiple large pneumonia-related die-offs have occurred throughout the Rocky Mountain Region. Montana, Nevada, and Washington have experienced the most significant pneumonia die-offs in recent years, but Utah, Idaho, Wyoming, British Columbia, South Dakota, and Nebraska have all lost bighorns following known or highly-likely contact with domestic sheep or goats. Desert bighorn sheep are also affected, as witnessed by summer/fall 2013 pneumonia die-offs along the California-Nevada border.

As an alternative to chemical herbicides, use of domestic sheep and domestic goats on public and private lands for weed control is on the increase. Growing in popularity with the recreational community is the use of domestic goats as pack animals. While these are legitimate activities, risks to wild sheep remain; those risks must be appropriately managed, particularly on public lands. And, while much effort has focused on public land grazing allotments and Crown-land reforestation



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efforts, inadvertent risks to bighorn sheep frequently occur from smaller domestic sheep or goat operations, hobby herds, and farm flocks on small-acreage deeded lands. Bighorn sheep are a highly social animal, and attraction to domestic sheep and goats commonly occurs, especially during estrus periods.

“...Many people are not aware of the problems that exist when there is contact between these animals...”

Land management and wildlife agencies are developing educational materials and implementing regulations to avoid or minimize contact between wild sheep and domestic sheep or goats. Many people are not aware of the problems that exist when there is contact between these animals. If you see domestic sheep or goats close to wild sheep, please contact your local wildlife agency, the WAFWA Wild Sheep Working Group, land management agency, or the Wild Sheep Foundation.

For further information go to:

www.wildsheepfoundation.org

www.wildsheepworkinggroup.com