

Historic Distribution and Abundance of Bison in the Rocky Mountains of the United States

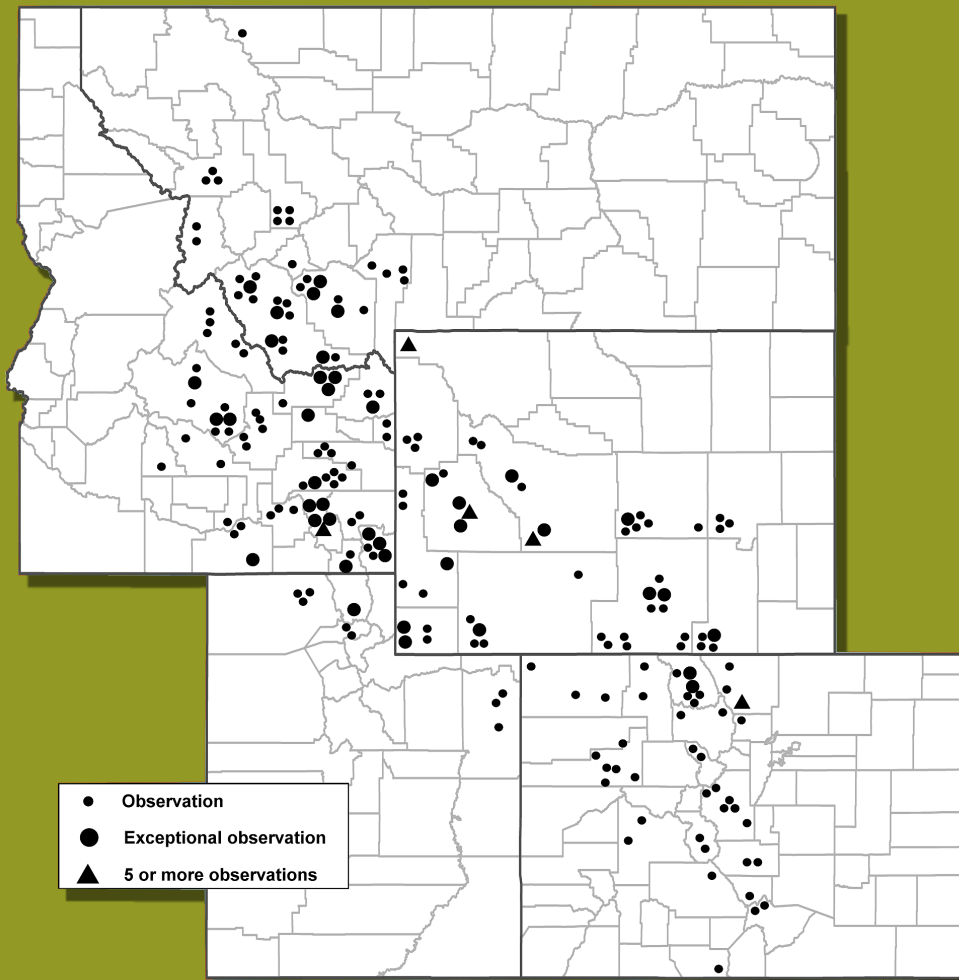
Abstract

Scant public awareness of the early distribution and abundance of bison (*Bison bison*) in the Rocky Mountains of the United States inhibits discussion of possible restoration of wild bison. A review of written evidence, largely from 1805-1845, indicates bison were widely distributed in intermountain valleys, with a major regional concentration spanning parts of Idaho, Montana and Wyoming. However, several interacting factors caused large spatial and temporal variation in bison abundance. Native American predation was likely a major influence on bison distribution and abundance during and shortly before 1805-1845. The area where bison were observed by early explorers underestimates the area where restoring productive bison herds is possible.

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Rocky Mountain Ecotype

Unique bison characteristics and behavior elicited by distinct environmental conditions in the Rocky Mountains constitute an ecotype, a portion of biodiversity without which the full expression of the *Bison bison* genotype would not occur.



Bison in the Rocky Mountains 1805 - 1845



Native American Predation

A Persistent, Mobile and Widespread Factor Limiting Bison Distribution in the Rocky Mountains

Ability to regionally extirpate bison – for short or long periods – or to prevent reestablishment of bison would have been enhanced by:

- 1) low bison abundance and productivity in areas with little and inconsistent forage, due to aridness with frequent droughts, perhaps exacerbated by competitive foraging from wild and Native American horses;
- 2) a large Native American population supported by alternative food sources, including salmon, other big game, small game and invertebrates;
- 3) periodic major bison declines due to severe winters or prolonged droughts, accentuating the numerical ratio of human predators/prey;
- 4a) patchily distributed bison habitat limiting bison mobility as an escape strategy, 4b) isolating source populations for reintroductions, 4c) limiting long term inter-populations genetic support, and 4d) allowing hunters to predictably locate their prey.

In contrast, Native American predation would have been limited by distance from permanent villages, especially in area contested by dangerous enemy tribes.

Native American predation likely was a major influence on bison distribution and abundance during and before 1805 – 1845.



Some Exceptional Observations

John Fremont, from Tom Fitzpatrick: In about 1824, "the buffalo were spread in immense numbers" over the Green and Bear River valleys and through all the country between the Green and Snake Rivers.

Idaho

Salmon River Valley, Custer County, 1824:
Ross: "over 10,000 in one herd."

Mud Lake area, Clark and Jefferson Counties, 1835:
Russell: "travelled amid thousands."
Shoshone killed " upwards of 1,000 cows."

Montana

Jefferson River Valley, Madison County, 1832:
Ferris: "plains covered with buffalo at the Beaverhead."

Ruby River Valley, Madison County, 1832:
Ferris: "hills covered with vast herds."

Wyoming

Upper Wind River Valley, Fremont County, 1823-24:
Clyman: "buffalo plenty." Killed "upwards of 1000 one day."

Upper Green River Valley, Sublette County, 1833:
Ferris: "plains covered with buffalo in all directions."

Salt River Valley, Lincoln County, 1835
Russell: "thousands of buffalo."

Utah

Ogden River Valley, Cache County, 1825:
Ogden: "plains covered with buffalo."

Colorado

North Park, Jackson County, 1839;
Smith: "probably about 2000 buffalo."

Native Americans often killed large numbers of bison.

Stuart, 1812, Upper Green River Valley, Wyoming;
"immense numbers of bison bones strewed everywhere."

Clyman, 1824, Upper Wind River Valley, Wyoming;
Crows killed "upwards of a thousand bison" in one day.

Bonneville, 1833, Upper Green River Valley, Wyoming;
Valley "strewed in every direction with the carcasses of buffaloes."

Russell, 1835, Mud Lake area, Idaho;
About 2000 Shoshone killed "upwards of 1000 cows" in one day.

Native American predation influenced bison distribution.

Sacajewea (via Clark), 1806: "But a few years ago (bison) were numerous" in the Gallatin Valley and "to the sources of Jefferson's river", Montana. They disappeared once Shoshones began to hunt the area "with more activity".

Wyeth, 1833; Bitterroot Valley, Montana. "Buffalo come here and even further but they are killed at once and do not get wonted here."

Point, 1842; Montana: "The running hunt was usually carried to the point of extermination."