

# The endangered circumstances and status of wild American bison in North America today.

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All citations are available for review online:

<http://www.buffalofieldcampaign.org/habitat/bisonconservation.html>

The International Union for Conservation of Nature has [Red Listed](#) the American bison as near threatened.

Sanderson and scientists estimate American bison occupy less than 1% of their original range.

Bison's original range spanned one-third of North America's landmass - more than two billion acres - and the wildlife species evolved in and adapted to over twenty distinct ecosystems (Sanderson; IUCN).

In Montana, bison's status is S2: "At risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state. Montana Fish, Wildlife, and Parks also designated bison a Tier I species: "Greatest conservation need. Montana Fish, Wildlife & Parks has a clear obligation to use its resources to implement conservation actions that provide direct benefit to these species, communities, and focus areas."

Freese and scientists found that "Today, the plains bison is for all practical purposes ecologically extinct within its original range."

Boyd found that greater than 95% of the 500,000 bison in North America today reside in private ownership as domestic livestock.

Less than 1.5% of bison are genetically *Bison bison* (Freese).

Forced cattle-bison breeding experiments to commercially exploit fitness traits of wild bison resulted in widespread introgression of cattle genes in private, public and Tribal bison herds (Polziehn; Ward; Halbert; Halbert and Derr; Hedrick; Schnabel).

A study by Douglas and scientists suggests that cattle genes in bison will adversely affect mitochondrial health and function, and the overall fitness of bison.

The extensive prevalence of cattle genes in bison populations (Polziehn; Ward; Halbert; Halbert and Derr; Hedrick), habitat fragmentation, loss of natural habitats and isolated populations, limited range and population sizes (Boyd; Boyd and Gates), artificial selection, intensive management, unnatural confinement to fenced ranges, absence of predators, introduction of non-native disease (Freese) are some of the risk factors of ecological extinction that threaten the identity and survival of American bison as a wildlife species.

Genetic testing of bison ((Polziehn; Ward; Halbert; Halbert and Derr; Schnabel) suggests that only bison descended from Yellowstone have no cattle ancestry.

The Henry Mountains bison was founded with bison solely descended from Yellowstone (Boyd).

Cattles genes have been found in American bison previously thought to have no cattle ancestry based on prior genetic testing: Wind Cave National Park, Grand Teton National Park, and Sullys Hill National Game Preserve (Dratch).

A recent report by scientists Dratch and Gogan suggests that only Yellowstone bison retain their wildlife identity. (The report did not survey Henry Mountains bison).

"The Bison of Yellowstone National Park are unique among bison herds in the United States, being descendants, in part, of the only continuously

wild herd in this country." Dr. Margaret Mary Meagher, retired Yellowstone National Park bison biologist.

A recent study by Halbert found "strong evidence for the existence of 2 genetically distinct subpopulations of bison" in the Yellowstone population.

"Prehistoric bison distribution in the GYE can perhaps best be summarized simply by saying that bison appear to have been living everywhere in Greater Yellowstone where habitats were suitable." Schullery and Whittlesey.

Scientist Joel Berger found that bison's nomadic nature and migratory behavior is still intact but they are cut-off from 100% of their historic migration corridors.

"Current management of private, state and Federal bison herds is leading towards domestication of bison that threatens their wild character and limits important natural selection processes." Position Statement of the Montana Chapter of The Wildlife Society on Wild Bison in Montana.

The American bison is a land-intensive species that once roamed over great distances (Boyd and Gates).

American bison, North America's largest terrestrial mammal and historically its most numerous mammal that left behind 100 million wallows (Butler), are architects of their environment shaping their world through shared behaviors in migratory herds across diverse habitats ranging from the Chihuahuan desert to northern grasslands (IUCN).

Long distance migration, what defines wild bison as a nomadic, herd animal that once thundered across the plains, is in danger of being lost forever.

Extirpation of American bison from their native range is an indicator that the prairie ecosystem they played a part in forming is also at risk of

extinction (Knapp).

Grazing by bison can reverse the loss of native grassland species and the disruption of grassland ecosystem structure and function caused by their extirpation (Collins).

Bison migrating freely in a wild state fulfill keystone ecological relationships that keep grasslands open and healthy, watersheds clean, and create habitats that supports an abundance and diversity of plants, birds, and wildlife (Fallon; IUCN; Sanderson).

Bison are an important food source for bears, wolves, eagles, coyotes, ravens and scavengers in the Yellowstone ecosystem (Mattson; Fallon).

Yellowstone is the last stronghold and wellspring of the Buffalo Nation (LaDuke).

"Yellowstone territory, the habitat of the last wild Buffalo Nation - is sacred ground, it has been a SACRED SITE for the First Nation's people, and for all humanity who hold deep respect for all Creation." (Looking Horse).

Yellowstone's remnant population represents a living link to the last of our nation's wild American bison.

"In the end, the frontier army's well-calculated policy of destroying the buffalo in order to conquer the Plains Indians proved more effective than any other weapon in its arsenal. Too small and too inept to vanquish the plains tribes expeditiously, the army aided and was in turn aided by the "sportsmen" and professional hunters who, along with the army itself, managed to destroy the Indians' staff of life. With the mainstay of their diet gone the Indians had no choice but to accept a servile fate on a reservation where they could subsist on government handouts. From the Indian perspective the buffalo's disappearance was a shattering blow. Crow Chief Plenty Coups described its impact to Frank Linderman: "When the buffalo went away the hearts of my people fell to the ground,

and they could not lift them up again. After this nothing happened. There was little singing anywhere." Sitting Bull summed up the results of the annihilation: "A cold wind blew across the prairie when the last buffalo fell-a death-wind for my people." Smits.