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Special Species

Rare Genetically Pure American Bison Discovered in Utah

American bison were nearly hunted to extinction in the 1800s, and most of those that were left were crossbred with cattle. Genetically pure bison are now rare, but researchers have uncovered a population of about 350 such animals in the mountains of Utah.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- Most bison in the U.S. have been crossbred with cattle and are semi-domesticated
- Only two genetically pure American bison herds were known to exist in the U.S. — in Wyoming's Yellowstone National Park and Wind Cave National Park
- A study revealed another herd in Utah's Henry Mountains that appear to be the only known truly wild, disease-free and free-ranging bison population left in North America
- Henry Mountain bison are remarkable because they're free of brucellosis, a venereal disease caused by bacteria that invade the reproductive organs
- Some Yellowstone bison wander onto public land, particularly during the winter when grazing becomes difficult. It was this natural migration that was often used as a reason to round up and slaughter the "straying" animals

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American bison are the U.S. national mammal, a designation that makes sense since millions of these majestic creatures once roamed the Great Plains. In the 1800s, however, the animals were hunted nearly to extinction; just over 1,000 bison remained in the U.S. by 1889.[1]

Over the decades that followed, bison slowly made a comeback. There are an estimated 500,000 bison in North America today, but most are not the same wild bison, genetically speaking, that once lived en masse in the wild.

During the 19th century, bison were bred extensively with domestic cattle. Livestock farmers at the time wanted to create an animal that was hardy and tolerant of droughts like bison yet with the gentle nature of cattle, according to wildlife ecologist Johan du Toit, Ph.D., of Utah State University (USU).[2]

As a result, most bison in the U.S. have been crossbred with cattle and are semi-domesticated, as they've been raised as livestock on ranches.

Only two genetically pure American bison herds were known to exist in the U.S. — in Wyoming's Yellowstone National Park and Wind Cave National Park — but a study revealed another herd in Utah's Henry Mountains that appear to be the only known truly wild, disease-free and free-ranging bison population left in North America.[3]

350 Wild Bison Discovered in Utah's Henry Mountains

In 2015, researchers from USU reported the discovery of a small free-ranging population of about 350 bison on public lands in the Henry Mountains of southern Utah. The isolated bison herd reportedly originated from bison that had been transplanted there from Yellowstone National Park in the 1940s.

Researchers analyzed genetic samples from 129 individual bison in the area and found no evidence of cattle genes.[4]

This "bison herd is valuable for the long-term conservation of the species," the researchers noted, adding that it also revealed insights into the tendency, or lack thereof, of wild bison to crossbreed with cattle in the wild.

It has long been assumed that bison and cattle allowed to graze together would mate and result in cross-breeding.

However, the Henry Mountains bison have grazed on open (unfenced) public lands alongside cattle with no cross-breeding. According to du Toit in a USU press release, "Given a choice, a bison bull shows no interest in domestic cows."[5]

Henry Mountain Bison Are Free of Brucellosis

The bison are also remarkable because they're free of brucellosis, a venereal disease caused by bacteria that invade the reproductive organs.

It occurs in a variety of different animals (including **dogs**) through infection with several species of Brucella bacteria, leading to a variety of symptoms including inflamed joints and reproductive problems.

In humans, infection can occur when a person comes into contact with an animal or animal product infected with Brucella bacteria. The disease has been largely eliminated from U.S. cattle, but still circulates among bison and elk living in Yellowstone National Park.

There is some concern that the wild animals could transmit the disease to nearby livestock, as has occurred in about 17 instances from elk to livestock from 2002 to 2012.[6]

Controversially, Yellowstone park officials reported they would cull between 600 and 900 bison in 2016 in an attempt to curb the spread of brucellosis in the area, even though they reported, "there have been no recorded instances of wild bison transmitting brucellosis to cattle."[7]

2 Additional Pure Bison Herds Introduced to US Indian Reservations

There is hope that genetically pure American bison may once again roam freely in more areas of their U.S. historic range. In 2012, for instance, 60 such bison were moved from Yellowstone National Park to the Fort Peck Indian Reservation in eastern Montana.

According to Defenders of Wildlife, which was involved in making the relocation possible, "The long-awaited move mark[ed] the historic homecoming of wild bison to an important part of their historic range on the Great Plains."[8]

In 2013, a second herd of 34 genetically pure Yellowstone bison were released at Fort Belknap Indian Reservation in Montana. Another 130 genetically pure bison were relocated in 2015.

Bison to Be Allowed to Roam on Public Land Outside Yellowstone

Some Yellowstone bison wander onto public land, particularly during the winter when grazing becomes difficult. It was this natural migration that was often used as a reason to round up and slaughter the "straying" animals.

In a major win for bison, the state of Montana announced that bison who leave Yellowstone will be allowed to roam on nearly 400,000 acres. In addition, the National Park Service announced in 2016 that Yellowstone bison could be relocated to tribal and public lands in lieu of being slaughtered.

Steve Forrest, Defenders of Wildlife's senior representative for the Rockies and Plains, explained that these steps could signal the beginning of restoring bison across North America:[9]

> *"Yellowstone's bison are our nation's most genetically valuable bison … They are essential in our efforts to restore the species across North America and for too long they have been needlessly sent to slaughter. We are delighted with [Montana] governor [Steve Bullock's] new rule that gives bison room to roam.*
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> *It finally acknowledges that bison are wildlife, not livestock, and recognizes that their seasonal, age-old winter migration routes know no political boundaries. Further, the park's proposal is a win-win for bison and for the American public."*

Sources and References

Nature World News December 21, 2015 (Archived)

[1] Defenders of Wildlife, Bison Facts

[2, 3, 5] Utah State Today December 16, 2015

[4] PLOS One December 16, 2015

[6] Emerging Infectious Diseases December 2013, Volume 19, Number 12

[7] Yellowstone National Park January 13, 2016 (Archived)

[8] Defenders of Wildlife, Yellowstone Bison Gain Ground in Montana (Archived)

[9] Defenders of Wildlife Spring 2016