MONTANA HISTORICAL SOCIETY

A rare engraving of mountain bison from H. R. Schoolcraft's **Indian Tribes of the United States** *(1860).*

The Mountain Bison

FEW ANIMALS HAVE CAPTURED the imagination as have the buffalo. The image of Plains Indians in colorful trappings riding on horseback into prodigious herds of buffalo has created an aura of romance and mythology. This association of horse, Indian, and buffalo—historically brief, culturally and economically unique—has almost completely shrouded many significant historical features of the bison in the prehorse era.

For example, it is misleading to think of this species as living only on the plains. Zoologists recognize two subspecies, or races, of bison. The plains buffalo *(Bison bison bison)* is well known. The other, the mountain bison *(Bison bison athabascae)*, has received little attention, and consequently its habits and attributes have been largely ignored. The mountain bison lived in the forests and mountains, particularly the Rocky Mountains, of the United States. In Canada, where it is called the wood bison, it lived in the meadows and forests of the subarctic zone. Early nineteenth-century trappers recognized a difference in species and referred specifically to the "mountain bison." In the language of science, the generic name *Bison* was in the process of being accepted and was picked up in the vernacular of the mountain man. One wonders which of the many naturalists to travel to the Rockies in this period mentioned that the animal was not a true buffalo but a bison. After about 1845, buffalo replaces "bison" in most accounts, and "wood buffalo" also creeps in.

Studying the mountain bison raises several major questions: (1) How was the behavior and ecology of the mountain form different from the plains type? (2) What was the original distribution of this race? (3) Why was it extinct over much of its range at contact time?

FROM THE PLETHORA of literature in western history, the general characteristics of the mountain bison are slowly emerging. Its most significant attributes were: altitudinal migrations; extreme shyness, manifested by a tendency to escape into forests or other topography unsuitable for pur-

suing horsemen; agility and speed; dark pelage with longer, finer hair than the plains buffalo; and a tendency to congregate in small bands. The contemporary descriptions are consistent except for gross size. Here are some samples:

"In various portions of the Rocky Mountains, especially in the region of the parks, is found an animal which old mountaineers call the 'bison.' This animal bears about the same relation to the plains buffalo as a sturdy mountain pony does to a well-built American horse. His body is lighter, whilst his legs are shorter, but much thicker and stronger, than the plains animal, thus enabling him to perform feats of climbing and tumbling almost incredible in such a huge and apparently unwieldly beast.

"These animals are by no means plentiful, and are moreover excessively shy, inhabiting the deepest, darkest defiles, or the craggy, almost precipitous, sides of mountains, inaccessible to any but the most practised mountaineers." (R. I. Dodge: *The Plains of the Great West,* 1877) ". . . The buffalo on the Pacific side of the Rocky Mountains are fleeter and more active than those on the Atlantic side. . . ." (Washington Irving: *Adventures of Captain Bonneville,* 1835) "They were frequently described to me as a marked variety known to the hunters as *Mountain* buffalo, and quite unlike the buffalo of the plains, smaller in size, the hair longer, more shaggy, and blacker, with other well marked differences." (W. H. Brewer: *Animal Life in the Rocky Mountains of Colorado,* 1871)

By GENE M. CHRISTMAN

A Lt. Grover, following the Blackfoot River in the winter of 1854, reported, "We crossed the track of a wood buffalo; his stride, when walking, was about a yard. This animal differs from the buffalo of the plains in being much larger, wilder, and in preferring a wooded to a prairie country." (Lt. C. Grover: *Pacific Railroad Report,* 1855)

The mountain bison wintered in the valleys, "holes," and "parks" in the Rockies. As the snow melted, they moved into the mountain meadows, even to the alpine tundra above the tree line. Recently, bones of a small band of bison (race not yet determined), including calves, were found under a melting ice sheet above the timberline on the Beartooth Plateau, northeast of Yellowstone National Park. They rutted in late summer, well isolated from the plains buffalo. This altitudinal migration seems to be one of the most distinguishing features of this subspecies. The paucity of records in many areas of the Rockies is due to season of observation and route of travel. For this reason, historians have frequently misinterpreted the status of bison in these regions. Travelers in the West stayed close to the rivers and easy passes, which offered water, firewood, meadows for grazing, and beaver for trapping. They generally wintered in well-protected valleys, especially in southern Idaho and northern Utah (winter bison hunts were common from Cache Valley, Utah, to the Snake River plains). In summer trappers were busy at the rendezvous, getting ready for the fall trapping season, and few climbed the mountains where bison grazed.

Lewis and Clark, the first explorers to penetrate the Rocky Mountain range of the mountain bison, followed the river valleys in western Montana and saw no live bison west of the "Gates of the Mountains." But they saw bison bones and traveled on bison trails, noting that ". . . it seems those animals do sometimes penetrate to a short distance within the mountains." (E. Coues: *History of the Expedition under the Command of Lewis and Clark,* 1893) The same interpretation is commonly made by others, and by implication does not recognize the mountain race. Significantly, Lewis and Clark's journey through these mountain valleys took place in the summer months.

In contrast, there were numerous records of bison kept by the men who traveled during the winter or at higher elevations. In the winter of 1831–32, John Work noted in his journal the existence of many herds of bison in the Beaverhead and Big Hole valleys and along the upper Salmon River. These areas overlap in part the routes of Lewis and Clark.

Frémont traveled up the Blue River from Middle Park, Colorado, in June, 1844. Approaching Hoosier Pass (11,541 feet), "we surprised a herd of buffalo, enjoying the shade at a small lake among the pines, and they made the dry branches crack, as they broke through the woods," he stated in his *Report* of 1844. Throughout his travel from North Park down to the area west of Pike's Peak, bison trails were abundant.

The ethnologist and anthropologist George Bird Grinnell claimed: "I have frequently seen living bison at and above timberline, and have found their remains well above timberline in Montana and in Wyoming. The bison commonly ranged in and occupied the mountains, and even the high mountains, all through the year. Old hunters of the west recognized a difference between the buffalo that lived in the mountains and those down on the plains."

HISTORICAL OBSERVATIONS, combined with zoological and anthropological data, indicate the range of mountain bison at contact time to have been as shown on the accompanying map. Because of the numbers involved and the habits of the animal, this area represents approximately the core, or

permanent, ranges of the race in the United States. It can be described as the area where summer migration to mountainous regions occurred.

The extent of the distribution of bison west of the core ranges has been the subject of much discussion, but there has been no thorough examination of available information. The map represents only a preliminary plotting of this information and hence is incomplete. Because subspecific identification of so few specimens has been made, we cannot state that only the mountain form is represented in the West. Also, these records are late—the last thousand years or so. Extinct species of bison are not included.

In addition to the vast literature of western exploration, ethnological and archaeological sources are significant in reconstructing the history of the mountain bison. The distinction between "prehistoric" and "historic" is often unclear and of little value. Before the coming of explorers, trappers, and traders, however, two potent factors profoundly altered Indian economy and way of life: European diseases and the horse. These factors are clearly "historical" in timing.

Salvage archaeology in eastern Washington has unearthed extensive collections of bison bones in village sites. Both bison and pronghorn antelope, unknown in Washington in modern times, were abundantly represented in levels before the advent of the horse. The great weight of bison and the absence of horses for transporting them indicate that the kill site was in close proximity to the villages; bison killed farther away would not likely be represented in the village, for the meat was dried at the kill site and few or no bones carried back. The number of sites represented suggests more than a rare or sporadic occurrence of bison in the area. Furthermore, the presence of bones of fetal and immature calves argues for a breeding population. For reasons explained below, fewer bison bones are found at levels where horse bones are also present.

The records from Malheur and Harney lakes, Oregon, are "historic," for Indians interviewed there claim that after the bison were gone, they used tules as building materials for houses in place of hides.

Some evidence has been found to substantiate the existence of bison in California. Although no intact specimens are extant, there is much ethnographic information about Indians hunting bison on tribal areas in the northeastern portion of the state. The year 1830 has been suggested as the last occurrence of bison there. Indians in the Sierra Nevada received bison robes by trade from Washoe and eastern Mono Indians of the eastern foothills of that range. Horn tips found at Buena Vista Lake, California, are probably such trade items.

The Columbian Plateau and the northern Great Basin should be considered as marginal range; areas to the south were submarginal. A marginal range was an area with little or no access to high mountain meadows and tundra. Bison could in part maintain themselves in modest numbers, overflowing from the core area. Their populations must have fluctuated, for in good years they would increase by reproduction, as suggested by the Washington excavations. In drought years they would have been restricted to well-watered areas and thus would have been vulnerable to hunters. It is doubtful, however, that hunting drastically altered the population levels in prehorse days.

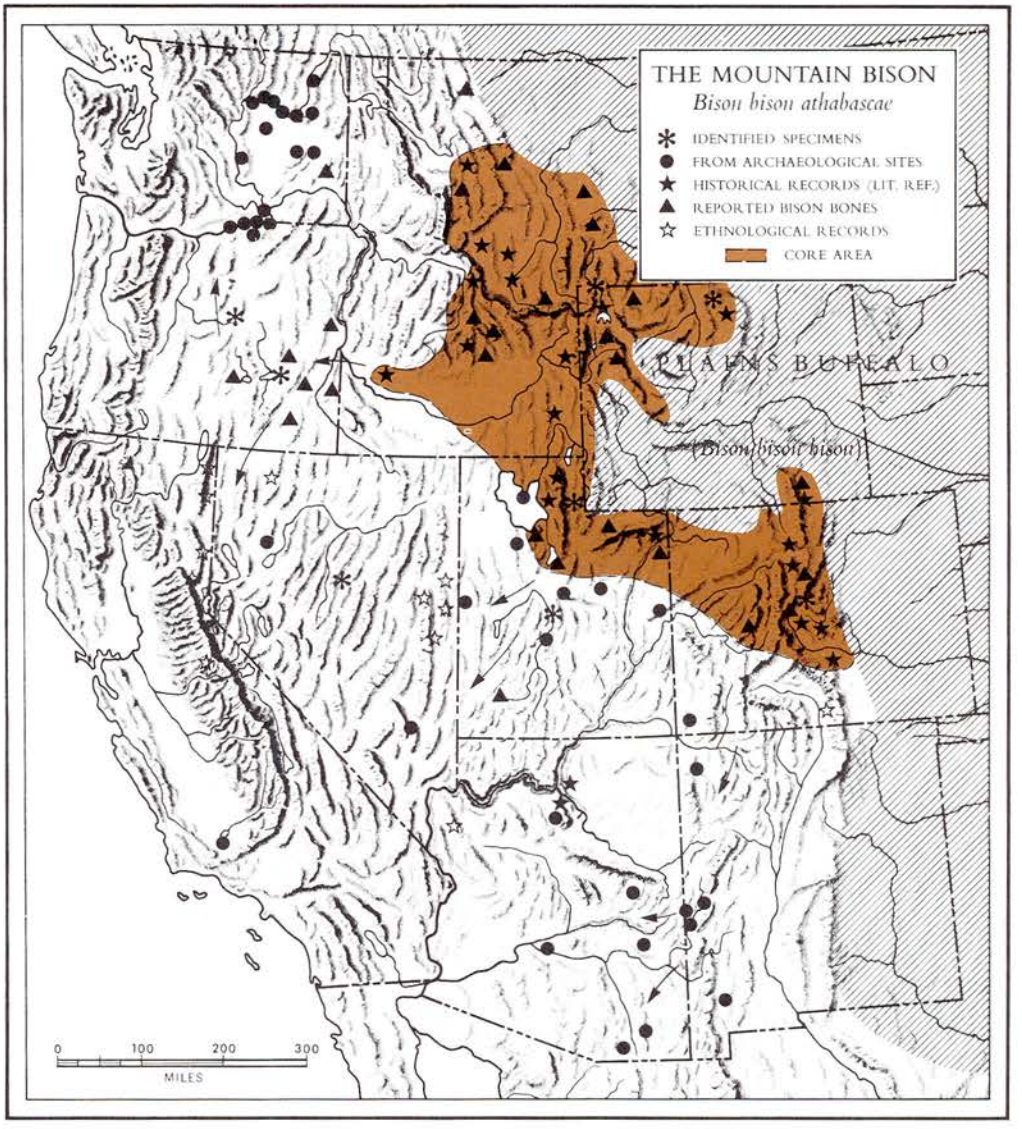
The bison records in southwestern Colorado, Arizona, and New Mexico are unclear. They date from 500 to 1400 A.D., and half of them are from forested, mountainous areas. An intriguing record is that of F. Garces who traveled through the Hopi region and the lower reaches of the Little Colorado River in the early summer of 1776. The Indians fed his party from a recently killed "Cibola," a term the Spanish applied to bison in the Southwest. Two such situations indicate that bison were in the area and were killed by Indians.

Thus, there clearly is no substance to the myth that bison moved into the West at a very late date, perhaps after the horse moved north. It is evident that they not only had a broad distribution in the West but were present in the Great Basin and Columbia Plateau immediately before the arrival of white men. We might then ask, why the late demise of bison? I can suggest only one change, which can explain this extinction: a faunal and cultural addition—the horse.

In prehorse days, Indians killed bison by stampeding them over cliffs or shooting them with arrows. The former method was probably the most remunerative. Arrows were effective only at relatively close distances, and bison were difficult to approach.

YELLOWSTONE NATIONAL PARK

Mountain bison in Yellowstone country. The photo, taken before 1894, depicts the Alum Creek Thermal area.



This map covers the range of the mountain bison in the western area of the United States.

It is doubtful that many North American Indians, if any, relied upon bison as a staple before the introduction of the horse. The Indians were not mobile enough, nor are "jumps" (cliffs) that convenient; so bison were a sometime supplement at best. The horse altered this, for the shooting distance was reduced to several feet; and the added mobility of scouts and villages, plus their newly acquired capacity to carry meat, significantly extended the Indians' hunting range.

Francis Haines pointed out (in the November, 1967, issue of THE AMERICAN WEST) that by 1720 the Nez Percé and Cayuse tribes of northern Idaho and southeastern Washington had acquired horses from the Shoshone Indians. By the end of the century these sedentary fishing folk had altered their economy and culture. They had become dependent upon plains buffalo for food and trade, and had picked up many other aspects of the Plains Indian culture. Their increased killing efficiency and greater mobility spelled doom to the bison populations on the Columbian Plateau, and forced Indian hunters to seek out the plains buffalo to maintain their altered culture.

Thus, for at least seventy-five years before the arrival of white men, horse-Indians were hunting bison in the Far West. Either by direct killing or by restricting movements of small herds from the core range, the horse-Indians eliminated the bison over a large area; today the only surviving mountain bison in the western United States are in Yellowstone National Park, and even these have been genetically diluted by contact with plains buffalo.

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