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The Buffalo Disaster of 1882

by Rudolph W. Koucky, M.D.

A century ago the buffalo on the northwestern plains suffered a disaster which almost exterminated the herds. In a two-year period between 1881 and 1883, the northern herd, which in 1881 may have numbered as many as four million animals, almost completely disappeared. One explanation for this phenomenon has been generally accepted. Proposed in 1887 by William Temple Hornaday, this assertion claims that the buffalo were exterminated by hunters. Hornaday's thesis was received with great acclaim and in subsequent years books, magazines, newspapers, and television programs have repeated that the buffalo herds were eliminated by hunters who were "the most skillful, the most relentless and the most savage on the continent." However, a review of the available evidence suggests that this long-accepted explanation is a myth initiated and maintained by bad journalism and poor scholarship.

The number of buffalo in North America in the early part of the 19th Century was incredible. The various estimates ranged from 30 to 200 million with 60 million as the most commonly expressed guess. Between 1840 and 1860 the buffalo on the Great Plains were divided into southern and northern herds by the migration of people into the west along the Platte River and by the building of the Union Pacific Railroad. In 1858, a disease epidemic completed the division into two herds by destroying the buffalo remaining in the Platte River valley. The two herds existed under entirely different circumstances. Euro-American settlement came earlier in the south. The southern buffalo range was cut up by three railroads and numerous military and trading roads and contained several villages and trading posts. The many marauding Indian bands in the area were troublesome, but they were disorganized and did little to slow the advance of settlements.

In the north, the Sioux Indians and allied tribes successfully protected their hunting grounds and kept the country in its original state until their hold was broken in 1876. During the period when the Indians kept the western part of the northern plains as their own preserve, a steady advance of settlement drove the buffalo into the West. As early as 1823, the Stephen H. Long expedition did not see buffalo until it reached the border of the Dakotas. Hunting parties from the Red River settlements into northern Dakota and the Assiniboine River Valley molested the buffalo throughout the first half of the 19th Century, and by 1862 the herd was being concentrated in the West. The James A. Fisk expedition in 1862 encountered so many buffalo in northwestern Dakota that one member claimed they saw "one million" in a single day. By 1870, very few of the animals remained east of the Missouri River. In 1878 large prairie fires drove the buffalo from northern Alberta southward into the Missouri River valley.

In the final northern range, made up of Montana and adjacent Canada, the animals existed in tremendous numbers. Traders at Fort Benton in northern Montana, in fact, observed that the buffalo were increasing. Contemporary accounts appear to verify this assertion. One historian reports that travelers in southwestern Saskatchewan once rode twenty to thirty miles a day for seven days, always within buffalo herds. Captain Grant Marsh, of Custer Battle fame, in the steamer Stockdale, was once stopped for several hours by buffalo crossing the Missouri River; after the boat was maneuvered through the herd and had passed upriver, the
herd was still crossing when last seen. Captain William T. Twining, surveyor for the 1874 expedition establishing the line between Canada and Montana, stood on a hill 1800 feet high and watched a migrating herd of buffalo so large he could not see the beginning or the end. Lt. G.C. Doane, the ingenious officer who devised the litters for evacuating the wounded from the Custer battlefield, traveled through central Montana and estimated the buffalo herds at four million animals. His guess seems conservative and conforms to all the other observations. Hornaday estimated the herd at 1.5 million, but this claim is contradicted by his own statement that 500,000 buffalo could be killed annually without decreasing the herd.\(^9\)

A parent herd of four million animals could have 600,000 to 800,000 offspring each year. Buffalo may not have reproduced as rapidly as domestic cattle, and Indians preferred to kill cows for their better meat and softer hides, thus disturbing the normal male-female ratio.

The number of buffalo killed by the Indians for personal use, such as food, tips, clothing, bedding, and miscellaneous purposes, probably decreased as alternate goods became available at the agencies and trading posts. Even the kill by whites, such as those at the Red River Colony at Winnipeg, decreased as agricultural and dairy products became available. With the number killed for these various purposes remaining essentially constant, the number of hides appearing in the fur trade becomes a good measure of increases or decreases in the total buffalo kill.

Hornaday collected the available data on the number of hides shipped from both the southern and northern buffalo country through direct correspondence with traders, fur buyers, railroad officials, and eastern fur dealers in 1887. Merrill G. Burlingame reviewed Hornaday’s work in 1929 and added more data.\(^1\) From these two studies it is obvious that no complete records ever were kept and that only some of the people involved in the trade were available for interview. Nevertheless, the only reasonably reliable information accessible today comes from these two publications. Subsequent writings repeat the earlier material and add very few new facts.

An examination of Hornaday’s and Burlingame’s data, however, calls their conclusions into question.

There were two major shipping points from the northern buffalo country. Fort Benton, located in northern Montana on the Missouri River, was the central collection point for the northern part of the range, even extending into southern Canada. In 1881 the Northern Pacific Railroad was extended to the Yellowstone River at Miles City and that location became the largest shipping point from that country.

J.N. Davis was the buyer on the Northern Pacific line. In 1881 he shipped 50,000 hides and in 1882 shipped another 200,000 hides, a combined total of 250,000 hides for the two peak years. I.G. Baker and Co., the buyer at Fort Benton, shipped 20,000 hides in 1880 and that number dropped to 5,000 by 1883. Assuming that the decline was uniform, a reasonable estimate is that 15,000 hides were shipped in 1881 and 10,000 in 1882 for a total of 25,000 hides for the peak years of 1881 and 1882. Combining the shipments from the two points, the total recorded shipment of hides from the northern buffalo range was 270,000 for the peak years of 1881 and 1882.\(^1\)

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\(^2\)Ewers, *The Blackfeet*, p. 278.


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According to explorers, buffalo “covered” the northern plains. This engraving by John M. Stanley was originally sketched near Lake Jessie in modern-day Griggs County during the 1853 Stevens survey expedition.

*—State Historical Society of North Dakota Collection*
This number is in striking contrast to the number of hides shipped from the southern zone. Hornaday obtained records from only one of the three railroads in the south, but this one road shipped a total of 459,453 hides in the peak years of 1872, 1873 and 1874. Based on this report from the one railroad, Hornaday estimated that the total number of hides shipped by the three railroads might be 1,378,359 for the three peak years. This number of hides represents a formidable kill of animals, and it is therefore readily understandable that the terms 'merciful slaughter' and 'relentless killing' should appear in the literature. It should be made absolutely clear that this killing occurred in the south. Obviously, a similar situation did not occur in the north where the total recorded harvest of 270,000 in the two peak years represented only a small part of the estimated four million animals.

In 1881 and 1882 disaster struck the northern herd. The four million animals, together with their anticipated 500,000 annual offspring, disappeared in these two years.

The disappearance of the buffalo first became apparent in 1881 in the Blackfeet country of northwestern Montana. The four Blackfeet hunts in 1881 were poor. During the winter of 1881-82, the Indians found an isolated herd which gave them a temporary supply of meat. In the remainder of 1882 they killed only a "few" buffalo. Kipp's post in north-central Montana was abandoned in July, 1882, because there were no more buffalo. In 1883 the hunts by the Blackfeet produced a total of six buffalo. It was said that, in prior years, the Blackfeet killed 100,000 to 150,000 buffalo each year.

The suffering and starvation of the Blackfeet Indians were tragic. Normally, only the aged and infirm stayed at the Indian Agency, and in 1881 these numbered 605 people. In 1882, 1,553 came to the agency, and in 1883, 3,000 came because they had no food. Emergency rations did not arrive until 1885.

The disappearance of the buffalo became apparent in the Yellowstone Valley in the following year during the winter and spring of 1882-83. The number of hides shipped on the Northern Pacific Railroad shows this loss very clearly. As previously noted, in 1881 buyer J.N. Davis shipped 50,000 hides and in 1882 shipped 200,000 hides. In 1883 he shipped 40,000 hides, most of which had been harvested in the fall and winter of 1882. The last hides, aside from an occasional few, were brought into Dickinson in July of 1883. In 1884, reflecting the kill of the prior winter, a total of one carload of 200 hides was shipped. Likewise, Fort Benton, in 1884, did not ship any hides.

Between 1881 and the spring of 1883, the entire herd of about 4,000,000 buffalo and their estimated 500,000 offspring disappeared almost completely. During this period a recorded total of 320,000 hides was shipped from the northern buffalo country. This three-year total was less than the anticipated propogation of the herd for one single year.

Hunting by plains Indians did little to reduce the population of buffalo. Artist Karl Bodmer sketched this version of such a hunt in 1833.

—State Historical Society of North Dakota Collection

Though it has been said that hide-buying statistics were falsified and downgraded in order to keep Congress from banning buffalo hunting, such speculation is unrealistic. The statistics were obtained ten years after feeble Congressional efforts to ban buffalo hunting had been abandoned and about three years after the northern herd had disappeared.

It is, however, almost certain that the recorded number of hides shipped was not the actual total. The records include only the shipments by two traders. These two probably were the major buyers since neither Hornaday nor Burlingame obtained records from any others, but it is well documented that others did exist. Burlingame states that there were "immense numbers," but gives no details. James Willard Schultz names three buyers in northern Montana in addition to the L.G. Baker and Co., interviewed by Hornaday. Olaf T. Hagen and Ray H. Mattison name two buyers in the Dickinson area in addition to Davis. The information about these various buyers is so fragmentary that it is completely impossible even to guess at the volumes of their enterprises. Some of these traders sold their hides to Davis and to Baker and Co., which still further confuses the picture.
To adjust the recorded total of hides shipped for the unknown number shipped by other buyers, one can add 100,000 or double the quotation, or even multiply it by five. There still will remain a great disproportion between the hides shipped and the estimate of four million buffalo in the original parent herd.

It is impossible that all the various independent observations of immense herds of buffalo could be wrong. It. Doane made his estimate of 4,000,000 buffalo in 1874, the same year that Twining saw the huge herd along the Canadian boundary. Ewers reports that the Blackfeet Indians had plenty of meat and hides in 1878 and 1879. The large Indian camp destroyed by the Army after the Custer battle in 1876 was well supplied with meat. As late as 1882, Indians from the Standing Rock Reservation went on a buffalo hunt and harvested 5,000 animals. Hide buyer J.N. Davis stated that in 1876 there were about 500,000 buffalo in the Miles City area alone. Mr. Hanford, traffic manager for the Northern Pacific, believed that the herds were unchanged up to 1880. It seems certain that immense numbers of buffalo remained in the northern country at least until 1881.

The statistics regarding the number of hides shipped from the northern buffalo country were based on statements by business people engaged in the fur trade and can be accepted as approximately correct. Conversely, various other writings about the merciful slaughter of fantastic numbers of buffalo seem to be stories by careless or gullible reporters, guesswork by bystanders, or even outright fabrications.

One writer, for example, casually mentions kills of 1.5 million buffalo and two million buffalo without any documentation or supporting evidence, apparently implying that such a massive slaughter was a common event. The same author converts Hornaday's speculative estimate of 1,378,359 hides shipped from the southern zone into the statement, "Together the railroads handled 1,378,359 buffalo hides." Sometimes it is impossible to identify exaggeration because insufficient information exists. For example, in 1880 the record indicates that 20,000 hides were shipped from Fort Benton. Some of these hides were unloaded at Bismarck for shipment by rail, and the remainder went down river. At Sioux City, Iowa, a reporter estimated that 100,000 hides passed through the city. This seems like an obvious exaggeration, but the 20,000 hides exported from Fort Benton were sent by one shipper and there may have been several other shipments by other buyers.

Likewise, the Dickinson Press in 1883 estimated that 250,000 hides would be shipped from the village in that year. Yet, in 1883, fur buyer Davis shipped 40,000 hides from all his stations, including Dickinson. There were two other buyers in Dickinson, but their enterprises were small. One must conclude that the newspaper made a gross exaggeration.

A story about frontier notable Buffalo Jones is interesting and perhaps significant at this point. Jones watched Indians drive a herd of "at least 2,000 buffalo" to their destruction over a cliff. When Jones counted the bodies, there were 41. This episode suggests that some of the stories were not intended to be taken seriously. Telling tall stories still is a common pastime.

In a similar vein, true statements taken out of context can leave a malignant impression. For example, the statement that hundreds of thousands of buffalo were slaughtered in the Yellowstone Valley gives the impression of something vile and vicious. When one recognizes that an annual harvest of 500,000 animals was considered permissible without decreasing the herd, the original comment carries with it an impression of factual history.

Even reputable writings sometimes conflict with the record. James McLaughlin gives a concise eyewitness account of the last buffalo hunt by Standing Rock Reservation Indians in June, 1882; 5,000 buffalo were killed. Along on the hunt were McLaughlin (who was the Indian Agent), his young son, and three friends, and the leading chief was Running Antelope. In Hornaday's account, however, the hunt was in 1883, 10,000 buffalo were killed, a crowd of white hunters participated, and, as a final garnishment, Sitting Bull was named as the leading chief (Sitting Bull, in 1883, was in partial confinement following his recent surrender). Curiously, Hornaday's garbled account has been copied in several articles, but McLaughlin's eyewitness version has rarely been utilized as a source.

The distortion of statistics by some writers is astonishing, but perhaps represents honest errors. Hornaday, for example, obtained a three-year total of 459,455 hides shipped by one southern railroad. Since there were two other railroads, he estimated that the total number of hides shipped might be 1,378,357. Perhaps this is a plausible estimate and it is compatible with the stories of fantastic kills in the south. Other accounts should be viewed more critically.

As a result of the tremendous supply of buffalo, there was no attempt at conservation. Meat was cheaper than its transportation. There was waste. Some hunters were novices who wounded buffalo and lost them. As G.O. Shields found on his hunting trips, buffalo were sturdy animals and hard to kill. Moreover, the novices, through ignorance, ruined some hides from maggots and mold due to poor preparation. Hornaday, as a result, estimated that each hide shipped could represent a kill of as many as five buffalo. To be conservative, he multiplied the estimate of hides shipped by about three to obtain the figure of 3,158,730 buffalo killed. This seems a highly unrealistic inflation, and Hornaday himself stated that the estimate was incredible.

The speculation, however, has become accepted as fact. Indeed, Haines astonishingly states that 3,157,000 hides...
were shipped from the south. Apparently, he misunderstood Hornaday’s speculative estimate and concluded that 6.5 million buffalo had been killed. In this series of speculations and errors an initial record of 459,455 hides became 1,378,730 buffalo killed, and finally 6.3 million buffalo killed. Since these writers are regarded as reputable, subsequent authors have repeated the figures until now they are accepted as truth.

Haines also says that 5,000 hunters preyed on the Montana herd. Supposedly, they came from all directions to get in on the final slaughter. Yet, in 1881, the population of Miles City, the largest village in eastern Montana, was 600. It seems impossible that 5,000 migrant hunters could be fed, clothed, housed, and equipped in a small village. Moreover, Dakota historians, such as Doane Robinson, Orin G. Libby, Theodore Roosevelt, James McLaughlin, and Olaf Hagen do not describe any such horde of hunters; Clement A. Lounsberry’s three-volume encyclopedia of North Dakota history does not mention a mob of migrant hunters. Hornaday did not give specific details about buffalo hunts. The story of a vast army of hunters seems to be a myth conjured up to explain the mystery of the disappearance of the buffalo. It is tragic that the literature on the buffalo is saddled with these exaggerations, speculations, distortions, and errors.

Haines, The Buffalo, p. 196.

The disappearance of the buffalo was so sudden that, in 1883, the local people did not realize that the buffalo were gone. The hunters assumed that the buffalo had wandered to some other area and would return. In the fall of 1883, men purchased outfits to go hunting, but returned with only bones to sell. As late as 1884, guides made arrangements for sportsmen’s hunts which had to be cancelled because buffalo could not be found.

When Hornaday, a taxidermist for the National Museum in Washington, conducted his research, he spent only a few weeks in Montana. Assisted by Mr. McNaney, a former buffalo hunter, and by local cowboys, he collected 25 animals for a museum display. He then wrote a truly remarkable descrip-
tion of the biology of the buffalo. Unfortunately, he obtained some material from hearst, such as his garbled account of the Standing Rock buffalo hunt. He obtained the statistics on the hides shipped from the buffalo country directly from the people involved in the fur trade. Hornaday also was an energetic conservationist and in later years was very active in establishing the modern buffalo preserves. His article reflects his concerns, but includes some dogmatic and almost fanatical opinions. The following excerpt pertaining to hunters is an example: 31

Give him a gun and something which he may kill without getting himself in trouble and presto! he is instantly a savage again, finding exquisite delight in bloodshed, slaughter and death, if not for gain, then solely for the joy and happiness of it.

Hornaday begins his discussion of the extermination of the northern herd with the conclusion that the animals were destroyed by "game butchers." 32 He knew that about 320,000 hides had been shipped from the northern country in the last three years of hide-buying because he, himself, collected the statistics. He also notes that 500,000 male buffalo could be harvested each year without decreasing the herd. Despite this apparent conflict in statistics, he concludes that the buffalo were exterminated by hunters. Since the total recorded number of hides shipped from the country was less than the anticipated annual propagation of the herd for one single year, it is obvious that some explanation, other than slaughter by hide hunters, must be found to explain the disappearance of the buffalo.

In 1926, while hunting on the former northern buffalo range, I saw a cluster of buffalo skeletons arranged much like a herd of cows lying on a meadow. I examined the skeletons and, with my training as a pathologist, could find no suggestion that the animals had been killed. They had simply laid down and died. Obviously, the entire herd had been sick. That scene has had considerable influence on my interpretation of the disappearance of the buffalo. It is, in fact, my firm belief that the several million buffalo died from disease.

Characteristically, epidemic disease is introduced by a host which is either sick or is immune, but still can transmit the disease to other non-immune individuals. Once introduced, the disease spreads by contact from one individual to another. It is proposed that the buffalo were susceptible to a disease which had not been present and which was introduced from an outside source. The disease was highly fatal because the buffalo had no immunity and it spread rapidly because the buffalo habitually congregated in large herds. The logical host for such a disease was domestic cattle.

Domestic cattle were introduced into the northwestern plains at several different times. In early years, the cattle had almost no opportunity to mix with the buffalo. The military and trading posts kept cattle in well supervised herds; though Indians frequently stole some, the animals were promptly killed and there was thus no opportunity for them to mingle with buffalo. Later, large numbers of cattle were brought from Texas as rations for the Indian agencies in the Dakotas. These herds were driven north along the Missouri River Valley to avoid the hostile Indians in the west. At the agencies the cattle were killed by the Indians, often in mock "buffalo" hunts, so there was no contact with the buffalo herds.

After the Civil War, large ranches were developed in Nebraska, Kansas, Colorado, and Wyoming. Most of the cattle for these ranches were brought from Texas where so-called tick fever was common. The disease, endemic throughout these states, could be fatal to cattle that had no immunity. Travelers drawn by oxen might be stranded by the sudden death of their animals. Friction and even bloodshed occurred when settlers tried to protect their disease-free animals from passing herds of Texas cattle being driven to the northern states. One of the reasons for fencing in the early days of the West was to protect local cattle from the Texas herds.

Prior to the late 1870's, most ranchers were kept from the northern buffalo country by the hostile Indians. After the Custer battle of 1876, the Indians were disorganized, but marauding bands kept the country in a turmoil for about two more years. The country had become peaceful by 1879, and thereafter it rapidly attracted ranchers. Though some ranching had occurred in southwestern Montana prior to and during the Gold Rush, few cattle were brought onto the northern buffalo range before 1871. By 1879, thousands of Texas cattle had been driven into southwestern and central Montana, primarily for the gold miners. The first Texas cattle were brought into southeastern Montana in 1881. 33 In 1881, there were 72 ranches in the Tongue River Valley of southeastern Montana with 23,000 cattle and 8,000 sheep. 34 The Indian Agent at the Blackfeet Reservation in northwestern Montana imported 500 cattle for brood stock for the Indians in 1879. There were no fences, and these cattle ran free within the buffalo country. The Agent reported in 1881 that the ranchers in central Montana complained that the Indians had killed 3,000 of their cattle; the Indians denied the charge. Apparently, the cattle had strayed because white men's cattle were later seen grazing in the Indian Reservation. 35 These statements are of utmost importance because they are definite evidence of intimate contact between domestic cattle and the buffalo in 1880-81 in the Blackfeet country where the disappearance of the buffalo was first observed and in the year when this first occurred. These cattle had originated in the southern states where tick fever was endemic.

The mingling of cattle known to harbor so-called tick fever with the buffalo exactly at the time and in the place where the disappearance of the buffalo first appeared is strong presumptive evidence that the buffalo were devastated by disease. The loss of the buffalo occurred in an area where there were no white hide hunters, which makes the concept even more attractive.

All the requirements for an epidemic were present. The host was domestic cattle infected with so-called tick fever. The buffalo never had contact with the disease and therefore had no immunity. The buffalo congregated in large herds, and this close contact provided for a rapid spread of the disease.
The traditional explanation for the disappearance of the great American buffalo herds is told in many modern museums. A gallery in the North Dakota Heritage Center, for example, repeats the long-accepted theory that wasteful over-hunting during the late 19th Century caused the demise of the great prairie beast. In the display a hunter "sights in" on three buffalo (top, left; center; below). One exhibit case contains items that represent the uses made by white hunters of the buffalo (top, right); the items are mostly frivolous attempts to appeal to a consumer culture.
Such a disease epidemic was not the first to be recorded. Two other epidemics had occurred in previous years, both associated with advancing civilization and the accompanying cattle. In 1825 in Nebraska at the vanguard of advancing settlements, an epidemic occurred which destroyed all the buffalo in eastern Nebraska. The Indians suffered from starvation and some died from eating meat from the sick animals. In 1858 an epidemic destroyed the buffalo in the Platte River Valley. From Fort Laramie to Fort Bridger "was one long offense to the nostrils." This epidemic occurred in the valley where immigrants going west brought cattle with them.36

It is impossible to be specific about the disease brought into the buffalo country by cattle. It was called "tick fever," but in 1881 veterinary medicine was poorly developed and, in all probability, several diseases were given the same name. In the epidemics of 1825 and 1858, the cattle had originated in the east where tick fever was unknown. It would be more appropriate to state that the 1881-82 epidemic was caused by a contagious cattle-borne disease.

To summarize, the concept that the herds of buffalo on the northern plains were exterminated by hunters is not supported by the available records. Large herds of buffalo, estimated at four million, roamed through Montana and southern Canada as late as 1881. The estimated propagation of the herds would permit a harvest of 500,000 animals each year. Yet, the entire population of buffalo disappeared between 1881 and early 1883. In these three years available records indicate that about 320,000 hides were shipped from the buffalo country, less than the anticipated increase in the herd for one single year. The descriptions of hordes of white hunters in the north country is not supported by the records and appears to be a myth. The introduction of domestic cattle originating in states where so-called tick fever was endemic exactly at the time and in the area where the disappearance of the buffalo first began offers evidence that the four million buffalo not accounted for by hide hunting died from a cattle-borne disease. The disease was highly fatal to buffalo because they had no prior contact with the disease and therefore had no immunity. Two previous disease epidemics among buffalo have been recorded. This concept of extermination by disease is much more plausible than the unsupported assumption that the buffalo were destroyed by hunters.