CHAPTER THREE

A Well-Run Ranch[1]

Domestication and Commercialization of the Plains Bison in Buffalo National Park, 1920–1939

WITH THE PURCHASE OF THE PABLO PLAINS BISON HERD from the Flathead Valley of Montana in 1907, the Dominion government embarked on the largest wildlife saving effort of the early 20th century. From the beginning, however, both the structure of Buffalo National Park and the management of the plains bison herd resembled a domestic cattle operation. Ellis Treffry, son of Vern Treffry (who was employed as park rider during fall roundups from 1921 to 1939), described the park as "essentially a big ranch, other than they had buffalo instead of cattle."[2]

The ranch-style management of the bison at Wainwright is not surprising. Those in the administration of the Department of the Interior and, after 1911, the Parks Branch, depended on agricultural knowledge to guide the bison effort at Buffalo National Park. In fact, in many of the early saving efforts, wild animals were domesticated in order to save them and increase their numbers. The bison herd increased rapidly in the first decade of the effort (1909–19). The Parks Branch, however, was initially hesitant to implement policies to curtail the growing size of the herd. In hindsight, their approach to the overpopulation problem was perhaps too cautious. Conflicting ideas of how to manage the rapid growth of the bison herd ethically and then further delays due to deliberations about how to make the herd most profitable created an even greater crisis.

By the 1920s, the Parks Branch needed to make the growing herd financially useful in order to sustain the effort and the focus of the bison became a commercial venture. In the end, however, commercializing the herd came at a cost. While making the bison profitable was necessary to sustain the effort financially, the type of management that followed at Wainwright compromised the integrity of the species. Somewhere in the desperation to make the overgrown effort pay for itself, the bison herd, while technically already domesticated,[3] completely lost its wildness.

At the turn of the 20th century, saving wild animals, especially those species considered to be on the verge of extinction, was enacted in the spirit of utility. At this time, domesticating these animals was a way to ensure their permanence and would have been understood as a means of "preservation" as illustrated by C. "Buffalo" Jones's attempt to save wood bison and muskox. Jones, famous for the role he played in saving the plains bison from extinction in the 1880s, was worried about the welfare of the large mammals in northern Canada. He approached the Dominion government in 1899 with a proposal to capture some of these animals to save them from extinction. In a letter to the governor general he wrote, "It is of the greatest importance that Some of booth [*sic*] the buffalo or Bison and Musk Ox, and also a few Reindeer Should be domesticated and preserved, as no law can protect them against distructive Storms, Wolves, or hungry Indians, particularly the buffalo that are so near extinct in a wild state."[4] Although the expedition never came to fruition, it might be argued that the government approved the scheme because Jones agreed to donate half of the animals he captured to Rocky Mountains Park.[5] As William Pearce from the Department of the Interior wrote, "It would be a good thing to list the domestication of…these classes named, the Muskox in particular."[6]

The Dominion government continued to explore domestication schemes in the early 20th century. A 1922 Department of the Interior report investigated the potential of domesticating muskox and reindeer. These animals were not in danger of extinction, but the government hoped to safeguard them for future use since they were deemed a valuable meat supply. The hides of the animals and the wool of the muskox were also felt to have potential.[7]

Saving wild animals by the means of domestication was a product of the perception in the 19th century that once-abundant game populations could not survive the onslaught of development and settlement. The alarm was raised by the near extinction of the plains bison. If herds as vast and as important as the bison could disappear over mere decades, then all species were at risk of extinction. Of the near annihilation of the southern bison herd, zoologist William Hornaday wrote, "With such a lesson before our eyes, confirmed in every detail by living testimony, who will dare to say that there will be an elk, moose, caribou, mountain sheep, mountain goat, antelope, or black-tail deer left alive in the United States in a wild state fifty years from this date, ay, or even twenty-five?"[8] Given the changes to the North American West, the only way that the plains bison could be saved was by raising them in private herds to increase their numbers and protect them from

poachers. Thus, the five individual efforts that are credited with saving a remnant of these animals from the decimation of the late 19th century were actually domestication efforts where humans intervened and raised bison in captivity to ensure the future survival of the species.

All five of the individual efforts credited with saving the plains bison from extinction (James McKay and Charles Alloway of Manitoba, Frederick Dupree of South Dakota, Charles Goodnight of Texas, Charles "Buffalo" Jones of Kansas, and Samuel Walking Coyote of Montana) captured bison calves when it looked as if the species might disappear without some intervention. In each case, the captured calves were fed domestic cow milk to sustain them on the journey back to the respective ranches. Once there, the calves were adopted by domestic cows and reared in captivity. In the case of the McKay-Alloway, Dupree, and Goodnight herds, crossbreeding between the bison and domestic herds resulted when the two species ranged in enclosures together. It is unclear whether Jones, who captured the most calves (56), grazed his bison with cattle, but it is probable that he did. He was very interested in crossbreeding, as is evidenced by his 1889 purchase of Colonel Samuel Bedson's herd from Stony Mountain, Manitoba, which consisted of both purebred and hybrid bison.[9]

In comparison to these early private initiatives to save the plains bison, the Pablo-Allard herd, at first glance, appears to have been managed with much less attention to domestication. The herd was considered to be the last free-roaming plains bison herd on the continent—a key factor in the Dominion government's interest in the animals. When examining the herd in June 1906, Howard Douglas, superintendent of Rocky Mountains Park, was impressed with how the herd had flourished under natural conditions. The range on which the bison grazed was not fenced. Rather, the herd was contained in the Round Butte area by natural barriers: "On the east were the majestic Mission Mountains, on the north was Flathead Lake, on the west were the Bitter Root Mountains, and to the south lay the Jocko Valley."[10] The herd also followed annual movements: it grazed in the valley in the summer and migrated across the Pend d'Orielle River to the mountains for the winter. The herd was never supplemented with hay and Douglas was pleased to find that Pablo "never [gave] any attention to the herd, and they [had] increased without any effort on his part."[11] This notion that the herd required low maintenance was substantiated by a 1902 article in *Forest and Stream*, which stated that although Pablo had "buffalo herders" to keep the herd within the range, they had little work to do but watch it.[12]

While the Pablo-Allard bison-saving effort initially appears to have been less intrusive when compared to the other early efforts, in reality its management can hardly be considered much different from that of domestic range cattle—unsurprising, since both Allard and Pablo were successful ranchers. That the Pablo herd had been managed like range cattle is clear as Douglas noticed, on inspecting the herd in 1906, that there were 50 bison steers among the 300 head.[13] In 1923, when an aged bison steer was slaughtered, an ear tag bearing the number "75" was discovered.[14] In 1932, two more ear tags, numbers "39" and "79," were found when two original Pablo bison were slaughtered.[15] As well, A. G. Smith, superintendent of Buffalo National Park, noted in 1923 that a number of the old bulls sported a slit in one of their ears, which suggested that at one time a number of the original Montana herd had been tagged in a similar fashion.[16]

Did Allard and Pablo purchase the herd with the intention of saving the species from extinction? Allard, described as an aggressive, farseeing, shrewd businessman, seems to have known the value of the animals. While it is not clear which of the two ranchers negotiated with Samuel Walking Coyote for his bison, knowledge of Allard's personality has led people to believe he initiated the sale.[17] The suggestion that Allard's motives for securing the herd were based on knowledge of the bison's value as a financial investment is substantiated by the fact that he continued to purchase additional bison, including the 1893 purchase of 26 purebred bison and 18 hybrids from C. "Buffalo" Jones.[18] Allard also took pleasure in displaying his bison; he took some to Butte, Montana, to an exhibition on "wild west riding sports" and had planned to take some to World's Fair in Chicago.[19]

While Pablo is described as a successful rancher, he also exhibited altruistic motives behind acquiring the bison. Tony Barnaby, Pablo's son-in-law, suggested that Pablo felt indebted to the species.[20] His love for the animals was evident when he realized that he would be forced to sell his portion of the herd. When he was unable to persuade the United States government to buy the herd and protect them, Pablo was "moved to manly tears,"[21] according to Barnaby. While bison had been sold from the herd in many small and some large sales, these sales seem to have been negotiated by Allard. There is no evidence that Pablo sold any of his bison before he was forced to by the government's decision that his grazing land was to be opened for settlement.[22] Pablo also put extra effort and expense into shipping his herd to Alberta. He built additional corrals out on the range and constructed cages that were drawn by 30, four-horse teams to transport the bison that were unwilling to

The park riders participated in the annual round-ups. Beginning in 1922, with the exception of four years, the bison were culled annually to reduce the size of the herd. This photo was taken circa 1928. From left to right: Blake Sharp, Frank Love, Bob Hyatt, Ray Sharp, Warren Blinn, George Armstrong, Vern Treffry, Bert Kitchen, and Bud Cotton. Photo by William Carsell.

be driven to Ravalli, where the rail cars were located.[23] Douglas noted some of the huge personal expense that Pablo accepted:

> I am perfectly satisfied, as I always have been, that the Old Man will ship every hoof he agreed to, and only those who know from personal experience what a huge undertaking it is, will ever credit him with the plucky fight he has put up, and the enormous expense incurred, which I should say would be about half what he is getting for the herd."[24]

From the beginning, the bison herd at Buffalo National Park was managed more like range cattle, like all previous bison-saving efforts. The experience and background of the park's administration played a role in this. All those administering the effort and those consulted for advice on the management of the herd were familiar with and/or had knowledge of agricultural management methods. Rocky Mountains Park Superintendent Howard Douglas was the man who spearheaded the purchase of the bison and the establishment of Buffalo National Park. His keen business sense, apparent at the time of the bison's purchase, can be traced to his experience of owning a general store and a coal and wood company; however, he also had a background in agriculture. He was raised on a family farm in Halton, Ontario, where he worked until he was 21.[25] J. B. Harkin, who was appointed commissioner of the newly formed Parks Branch in 1911, was the most influential person in the administration of the national parks system; his most significant role was overseeing the policy that affected the herd's management. Harkin's background was primarily in politics. He was a newspaperman, a parliamentary correspondent, and later a private secretary to Ministers of the Interior Clifford Sifton and Frank Oliver. While it appears that Harkin had little agricultural experience, Alan MacEachern argues that Harkin should not be solely credited with conceptualizing national park policies. While these are attributed to Harkin, policies were often drafted by his assistants and thus were a reflection of the beliefs of the Parks Branch as a whole.[26] Hoyes Lloyd, administrator of the Migratory Bird Regulations at the Parks Branch, was one assistant whom MacEachern names as drafting policy for Harkin. Trained as a chemist, Lloyd had worked closely with veterinarians and milk inspectors to eradicate the problem of bovine tuberculosis, a condition that posed a danger to Ontario's milk supply.[27] It is also clear from correspondence found in the Buffalo National Park files that Harkin often

The park farm, located in the southeastern part of Buffalo National Park, was the centre of the agricultural operations for the park. The hay meadows nearby provided a source of winter feed for buffalo as well as horses and livestock used at the park. An additional six-hundred acres were cultivated and provided oats for Buffalo National Park and other national parks.
Photo by J. H. Gano.

consulted Maxwell Graham, Chief of Park Animals, for his opinion. Graham was trained at Ontario's Agricultural College in Guelph and farmed for six years before moving to Ottawa.[28]

Those working most closely with the bison at the local park level were also familiar with agricultural life. While little is known about Superintendent A. G. Smith's credentials, the wardens and park riders all had ranching experience. Bud Cotton, long-time warden at the park, moved from Sherbrooke, Quebec when he was sixteen and worked as a cowpuncher on some ranching operations in southern Alberta before he started at Buffalo National Park in 1913.[29] Of his park riders, Cotton stated: "All…had handled cattle and knew ranch routine, from branding to round-up."[30] Since the work of a park rider was seasonal, many had their own operations, which they tended to when not working at the park.

As little was known about wildlife science until the 1930s,[31] the Parks Branch turned to sources knowledgeable in domestic animal management and relied heavily on the Department of Agriculture for advice on managing the bison. Parks Branch officials frequently consulted with the Department of Agriculture for their opinions on different policies and the health of animals,[32] especially after the cattalo experiment began in 1916. Furthermore, local park officials often sought advice from the veterinarian in Wainwright regarding maintenance of the herd, whether it be to diagnose sick animals or to perform post-mortems.[33]

The structure and organization of Buffalo National Park also took on other characteristics of a domestication project. The preparations for the new park at Wainwright seem almost to have been modeled on a large ranch operation. Despite the fact that the area set aside south of Wainwright was a vast amount of territory, comprising 100,000 acres, settlement surrounded the park area and the park needed to be fenced. Before the park opened, Howard Douglas also requested cost estimates for a "house for [a] caretaker, corralls, stables, horses, saddles, and feed for Winter of 1908 & 1909."[34] The park farm, located in the southeastern portion of the park, oversaw all the agricultural operations. It had a "[p]ermanent farm staff, including the park supervisor, one park warden, blacksmith's handyman, barn worker and six teamsters."[35] Employees were assigned to various duties, including repairing fences, plowing miles of fireguards, harvesting crops in the summer months, and hauling hay to the bison in the winter. The park was self-sufficient in that it grew its own crops to feed the bison:

> Six hundred acres were farmed in grain, grass and legume rotation… Usually 300 to 400 acres of oats were grown, rotated each year with 40 to 50 acres of sweet clover for fertility and hay and 100 to 150 acres of grass for soil fiber and hay. The oats supplied grain and oat straw… One of the main summer activities of the park farm staff was cutting and stacking approximately 1,500 tons of hay during July to September. Hay was obtained from the floodable meadows along the Ribstone Creek. These meadows were either flooded naturally or could be flooded manually each spring ensuring a good stand of high quality hay each year.[36]

Even everyday operations referenced known agricultural methods. Maxwell Graham considered ranching techniques to be the best way to care for bison. He recommended that the local employees adhere to "methods pursued by intelligent ranch owners, and which [consist] mainly in close observation of the herd, the supplying of necessary rock salt, watching for fever ticks, and above all segregation of those animals who appear diseased."[37] From early on, the herd was continually subjected to human intervention. Working with bison was dangerous. The animals were quite unruly and it was in the best interests of those working with the bison that the herd be domesticated. In 1913, Bernard Hervey, Chief Superintendent of National Parks, recommended a proposal to pacify the herd. Park riders were to ride among the herd on a daily basis and cut a few animals out of the herd so that the bison would become familiar with this routine: "Conditions are exactly the same with ranche [*sic*] cattle," he stated, "but by usage of seeing mounted men continually amongst them they soon learn that they are there for their protection and will not molest the riders who sought to save one of their number in distress."[38] Whether Hervey's recommendation was followed and, if so, how long it continued is unknown. Yet it is clear that the bison continued to be handled as cattle since the herd was driven at least annually, from the summer range, an enclosure that comprised most of the park, to the winter quarters, a smaller range in the southern portion of the park, where they were fed hay during the winter months.[39] Furthermore, the annual population count would have required handling of the herd.[40]

The management governing Buffalo National Park would also have adhered to known ranching methods. While it is unclear when the sex ratio (two cows to one bull) was applied at Buffalo National Park, an awareness of the importance of a sex ratio can be seen at the purchase.[41] The sex and age of animals shipped from Montana were recorded, and it appears that it was

believed that the ratio of cows to bulls had a direct influence on the rate of the herd's propagation. The adult stock from the first shipment to Elk Island, for example, consisted of 101 bulls, 18 steers, and 47 cows.[42] Of the second shipment, Douglas was pleased that the majority of the animals were female (169 of 211 head). "[I]t will place the herd now in Elk Island Park on a much better basis than it was after the first shipment…I might add," he continued, "that the cows are all prime young stock and the increase in the next few years should be very satisfactory."[43] The same idea is echoed again in 1912. Maxwell Graham seemed to attribute the lack of increase in the bison herd to an improper ratio. He stated, "from our records here it would appear that approximately over 1/2 of the entire buffalo herd, now in our Parks, consists of males, and further that more than 1/6 of these males are absolutely aged[;] this will probably explain why the natural increase has not been more than it has in the past."[44]

This policy of maintaining a proper sex ratio led to even greater control of the breeding stock. By 1914, park officials began to express concern over the sex ratio since it was believed that the herd possessed too many bulls.[45] When they introduced a policy to dispose of some excess bulls, the Parks Branch became involved, in a sense, in selecting which animals and characteristics would be used for breeding purposes. While this practice raises the broader issue of gene selection, which is too complex to address here, it is important to note that such decisions contributed to domestication. While injured or older bulls, no longer considered useful, were disposed of,[46] the selection of particular bulls also determined the docility of the herd. "Bolivar," an older bison, was disposed of in 1918 more for his bad temper than his physically unfit condition. He was described as being "of the genuine wild beast variety…and absolutely refuse[d] to be frightened, controlled or subdued."[47] Indeed, the department seemed interested in breeding more docile bison.

As the park had no stream of revenue, for no admission fee was charged at the park, it was in the Parks Branch's best interest to dispose of these excess old and injured bulls in a profitable manner.[48] They decided to wait until winter when the robes would be prime and when the meat "might profitably be sold to the public around Christmas time."[49] Certainly, disposing of the bison and profiting from them at the same time would have been seen as an acceptable practice, in line with concept of conservation and planned and controlled resource use directing the park system at that time.[50]

By 1919, officials believed that Buffalo National Park had an excess of 1,000 bulls.[51] Instead of culling this excess, the department first looked to museums and zoological collections in the United States and Canada as

suitable outlets for the disposal of the bison. While there seemed to be some interest in securing specimens for mounting purposes, there was no interest in securing any live bulls.[52] One of the main reasons for this lack of interest, made clear by William Hornaday, director of the New York Zoological Society, was that the asking price of $250 was too high. He informed them that the market was already saturated with bison in the eastern United States, and that the prices for both bulls and cows had dropped by 50 per cent.[53] Given that there was little market for live bison, other avenues, such as establishing other bison parks on the Prairies, were suggested.[54] However, these schemes were often accompanied by an even greater financial obligation that the department was not in the position to entertain.

The herd continued to increase, and the Parks Branch explored other options to reduce the growing herd. The proposition of allowing sportsmen to shoot bison, and thereby bring in substantial revenue, was never entertained because J. B. Harkin believed that it would invite too much criticism.[55] However, selling excess bison bulls to interested farmers and ranchers was seriously considered. Harkin believed buyers would be more than willing to purchase a bull for $250, making this one of the easiest ways by which to recoup some revenue.[56] While the scheme never came to fruition, Gordon Hewitt, Dominion entomologist, also endorsed the scheme and argued that farmers should be allowed to benefit from the value of the bison:

> The greatest value of the buffalo, however, lies in the possibility of its domestication. This may appear to be a novel idea, but I am convinced that its acceptance and adoption would result in inestimable benefit to the Prairie Provinces and the country as a whole. The greatest need in the Prairie Provinces is an increase in its beef-producing capacity. The buffalo is an animal which offers great possibilities, being pre-eminently suited to prairie conditions, and at the same time it produces a robe of no small commercial value.[57]

Naturally, the Department of Agriculture was very much in favour of making the bison beneficial for a different reason. Dr. Tolmie, minister of Agriculture, was very interested in the hybrid experiments and suggested selling surplus bison to farmers and ranchers. While he thought that the potential obstacles that would be encountered in crossbreeding should be made clear to purchasers, he also believed that private trials would give "many ranchers in the section an opportunity of experimenting under practical ranch conditions."[58]

Maxwell Graham, Chief of Park Animals, was very enthusiastic about the idea of a crossbreeding experiment. He proposed a cyclical breeding system that would not only recoup the costs of disposing of surplus bison, but also, in the long term, place the bison herd on a revenue basis. Once the correct ratio of the herd had been maintained in the park, all breeding females could be "placed with half their number of selected bulls" in one area. The rest of the "young stock" not yet ready for breeding could be placed in a second area, and steers and cows not selected for breeding in a third area for the purpose of beefing them. He believed that "[b]y following the above practice the increase of the herd will yield a steady revenue, while the total increase of breeding stock will be very gradual." Furthermore, he believed, the "perpetuation of the bison would be assured to a much greater degree" if the main herd was split and animals were distributed to farmers, ranchers, and other parks.[59]

It is surprising that the government never pursued the idea of selling bison to ranchers and farmers, especially since, in the mid-1920s, the United States had a policy of donating bison, at the cost of capturing and crating, to people who made applications.[60] While Harkin initially seemed to be exploring the idea, in the end this method of reducing the surplus bison was rejected for several reasons. First, the Department of Agriculture was already carrying out these experiments. Since these trials were in the early stages, and required expert advice, he felt amateur experiments by farmers, ranchers would be doomed to failure, and any negative publicity would adversely affect the government hybrid experiment at Wainwright.[61] Second, if the branch distributed bison to private individuals, they would not be able protect the park herds from poachers because it would be difficult to prove whether a robe or head came from a private herd or one of the parks.[62] This rationalization points to the third and greater objection for not distributing bison to interested individuals: it would deprive "the Department of the virtual monopoly it now enjoys in the possession of the herds of bison administered by this Branch in our National Parks."[63] Clearly, Harkin viewed the surrender of this monopoly as a forfeiture of future revenue because the Parks Branch could benefit more by disposing of the bison themselves.

By the 1920s, the rapid growth of the bison herd was beginning to endanger the effort itself. While carrying capacity had yet to be determined, the herd was dangerously close to outgrowing the park (by the 1930s, the capacity of the park range under normal conditions had been judged to be 5,000 head).[64] As the management of the bison became more costly, the park

was in need of revenue. To distribute bison to local ranchers would render the animals commonplace and leave the Parks Branch without its only revenue source. With 1,000 bulls to dispose of in 1919, Maxwell Graham pointed out that if the highest prices could be achieved from sale of the meat, heads, and hides, the profit would be considerable.[65] In 1921, Harkin reported with enthusiasm the financial benefit that could be realized from the growing bison herd: "The numbers have been increasing so rapidly that we have been compelled to look toward—I might almost say—the commercialization of the herds…what we started off to do from a purely sentimental standpoint may prove to be a valuable commercial proposition. For instance, there is a market for the herds—apparently a better paying market than we had ever anticipated."[66]

The Parks Branch, however, took too long deliberating over the proper way to realize this potential revenue. One obstacle lay in the fact that Buffalo National Park had been initiated and promoted as a saving effort, so officials had to be careful to deal with the overpopulation problem in a way that would not alienate the public. More importantly, the Parks Branch wanted to ensure that the bison products, of which the most important was the meat, were marketed properly. It was clear when the department finally considered slaughtering bison for food purposes in 1918 that disposing of excess bison was going to be a long-term problem. Since only bulls were to be disposed of in the beginning, Harkin was concerned that the meat proposition not be given a "black-eye": "We have to look forward to the development of a buffalo meat trade as a high priced one and of course we cannot take any chances of damning it at the start by disposing of any meat to the public which would not be attractive."[67]

This cautious approach to reducing the herd only served to create greater problems. In hindsight, it probably would have been wiser if an overtly commercial policy, even if more controversial, had been followed from 1916, when it was first realized that the herd was too large. While the Parks Branch deliberated, the herd continued to increase. By 1922–23, the size of the herd, which numbered 6,780 bison (see Table 2), began to threaten the park's ecological viability.

TABLE 2: BISON POPULATION CENSUS, 1922–32	
Year	*Number of Bison*
1922–23	6,780
1923–24	6,655
1924–25	8,267
1925–26	8,832
1926–27	6,026
1927–28	4,241
1928–29	4,300
1929–30	5,016
1930–31	6,231
1931–32	6,331

Source: LAC, Memorandum to J. B. Harkin, 15 Feb. 1933, Parks Canada Files, Buffalo National Park, RG84, Vol. 50, BU217, pt. 1.

By 1922, commercializing the herd was the only option left to save the effort from financial ruin. In response to a letter from Colin Moncrieff, who believed the surplus bison should be released rather than slaughtered, Harkin wrote:

> There is another consideration and that is, that the government to date has spent a very considerable amount of money for the purpose of preserving the buffalo. Conditions have become such that the government can safely market a very considerable number of the animals each year and get a financial return to help pay the bills incurred for the purpose of preserving the animal from extinction. I am inclined to think that public opinion will endorse the idea that commercialization of the herd without interfering with the preservation of the species will be amply justified.[68]

Although it was necessary to dispose of about 1,000 bulls in 1922, no large-scale effort to reduce the herd took place until 1923. The slaughter in 1922 was actually a smaller experiment made in order to test the market for bison meat.[69] The delay can be attributed to the department's taking great pains to make the bison as profitable as possible. Harkin stated, "our only hope for any considerable profit in the disposal of meat will be to put it on as a luxury and not in competition with beef. In other words we must demand a price considerably higher than the current price of beef."[70] Harkin knew that creating a market for bison products was going to be difficult and costly.[71] A. S. Duclos of Edmonton Cold Meat Storage secured the tender for the slaughter that first year. He made it clear that since the slaughter would become an annual practice, it was important that this first experiment profit both the department and the buyer.[72]

Not only did the delay in implementing a large-scale reduction of the herd allow the bison population to continue to increase, but the first experimental slaughter of 265 animals proved that it was going to be more difficult to market the meat than the Parks Branch had anticipated. Since the park needed to get rid of mature bulls, the biggest question was whether or not the meat would be attractive for consumption. Much like the meat from older domestic bulls, however, bison bull meat was found to be tough and unpalatable. Even meat from younger bulls was unsatisfactory, as bison meat used for a barbeque in Jasper proved.[73] This problem with the meat's quality posed a huge problem, and the Parks Branch was forced to find other ways to dispose of it profitably. Since only 200 pounds of an average 700 pound dressed

bull could be considered choice meat, Harkin thought that the poorer quality cuts could be made into pemmican to be used as a trading item in the north, rather than risk marketing all the meat.[74]

A second, unexpected drawback from this experimental slaughter was that a high percentage of the carcasses, 61 out of the 264, were condemned.[75] This result not only created a setback in the plan to market the meat as a luxury, but also cost the department extra money, as the possibility of condemned carcasses was overlooked in the contract; dressing carcasses that were essentially useless cost just as much and took the same amount of time as dressing good carcasses.[76] While it is not clear whether or not condemned meat was tested in the experimental year, in the 1923–24 slaughter the meat was condemned because of disease.[77] This issue would cause widespread problems for the park in the future. The presence of disease not only harmed the herd, but also hindered the sale of bison meat products.

In the 1920s, when it was first discovered that the meat of older bulls would generate no demand, the Parks Branch experimented with creating steers to improve meat quality. Relying on the cattle industry's practice of improving the palatability of meat by castrating domestic bulls, Graham gave his support for such experiments as early as 1919: "In the case of young bulls prime beef of high quality could be made of these if such bulls were turned into steers and later beefed at three or four years of age."[78] In 1923, eleven calves were castrated. While the results did not prove profitable enough to warrant the continuation of the experiment,[79] the willingness to go to such lengths to make the bison herd more profitable shows the change of emphasis, from a saving effort to a business venture, taking place at Buffalo National Park.

The Parks Branch also began to explore the practice of selective breeding to improve the breeding stock of the herd and the quality of beef and hides. While the herd was never healthy enough in later years to implement a full-fledged policy, in 1932, A. G. Smith, reflecting on the management of the herd, stated:

> the thought of selective breeding is not a new one with us as for a number of years we have carried on with this idea in mind…
>
> It has been our policy each slaughter when the animals are being put through the corrals for the purpose of selecting beef stock to discard the weaklings and undesirable breeders from the herd, both male and female, and hold for breeding stock animals of good type and appearance.[80]

As the herd increased, the problem moved beyond disposing of excess bulls. It became necessary to reduce the population as a whole, both males and females. This action, however met with public protest; humane societies protested the killing of cows that were in calf. That the Parks Branch remained aloof from these protests illustrates how the effort shifted from a saving endeavour to a commercial venture focussed on gaining profit. In a letter to Harkin, James Smart of the Parks Branch stated, "To the practical stockmen, this is a joke and I see no reason why we should not treat the buffalo herd in the same way as a rancher treats his herd of domestic stock."[81]

Ultimately, commercializing the herd did not alleviate the park's financial problem, although in the short term, the effort appeared to bear some fruit. While sales of bison robes had not been very successful, Harkin was pleased with the meat returns from the first large-scale slaughter. He wrote, "I am beginning to think that the commercial returns from the slaughtering of the buffalo on the whole are going to be so satisfactory that as a pure matter of business it may be desirable to adhere to slaughtering as the best means for keeping the herd within reasonable numbers."[82] Even though the robes were not selling, they were not perishable and could be stored indefinitely.[83] However, the department decided not to slaughter any animals in the winter of 1924; it appears that the main reason for cancelling the slaughter was financial. Revenue from commercial sales was insufficient to sustain the effort, and another solution to the herd's growth had to be found.

Of interest, the suggestion to ship some of the excess herd north was first raised by Maxwell Graham in September 1919. He recommended that excess plains bison from Wainwright be transplanted to the habitat of the wood bison near Fort Smith so that the two herds would eventually mix.[84] Dominion Parks Inspector H. E. Sibbald raised the proposal again in January 1923 and suggested bison be shipped to the newly formed Wood Buffalo Park.[85] Initially, Harkin opposed the idea, stating that the area in question was not under the jurisdiction of the Parks Branch, but rather the North West Territories and Yukon Branch. Furthermore, he believed transporting the bison would be an expensive undertaking: "Apart from that, however, what particular object is to be served? It is likely that by annually slaughtering one thousand animals, or thereabouts, at Wainwright, the Department will be able to secure a substantial revenue. In the present condition of the country financially it seems to me this would be better policy than spending more money to transport these animals to the north."[86]

In 1925, 1,654 Wainwright bison bound for Wood Buffalo National Park were branded with a "Gamb Joint W" brand on right shank to help distinguish them from their wood bison counterparts. Here, local rancher Harry Mabey brandishes the iron. After the first year, branding was discontinued due to the cost and protests by the SPCA.
Photo by William Oliver.

The slaughter, however, was cancelled again in 1925. Harkin stated, the Parks Branch had "absolutely no funds with which to carry on killing operations this Fall."[87] The existence of products still on hand from the 1923 slaughter suggests that the market for bison products had not been as lucrative as anticipated.[88] Thus, this new outlet for the excess bison began to look more appealing as a cost-saving measure for the Parks Branch; while shipping bison was an expensive undertaking that offered no potential revenue, the North West Territories Branch was assuming all the shipping costs after the bison had been loaded on the trains at Wainwright. It was estimated that for the first shipment it would cost the Parks Branch $20,000, or $10 per head. This estimate was based on 2,000 bison and included the cost of building the necessary infrastructure to corral and load the bison on the trains.[89] As the infrastructure was a one-time cost, future shipments would cost the department only about $5,000 for around 2,000 animals, or $2.50 per head.[90]

When Harkin stated that the decision to move the bison north was made with the best interests of the people of Canada in mind, he was clearly implying that this route was the least costly to the government.[91] Anticipating that once the bison were shipped north they would increase at the same rate as they had in Wainwright, Harkin believed they would contribute significantly to northern development as a food and fur supply for Natives, explorers, and prospectors.[92] Shipping the bison north also removed the surplus population from public view and awareness. Certainly, this option of disposing of the surplus animals would have been considered more acceptable to the general public than disposing of the animals by slaughter.

Shipping the bison north led to another management practice that was rooted firmly in the ranching tradition: branding the bison. Symbolically, this practice was the greatest proof that the status of bison's wildness had been totally diminished and that the animals were now considered mere range stock. Branding was introduced as a measure to maintain the integrity of the plains bison; the practice was desired by the North West Territories Branch to permit the wardens in Wood Buffalo National Park to distinguish between the plains and wood bison. However, in hindsight the practice served little purpose, given that this means of identifying the species did nothing to prevent the two types of bison from interbreeding. After consulting with Dr. G. Hilton, Veterinary Director General, Dr. J. C. Hargrave, Chief Inspector for the Health of Animals Branch in Alberta and Maxwell Graham, Chief of Wild Life Division, the Parks Branch went

From 1925–1928, 6,673 bison were shipped north to Wood Buffalo National Park in an attempt to reduce the overpopulated bison herd at Wainwright.

ahead with the scheme; 1,654 bison were branded by local rancher Harry Mabey with a "W" on their right shank.[93] Bison were only branded in 1925, the first year they were sent north. The procedure was discontinued, however, because it was too costly; the bison had to be segregated, fed additional hay, and held in corrals longer than otherwise necessary.[94] However, Warden Ray Sharp stated the administration stopped the practice when the SPCA in Edmonton found out and members of the organization came to the park and complained.[95]

The herd, from the beginning of the effort, had been moved annually between its summer and winter ranges. However, from 1922 onward, with the exception of two years, the park riders rounded up the herd on an annual basis for either slaughter or shipment in much the same way as was done with domestic cattle. A newspaper description of the 1925 roundup, while saturated with descriptions of "Wild West" thrills, sounds very much like an annual spring roundup on a ranch, with a bit more action. Park riders drove the charged herd to the corrals, ran them through the chutes to the squeeze where they were branded, and then loaded them into the cattle cars.[96] While only a portion of the herd was targeted in the roundups, the process affected the majority of the herd. For the roundup in 1926 for the northern shipment, A. G. Smith stated that 7,101 animals were passed through the corrals in order to segregate 1,903 bison.[97]

By 1926, it was apparent that shipping bison north was not alleviating the park's overpopulation problem. Smith estimated that even with that year's shipment, the natural increase was going to leave the park with almost twice the number of bison recommended for the park.[98] While shipments north continued for two more years (see Table 3), it became necessary to resume slaughtering, and the Parks Branch was once again faced with the problem of making this slaughter commercially viable.

By the 1930s, the market for bison meat had fallen, as the exceedingly low price offered by Burns and Company for the contract to slaughter the herd in 1933 indicates. Burns stated that even beef prices were low and earlier that year had suggested that tenders be called early to all the bidders to make provisions to distribute the meat months before the kill. Bison meat was no longer a novelty, and it was more difficult to market.[99] Once again, other avenues for offloading surplus meat were also explored. J. B. Harkin even approached Gainers, inquiring about experimenting with canned meat.[100]

It was, however, the use of bison meat for relief purposes that proved to be the most effective outlet. In 1933, the meat was used by the Department

TABLE 3: INVENTORY OF BISON SLAUGHTERED BY CONTRACT AND SHIPPED TO WOOD BUFFALO NATIONAL PARK, 1922–40

Year	*Number of Bison Slaughtered*	*Year*	*Number of Bison Shipped to Wood Buffalo National Park*
1922–23	265	1922	-
1923–24	*1,881	1923	-
1924–25	-	1924	-
1925–26	-	1925	1,634
1926–27	**2,001	1926	2,011
1927–28	1,000	1927	1,940
1928–29	-	1928	1,088
1929–30	525	1929	-
1930–31	67	1930	-
1931–32	1,534	1931	-
1932–33	1,216	1932	-
1933–34	2,000	1933	-
1934–35	1,000	1934	-
1935–36	†	1935	-
1936–37	1,522	1936	-
1937–38	2,020	1937	-
1938–39	1,200	1938	-
1939–40	2,910	1939	-

Source: LAC, Commissioner to Geo. B. Grinnell, 12 Jul. 1942, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt 3; LAC, J. B. Harkin to William Rowan, 23 Mar. 1929 and F. H. H. Williamson to V. W. Jackson, 17 Jun. 1937, Parks Canada Files, BNP, RG 84, Vol. 54, File BU232, pt. 4; LAC, J. B. Harkin to Canada Packers Limited, 21 Nov. 1935, Parks Canada Files, BNP, RG 84, Vol. 58, File BU299, pt. 11; LAC, "Approximate Census of Buffalo Herd, March 31 1938," Parks Canada Files, BNP, RG 84, Vol. 57, File BU299, pt. 13; LAC, Memorandum to Mr. Lloyd, 4 Jan. 1939, Parks Canada Files, BNP, RG 84, Vol. 58, File BU299, pt. 14; and LAC, Memorandum to Mr. Lloyd, 15 Jan. 1940, Parks Canada Files, BNP, RG 84, Vol. 58, File BU299, pt. 15.

* LAC, Commissioner to Geo. B. Grinnell, 12 Jul. 1924, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232 pt 3. This letter states that the number of bison slaughtered in 1923–24 was 1,847.

** LAC, J. B. Harkin to William Rowan, 23 Mar. 1929, Parks Canada Files, BNP, RG 84, Vol. 54, File BU232, pt. 4. This letter states the number of bison slaughtered in 1926–27 was 2,013.

† There was no slaughter in 1935–36 because the abattoir at Buffalo National Park burned down.

of National Defence for national park relief camps, as well as for Inuit relief.[101] Meat was again distributed in this manner in the 1934–35 slaughter. When the Parks Branch wished to market the meat to the public again for the 1935–36 slaughter, Burns and Company warned that this would be difficult because the meat had been used for relief purposes. In any event, the slaughter did not take place as planned since the abattoir burned down that year.[102]

By the winter of 1938–39, the need to dispose of such high numbers of bison over the years had resulted in a herd composed mostly of younger animals. That year, most of the animals killed were yearlings and two-year olds. Burns and Company, who performed the slaughter that year, wrote:

> These young animals have not a good finish and do not show up to advantage when displayed on the retail counter. On the face of which it would seem that younger animals would be more desirable, particularly from the standpoint of tenderness, but the lack of finish which they showed this year has more than offset the desirability of them in eating qualities…In the past years Buffalo has been looked upon by a great many people as a desirable meat novelty, but certainly the quality of these younger animals, this year, did a great deal to dissipate this idea in the minds of the buying public, and we are of the opinion that serious damage could be done to the reputation of Buffalo if the slaughter of these younger animals continues.[103]

From the beginning, Buffalo National Park resembled a domestication effort, not unlike other early endeavours to save near-extinct species. While commercialization of the bison herd at Buffalo National Park was not a route that the Park Branch's had intended to follow, the rapid growth of the herd was not anticipated. Their cautious approach to curtailing this growth, however, resulted in an even greater overpopulation crisis. While the Parks Branch explored other avenues to downsize the herd, most of them were not viable and the first few culls were not effective. Shipping bison north, considered because it was the most economical solution, relieved the overpopulation problem only temporarily. The Parks Branch quickly found itself needing to introduce a cull to downsize the herd in a profitable manner, and the focus on saving the bison moved to the back burner. Unfortunately, the Parks Branch was never very successful at realizing any significant profit from its new bison venture.

The most significant tragedy at Buffalo National Park was the change in attitude towards the bison by those administering the effort at Buffalo

National Park. As the emphasis shifted from a saving effort to a commercial ranching business, the integrity of the bison as a species was compromised. In the 1920s, with the bison population exploding, the Parks Branch apparently believed that the saving of the species from extinction had been achieved and was no longer necessary. Again, in response to Colin Moncrieff's suggestion that the surplus bison be released, Harkin stated, "How to deal with the surplus animals now constitutes a real and pressing problem. The desirability of preserving the species from extinction is not a factor in this matter as I have already said the maintaining of the present herds [Buffalo and Elk Island] provides the guarantee against extinction."[104] Unfortunately, the shift in focus from a salvage effort to a business venture changed the value of the bison in the eyes of the Park Branch from a near-extinct, symbolic species to mere livestock, from which they could gain a profit.

Notes

1. Adeline Schleppe, personal interview, 11 Nov. 2002.
2. Ellis Treffry, personal interview, 11 Nov. 2002.
3. The *Oxford English Dictionary* defines "domesticate" as "to accustom (an animal) to live under the care and near the habitations of man; to tame or bring under control." *Oxford English Dictionary Online*, <http://dictionary.oed.com> (14 Jun. 2004). However, hybridization has also traditionally been defined as a domestication scheme. For the purpose of this study, a distinction will be made between "domestication," adapting and pacifying an animal to be controlled and used by humans, and "hybridization" or "crossbreeding," which will be addressed in chapter 5.
4. LAC, C. Jones to Governor General of Canada, 8 Nov. 1899, Parks Canada Files, BNP, RG 84, Vol. 155, File U209-1, pt. 1.
5. LAC, Memorandum to James A. Smart, 24 Nov. 1899, Parks Canada Files, BNP, RG 84, Vol. 155, File U209-1, pt. 1.
6. LAC, William Pearce to Lyndwode Pereira, 20 Nov. 1899, Parks Canada Files, BNP, RG 84, Vol. 155, File U209-1, pt. 1. The Dominion government agreed to allow Jones to capture ten bison, twenty-four musk oxen and twenty-six reindeer. LAC, Mr. Rothwell to C. J. Jones, 11 Jan. 1902, Parks Canada Files, BNP, RG 84, Vol. 155, File U209-1, pt. 1.
7. *Reindeer and Musk-Ox: Report of the Royal Commission upon the Possibilities of the Reindeer and Musk-Ox Industries in the Arctic and Sub-Arctic Regions* (Ottawa 1922), 7, 14, 15–16, 18, 21–22, 27–28.
8. Hornaday, *Extermination*, 391.
9. Coder, "National Movement," 1–45. Bedson's bison herd started with eight animals from the McKay-Alloway herd, which he purchased in 1880. Coder, "National Movement," 5.
10. Coder, "National Movement," 22.
11. LAC, Howard Douglas to the W. W. Cory, 15 Jun. 1906, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 1.
12. Whealdon et al., *I Will Be Meat for My Salish*, 86, 99.
13. LAC, Howard Douglas to the W. W. Cory, 15 Jun. 1906, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 1. The practice of castrating bulls to make steers is performed to make the animals more docile and improve the quality of meat.
14. LAC, Commissioner to Howard Douglas, 5 Mar. 1923, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 3.

15. LAC, R. Waddy to Veterinary Director General, 21 Jan. 1932, Parks Canada Files, BNP, RG 84, Vol. 58, BU299-2, pt. 1.
16. LAC, A.G. Smith to Commissioner, 21 Feb. 1923, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 3.
17. Whealdon et al., *I Will Be Meat for My Salish*, 86–87.
18. Coder, "National Movement," 39.
19. Whealdon et al., *I Will Be Meat for My Salish*, 86.
20. Whealdon et al., *I Will Be Meat for My Salish*, 83–84.
21. Whealdon et al., *I Will Be Meat for My Salish*, 84.
22. Whealdon et al., *I Will Be Meat for My Salish*, 84, 86, 87.
23. LAC, Michel Pablo to W. W. Cory, 18 Nov. 1908, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 2; Whealdon et al., *I Will Be Meat for My Salish*, 93.
24. LAC, Howard Douglas to W. W. Cory, 11 Nov. 1909, RG 84, Vol. 51, File BU209, pt. 2.
25. Foster, *Working for Wildlife*, 55.
26. MacEachern, *Natural Selections,* 29.
27. Foster, *Working for Wildlife*, 159.
28. Foster, *Working for Wildlife*, 97.
29. E. J. (Bud) Cotton, *Buffalo Bud: Adventures of a Cowboy* (Vancouver 1981), 6.
30. Bud Cotton, "Range Riding with Canada's Buffalo Herds," unpublished manuscript, personal collection of Adeline Schleppe, n.d.
31. MacDonald, *Science and History at Elk Island*, 31.
32. For example, Dr. S. E. Clarke, agrostologist, Dr. Frederick Torrance, veterinary director general, and Dr. Hargrave, inspector, all professionals from the Department of Agriculture, were consulted on matters pertaining to Buffalo National Park.
33. For example, Stan Wiley, the local veterinarian, was often called on to attend to the buffalo herd. Herb Dixon (grandson of Herb Walker, park farm superintendent), personal interview, 12 Feb. 2004.
34. LAC, Howard Douglas to the W. W. Cory, 22 Oct. 1907, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 1.
35. Treffry, personal interview, 11 Nov. 2002.
36. Treffry, personal interview, 11 Nov. 2002.
37. LAC, Maxwell Graham to Mr. Harkin, 3 Aug. 1912, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

38. LAC, P. C. Bernard Hervey to J. B. Harkin, 10 May 1913, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1. J. B. Harkin, on hearing of Hervey's recommendation, discouraged the procedure during calving period because he did not want to excite or harass the herd. LAC, Commissioner to P. C. Bernard Hervey, 20 May 1913, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

39. LAC, J. B. Harkin to A. M. Comsia, 4 May 1935, Parks Canada Files, BNP, RG 84, Vol. 54, File BU232, pt. 4. Also see map entitled "Buffalo Park," 1926, in LAC, Parks Canada Files, BNP, RG 84, Vol. 50, File BU38, pt. 1.

40. For example, LAC, L. Pereira to Howard Douglas, 25 Mar. 1911, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

41. In 1919, Harkin noted that experts in the United States had determined the proper sex ratio of bison to be one bull to two cows. LAC, J. B. Harkin to W. W. Cory, 3 Nov. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

42. LAC, Howard Douglas to W. W. Cory, 11 Jun. 1907, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 1.

43. LAC, Howard Douglas to W. W. Cory, 22 Oct. 1907, Parks Canada Files, BNP, RG 84, Vol. 51, File BU209, pt. 1.

44. LAC, Maxwell Graham to Mr. Harkin, 3 Aug. 1912, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

45. In this year, the composition of the herd was 500 bulls and 476 cows. Calves and yearlings numbered 470 and were of both sexes. LAC, Enclosure in Letter to Dr. Frederick Torrance, 10 Mar. 1914, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

46. LAC, Letter to P. A. Taverner, 6 Dec. 1915, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

47. LAC, *Rocky Mountain Courier*, 22 Feb. 1918, "Buffalo Herd is Thriving," Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

48. LAC, Mr. Courtice to J. B. Harkin, 13 Nov. 1916, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1; LAC, F. H. H. Williamson to William Flemming, 29 Aug. 1940, Parks Canada Files, BNP, RG 84, Vol. 982, File BU2[548608], pt. 4.

49. LAC, Letter to P. A. Taverner, 6 Dec. 1915, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

50. Taylor, "Legislating Nature," 127.

51. LAC, Commissioner to W. W. Cory, 3 Nov. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

52. LAC, Maxwell Graham to J. B. Harkin, 1 Apr. 1919 and other correspondence, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

53. LAC, William Hornaday to J. B. Harkin, 22 Sep. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

54. Hewitt, *Conservation of the Wild Life of Canada,* 136.

55. LAC, J. B. Harkin to W. W. Cory, 21 Nov. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

56. LAC, Commissioner to W. W. Cory, 3 Nov. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

57. Hewitt, *Conservation of the Wild Life of Canada,* 136.

58. LAC, S. F. Tolmie to J. B. Harkin, 19 Nov. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

59. LAC, Maxwell Graham to Commissioner, 17 Oct. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

60. LAC, Hoyes Lloyd to Mr. Harkin, 8 Apr. 1926, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 3.

61. LAC, J. B. Harkin to R. A. Gibson, 13 Oct. 1920, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

62. LAC, Commissioner to W. W. Cory, 22 Nov. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

63. LAC, J. B. Harkin to R. A. Gibson, 13 Oct. 1920, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 2.

64. LAC, S. E. Clarke, "Report on Investigation of Pasture Conditions at Buffalo National Park," Sept. 1930, Parks Canada Files, BNP, RG 84, Vol. 50, File BU35, pt. 1.

65. LAC, Maxwell Graham to J. B. Harkin, 29 Sep. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

66. LAC, [Irma] *Times*, 21 Oct. 1921, "Some Facts About Growth of Canada's Fine Buffalo Herd," Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 3.

67. LAC, Commissioner to Superintendent, 29 Nov. 1918, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

68. LAC, J. B. Harkin to Colin C. Moncrieff, 15 Dec. 1922, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 1.

69. LAC, J. B. Harkin to W. W. Cory, 21 Nov. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

70. LAC, J. B. Harkin to W. W. Cory, 21 Nov. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

71. LAC, J. B. Harkin to W. W. Cory, 6 Jun. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

72. LAC, A. S. Duclos to Charles Stewart, 8 Jun. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

73. LAC, Chief of the Animal Division to Commissioner, 17 Oct. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

74. LAC, J. B. Harkin to W. W. Cory, 21 Nov. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

75. LAC, Statement of Slaughtering Operations and Shipments, Buffalo Park, 1922–23, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

76. LAC, J. B. Harkin to A. G. Smith, 24 Mar. 1923, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

77. LAC, Memorandum to P. Marchand, 21 Jan. 1924, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

78. LAC, Maxwell Graham to Commissioner, 16 Oct. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

79. LAC, A. G. Smith recalled that while steers slaughtered up to the age of four years were in better condition than bulls of the same age, after four years their appearance and the quality of their hides were not good as bulls. A. G. Smith to the Controller, 15 Mar. 1939, Parks Canada Files, BNP, RG 84, Vol. 54, File BU232, pt. 5.

80. LAC, Commissioner to J. B. Harkin, 6 Sep. 1932, Parks Canada Files, BNP, RG 84, Vol. 54, File BU232, pt. 4.

81. LAC, James Smart to J. B. Harkin, 21 Apr. 1926, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 3.

82. LAC, J. B. Harkin to R. A. Gibson, 19 Apr. 1924, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

83. LAC, J. B. Harkin to A. G. Smith, 19 Dec. 1922, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

84. LAC, Maxwell Graham to J. B. Harkin, 29 Sept. 1919, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 1.

85. LAC, H. E. Sibbald to J. B. Harkin, 17 Jan. 1923, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 1.

86. LAC, Commissioner to H. E. Sibbald, 23 Jan. 1923, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 1.

87. LAC, Memorandum to W. W. Cory, 31 Aug. 1925, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

88. LAC, Memorandum to W. W. Cory, 31 Aug. 1925, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299-1, pt. 1.

89. LAC, Memorandum from C. E. Nagle, 19 Dec. 1924, Memorandum to Mr. Graham, 10 Jan. 1925 and Commissioner to S. J. Hungerford, 3 Mar. 1925, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 1.

90. It was estimated that for 2,000 head it would cost the department $6,000 to dispose of the bison by tender on the hoof and approximately $24,000 for the department to conduct an internal slaughter. With the latter option, the department questioned whether the sale of the bison products would raise enough revenue to offset the cost. LAC, C. Nagle to Mr. Bateman, 30 Nov. 1925, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 3. Sending the bison north, from a financial point of view, was the most logical plan, especially since the department had already invested in the infrastructure to corral and load the bison in 1925.

91. LAC, Commissioner to Geo. B. Grinnell, 21 Apr. 1925, Parks Canada Files, BNP, RG 84, Vol. 53, File BU232, pt. 3.

92. LAC, Commissioner to Lewis Freeman, 14 Nov. 1927, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 2.

93. LAC, O. S. Finnie to J. B. Harkin 27 Apr. 1925, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 1; LAC, Memorandum to O. S. Finnie, 29 Jul. 1925 and A. G. Smith to J. C. Hargrave, 25 Jun. 1925, Parks Canada Files, BNP, RG 84, File BU232-1, pt. 2; and LAC, *Edmonton Journal*, 13 Jun. 1925, "150 Bison Branded in One Day's Work," Parks Canada Files, BNP, RG 84, Vol. 53, File BU232-1, pt. 3.

94. LAC, Letter to W. W. Cory, 16 Jul. 1925, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 2.

95. Ray Sharp, interviewer unknown, circa 2001, VHS, Buffalo National Park Foundation Archives, (hereafter BNPFA), Wainwright, AB.

96. LAC, *Edmonton Journal,* 15 Jun. 1925, "Cowboys Win in Tug-O-War with 800-Pound Buffalo; Load Cars at Wainwright," Parks Canada Files, BNP, RG 84, Vol. 53, File BU232-1, pt. 3.

97. LAC, A. G. Smith to J. B. Harkin, 3 May 1926, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 2.

98. At that time, the park had around 8,500 bison. LAC, A. G. Smith to Commissioner, 30 Apr. 1926, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 2.

99. LAC, Letter to Hon. T. G. Murphy, 3 Nov. 1933, John Burns to J. B. Harkin, 28 Oct. 1933, and R. S. Munn to A. G. Smith, 6 Jun. 1933, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299, pt. 9.

100. LAC, J. B. Harkin to Messrs. Gainers Limited, 22 Jun. 1933, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299, pt. 9.

101. LAC, Harkin to Messrs. Burns & Company and Letter to H. H. Rowatt, 28 Oct. 1933, Parks Canada Files, BNP, RG 84, Vol. 57, File BU299, pt. 9.

102. LAC, Burns & Co. Ltd. to J. B. Harkin, 5 Nov. 1935 and J. B. Harkin to Messrs. Burns & Company Ltd., 20 Nov. 1935, Parks Canada Files, BNP, RG 84, Vol. 58, File BU299, pt. 11.

103. LAC, Burns and Co. Limited to F. H. H. Williamson, 9 Feb. 1939, Parks Canada Files, BNP, RG 84, Vol. 58, File BU299, pt. 14.

104. LAC, J. B. Harkin to Colin C. Moncrieff, 15 Dec. 1922, Parks Canada Files, BNP, RG 84, Vol. 52, File BU232-1, pt. 1.