

ANIMALS AND ARTIFACTS: SPECIMEN EXCHANGES AND DISPLAYS IN
YELLOWSTONE NATIONAL PARK, THE NATIONAL MUSEUM,
AND THE NATIONAL ZOO,
1846 TO 1916

by

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of

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DEDICATION

This dissertation is dedicated to the many good people I've been fortunate to have in my life: Bob and Helen Sheffer, who took me in when I needed a family; Dr. Joanna Spaulding, who made sure I graduated from high school against all odds; Dr. H. D. Hampton, who introduced me to the history of Yellowstone and the American West and has been a mentor and friend ever since; and Hannah Smith, my guiding star.

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ABSTRACT

While much has been written about Yellowstone National Park, few historians have discussed the history of its wildlife, particularly before 1916 when the National Park Service was established. “Animals and Artifacts” investigates how Yellowstone came to be identified as wildlife’s last refuge in the American West while also trying to understand how the U. S. Cavalry concurrently trapped and shipped animals to the National Zoological Park and, eventually, to zoos around the country. It also questions how animal displays and exchanges came to be so integral to the Park’s administration, overall mission, and national identity during these formative years.

This study relies on primary documents from the National Park Service and the Smithsonian Institution, including annual reports and correspondence dating from the establishment of the Smithsonian in 1846 until 1916 when the cavalry turned administration of the Park over to civilian control. Additional sources, including publications and newspapers from the period, were also consulted, as were secondary sources as appropriate.

The research documents that the Smithsonian Institution, with its own well-established culture of specimen exchange initiated during its earliest years, viewed Yellowstone National Park as a primary source of specimens. In particular, it looked to the Park for animals of the American West, both living and dead, to display in Washington, D. C., entering excess specimens into its network of exchange. This special relationship helped define Yellowstone National Park’s development and eventually transformed it into a center of animal displays.

To understand how Yellowstone managers still haze animals back into the Park today requires a better understanding of how tourists, military administrators, and Smithsonian scientists alike all looked to Yellowstone to protect the wildlife of the American West while also expecting to see those animals on display. “Animals and Artifacts” looks at the early history of Yellowstone to better understand how this all came to pass.

1. INTRODUCTION:

YELLOWSTONE WILDLIFE AND OTHER FINE SPECIMENS

On March 20, 1911, D. J. Haff, President of the Board of Park Commissioners in Kansas City, Missouri, sent a check to Yellowstone National Park for \$514.00 to “cover the estimated cost of capturing, delivering on board cars at Gardner, Mont., and forwarding to Kansas City” two grizzly bears and two brown bears. As a subsequent letter would clarify, the zoo did not desire just any bears, but wanted “to obtain as nice specimens of the Grizzly bears as can be obtained from Yellowstone Park and to that end we are willing to wait until good specimens can be obtained for us.”¹ The zoo superintendent made clear that he was “not especially desirous of obtaining the ordinary small black bears,” but rather “large bears or cubs that will ultimately be the large bears popularly known as the Cinnamon bears.”²

Zoos and other captive-breeding programs requested and received more than fine specimens of bears from Yellowstone, however. In 1910, for example, U. S. Cavalry personnel stationed at Fort Yellowstone trapped, crated, and transported two antelope and two mule deer to the National Zoological Park in

¹ D. J. Haff to Lloyd Brett, March 20, 1911, Yellowstone National Park Archives, Item 93, Box 48, file no. 25 (hereafter LB 48, f 25). Note: Over the years Yellowstone has used a variety of different filing systems, filed by topic and/or person and/or event. If it appears that multiple letters are all in the same “file,” they are.

² W. H. Dunn to Lloyd Brett, April 4, 1911, LB 48, f 25.

Washington, D.C. and twenty-three antelope to the National Bison Ranges in Montana and Oklahoma. In 1911, the troops captured and shipped eight white pelicans to the National Zoo, and four grizzlies to Philadelphia. By 1912, the administrators of Yellowstone received so many orders for bears that they sent animals to Boston, Milwaukee, St. Louis, and Memphis zoos, but “carried over” additional requests to 1913.³ That same year, the Park also received inquiries from as far away as Virginia and London about securing bears, beaver, elk, pelicans, and other Yellowstone wildlife.

From 1886 until 1916 when President Woodrow Wilson signed legislation to establish the civilian-run National Park Service, the U. S. Cavalry served as acting superintendents in the Park and assumed responsibility for responding to a growing number of requests for trapping and shipping wildlife out of the Park.⁴ To this end, they developed and managed an extensive system of crate building, shipping, and accounting as they filled a growing number of requests for living specimens for zoos and game preserves. Garrisoned in Mammoth Hot Springs, the troops could be, and sometimes were, called out to respond to “Indian trouble” in Montana and other areas, or be transferred to other military

³ “Animals for Public & Other Parks, 1921,” LB 48, f 25.

⁴ In 1886, the Secretary of the Interior called upon the Secretary of War to help him defend the Park, quoting from the Sundry Civil Act of 1883 for the Department of War to “prevent trespassers or intruders from entering the park for the purpose of destroying the game or objects of curiosity therein....” See H. Duane Hampton, *How the U. S. Cavalry Saved Our National Parks* (Bloomington, IN: Indiana University Press, 1971), 79.

outposts as far away as Hawaii or the Philippines. But while in the Park, cavalry officers and their troops protected wildlife from predation and poaching and, in some instances, hazed animals back across the border when they strayed. Many became expert in the animal trade.

In addition to requests from public zoos and reserves, the U. S. Cavalry received multiple inquiries from individuals, private menageries, and game farms wanting to capture animals in the Park. In 1912, for example, a Mr. Shaw, a member of the Benevolent and Protective Order of Elks living in Gardiner, Montana asked if he could capture two elk in the Park to take with him to the national Elks convention in Portland, Oregon. After the convention, the man pledged to donate the elk to a public park to save the expense of returning them to Yellowstone.⁵ Lieutenant-Colonel Lloyd Brett, acting superintendent at the time, dutifully forwarded Shaw's request to the Secretary of the Interior for approval, but advised against it. "I cannot recommend approval of this request," Brett wrote, "as it seems hardly in line of our ideas of the proper use of the animals of the park, and there is no certainty of a future good home for them."⁶

The Department's Chief Clerk agreed that Park animals had a proper use, and that shipping them to an Elk convention in Portland, Oregon did not fit within that definition. He added, however, that since so many elk "annually drift from the park into the abutting forest reservations, it would seem that Mr.

⁵ Walter C. Shaw to Lloyd Brett, March 7, 1912, Item 93, LB 48, f 25.

⁶ Lloyd Brett to [Walter L. Fisher], March 9, 1912, LB 48, f 25.

Shaw would have but little difficulty in securing the elk he desires at some point outside of the park.”⁷ The Department of the Interior routinely refused permission for private parties to remove animals from within Yellowstone’s boundaries but, as the Chief Clerk confirmed, the animals outside those borders no longer belonged to the Park and could be taken and disposed of in whatever way seemed practicable. The idea that some animals belonged to the Park while others did not depending on their physical location plagued Yellowstone administrators from the Park’s inception.

The U. S. Cavalry also supervised the shipment of representative wildlife *into* the Park and, in some instances back out again. For example, in 1896 boat operator E. C. Waters received permission as a concessionaire to import bison and other animals into the Park for a private menagerie displayed on Dot Island in Yellowstone Lake. The Park released these animals into Yellowstone in 1907 when Waters failed to properly care for them.⁸ And in 1901, the National Park imported bison from private collectors when Yellowstone’s free-roaming bison herd had declined to only a few animals. By 1912, this “tame herd” had grown large enough to include a surplus of bulls that the Park offered to sell to private

⁷ Department of Interior Chief Clerk and Chief Executive Officer to Lloyd Brett, March 12, 1912, LB 48, f 25. Note that whenever possible the correspondent’s name has been determined and used instead of just his title.

⁸ As discussed later, in 1909 Yellowstone almost received chamois from Switzerland for display in the Park. Acting superintendents also proposed importing several different types of large game birds for breeding and display in the Park.

parties. As the Yellowstone bison herd grew to a total of 228 animals, in 1915 Yellowstone personnel shipped some of these animals to locations as diverse as Portland, Oregon and Corpus Christi, Texas.

The 1915 shipment of bison to Texas included twenty elk. Through elimination of predators, protection from hunters in Yellowstone, widespread-feeding programs, and loss of habitat outside the Park, elk had become so plentiful that Yellowstone resorted to shipping them in carload lots to any state applying for them, establishing elk herds throughout the country. Yellowstone even trapped and transported elk to other national parks, including Wind Cave and Glacier, to serve as animal attractions and breeding stock, raising questions about the very nature of “native” wildlife in national parks.

When the military turned the administration of the first national park over to civilian control in 1916, it transferred a well-established program of wildlife protection and control, as well as a deeply entrenched culture of animal shipments and displays. And yet most historians of Yellowstone pay little attention to wildlife management as a defining issue of the Park, particularly during these formative years from 1872 to 1916.⁹ Instead, they point to the significance of the 1872 legislation for protecting Yellowstone’s unique geology, noting that original proponents emphasized the importance of shielding the

⁹ For example, Alice Wondrak Biel’s *Do (Not) Feed the Bears: The Fitful History of Wildlife and Tourists in Yellowstone* (Lawrence, KS: University of Kansas Press, 2006) focuses on the post-National Park Service period, and particularly on tourists and bears in the Park.

region from becoming a western version of Niagara Falls. Historian Alfred Runte, for example, has argued that Congress had little interest in wildlife conservation in Yellowstone. Rather, establishing the Park presented a unique opportunity for a culture-starved nation to preserve “a semblance of antiquity through landscape.”¹⁰ More recently, Mark V. Barrow, Jr. picks up this theme in *Nature's Ghosts*, writing that while Yellowstone and other national parks could have demonstrated “the feasibility of wildlife refuges,” they “were established

¹⁰ Alfred Runte, *National Parks: The American Experience* (Lincoln, NE: University of Nebraska Press, 1975), 41. Kathy S. Mason views the creation of Yellowstone as setting “a precedent for the preservation of the monumental, the extraordinary, and even the bizarre in nature.” Mason, *Natural Museums: U. S. National Parks, 1872-1916* (East Lansing, MI: Michigan State University Press, 2004), 2. Clive Hambler defines conservation as “the protection of wildlife from irreversible harm,” with irreversible as “changes that are not reversible within a human generation” and harm as “damage or declines due to people.” Hambler, *Conservation* (Cambridge: Cambridge University Press, 2004), 2-3. Michael E. Soulé defines conservation biology as addressing “the biology of species, communities, and ecosystems that are perturbed, either directly or indirectly by human activities or other agents,” with a goal of “[providing] principles and tools for preserving biological diversity.” Soulé, “What is Conservation Biology?” *BioScience* 35, no. 11 (December 1985), 727-734. Scientists disagree on the origins of conservation biology. For example, Hambler argues that conservation biology originated in the late 19th century in response to Darwin’s *Origin of the Species*. *Conservation*, 7. On the other hand, Soulé describes the rise of conservation biology as a response to “the biological diversity crisis.” According to this interpretation, the Society of Conservation Biology came into being in May 8, 1985 at a meeting in Ann Arbor, Michigan where Jared Diamond and Peter Brussard presented their committee report. The first annual meeting of the Society was held in 1987 in Bozeman, at Montana State University. See “History of the Society for Conservation Biology: How and Why We Got Here,” *Conservation Biology* 1, no. 1 (May 1987), 4-5.

primarily to protect the scenic wonders and natural curiosities contained within their boundaries.”¹¹

Judith Meyer agrees, noting that animal conservation did not seem to motivate legislators. In 1872, “wildlife was still considered a culinary treat as much as a visual one,” she has written, and “wildlife was plentiful throughout the western states. The popularity of viewing wildlife in its natural unfenced setting really only [became] popular after the turn of the century.”¹² According to Mary Ann Franke, even as late as 1905, “the motivation for establishing a captive [bison] herd in Yellowstone seems to have had more to do with gratifying park visitors than with preserving the species.”¹³

Other historians, however, have described the establishment of Yellowstone as part of a larger conservation movement in America. While Runte argued that national park administrators did not demonstrate a commitment to wildlife and other conservation efforts until the 1920s, well after the establishment of the National Park Service, historian H. D. Hampton applauded early proponents of Yellowstone and other national parks as foresighted when it came to a commitment to conservation.¹⁴ James Pritchard agrees, adding that

¹¹ Mark V. Barrow, Jr., *Nature's Ghosts: Confronting Extinction from the Age of Jefferson to the Age of Ecology* (Chicago, IL: University of Chicago Press, 2009), 83.

¹² Judith L. Meyer, *The Spirit of Yellowstone: The Cultural Evolution of a National Park* (Lanham, MD: Rowman & Littlefield Publishers, Inc., 1996), 20.

¹³ Mary Ann Franke, “Captivity for Yellowstone Bison,” *Montana: The Magazine of Western History*, Vol. 55, No. 2 (Summer, 2005), 4.

¹⁴ Hampton, *How the U. S. Cavalry Saved Our National Parks*, 30-31.

Yellowstone National Park not only protected landscape but also entered the Park itself into “a national crusade to protect large game animals threatened with extinction in the American West.” Pritchard cites various mechanisms for protecting Yellowstone wildlife starting with the founding of the Park in 1872 and continuing through 1894.¹⁵

John Reiger looked to big-game hunters like Theodore Roosevelt and George Bird Grinnell and organizations like the Boone and Crockett Club to help explain early wildlife conservation efforts in the American West; he also noted their general support of wildlife protection in Yellowstone.¹⁶ Looking at a different kind of hunter, Karl Jacoby has argued that the establishment of Yellowstone paralleled the actions of the same elite hunters and landowners who limited access to other natural resources in the Northeast and Southwest. In his view, setting aside the Yellowstone region as a national park inevitably led to conflict between the federal government and those living on the Park’s periphery

¹⁵ James A. Pritchard, *Preserving Yellowstone’s Natural Conditions: Science and the Perception of Nature* (Lincoln, NE: University of Nebraska Press, 1999), 8. The Lacey Act of 1894 prohibited “all hunting, or the killing or wounding, or capturing at any time of any bird or wild animal, except dangerous animals, when it is necessary to prevent them from destroying human life or inflicting an injury.” While the 1894 Act only protected Yellowstone wildlife and provided legal jurisdiction for enforcement, John Lacey would later sponsor legislation to protect all American wildlife. The Lacey Act of 1900 is considered by many to be the founding legislation of the conservation movement, directly linking the protection of Yellowstone wildlife to conservation efforts nationwide.

¹⁶ John F. Reiger, *American Sportsmen and the Origins of Conservation* (New York, NY: Winchester Press, 1975).

over the very resources, particularly animals, that non-elites in the region needed to survive.¹⁷

But even those studies that address, at least in part, Yellowstone's wildlife history fail to consider or explain how or why acting superintendents came to capture and ship Yellowstone wildlife for display in zoos, while displaying some of the same animals in pens and corrals in the Park for the benefit of visitors. Or how, in the process, Yellowstone's acting superintendents established an extensive bureaucratic animal-accounting system that became so integral to the Park's administration and culture. This major oversight appears to be driven in part by historians failing to step back to view national parks in general and Yellowstone National Park in particular in their perceived role as "natural museums," or in the larger context of animal displays in museums and zoos. Indeed, the idea that Yellowstone developed during this formative stage as a zoological park while entering into a well-defined network of animal exchange, might seem too controversial or too closely associated with polemics questioning

¹⁷ Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley, CA: University of California Press: 2001). Louis Warren makes a similar argument about Glacier National Park protecting elk from the Blackfeet living on the reservation adjoining Glacier's borders. Ironically, many if not all of the elk Glacier administrators sought to keep from crossing the border out of Glacier had been shipped to the national park from Yellowstone. Warren, *The Hunter's Game: Poachers and Conservationists in Twentieth-Century America* (New Haven, CT: Yale University Press, 1999).

the Park's current wildlife management policies.¹⁸ Others simply might feel reluctant to examine questions routinely addressed by biologists. But even studies such as *Wildlife Research and Management in the National Parks*, written by a National Park Service research scientist, focuses on wildlife management after 1916, with only a brief overview of the development of the Park's early wildlife administration as part of the book's introduction.¹⁹

This study offers a different perspective, arguing that wildlife played an important role in the early history and management of Yellowstone, and that animals helped shape how visitors experienced and remembered the Park. At a time when Americans expressed a growing concern for the fate of the nation's iconic wildlife, many looked to Yellowstone to provide a last refuge for its survival as well as a park environment where they could still be viewed. For example, as early as the 1870s, tourists mentioned wildlife in general, and bears in particular, when describing Yellowstone National Park.²⁰ Indeed, visitors often complained to the military superintendents if they failed to see birds or

¹⁸ For an example of a polemic, see Alston Chase, *Playing God in Yellowstone: The Destruction of America's First National Park* (Orlando, FL: Harcourt Brace, 1987, 1986).

¹⁹ R. Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana and Chicago, IL: University of Illinois Press, 1972).

²⁰ In a study of the non-governmental Yellowstone written record, Judith Meyer found that Park visitors and others writing about the Park mentioned bears more than twenty percent of the time in the 1870s; those mentions jumped to more than sixty percent in the early 1900s. By the end of the 19th century, writers also mentioned wildlife generally more than thirty percent of the time as part of their description of the Park. Meyer, *The Spirit of Yellowstone*, 19.

animals. By the 1880s, Americans and others traveled to Yellowstone, at least in part, because of the Park's reputation as "a great preserve for wild animals," describing Yellowstone as a "natural museum of marvels free to all."²¹

As the first national park, Yellowstone lacked a well-established model to shape its management and to define these early visitor experiences. Superintendents and visitors alike, therefore, looked to other entities like zoos and museums to help them describe the Park's function. Initially thought of as a temple for the muses, museums collected and displayed objects for contemplation, as well as providing a protective environment for these objects into the future. Zoos displayed living specimens to achieve a similar conservation end, as did Yellowstone, preserving and displaying the iconic animals of the American West. While the Smithsonian's George Brown Goode did not discuss national parks in his groundbreaking work on museum administration, he defined all zoological parks, aquariums, and botanical gardens as living museums. A "natural museum" like Yellowstone developed in part around its identity as a zoo.²² Indeed, many described it that way. In the 1890s, for example, Arnold Hague of the US Geological Survey regularly referred

²¹ Maturin Murray Ballou, *The New Eldorado: A Summer Journey to Alaska* (Cambridge, MA: The Riverside Press, 1889), 15.

²² See George Brown Goode, "The Principles of Museum Administration," *Annual Report of the Board of Regents of the Smithsonian Institution, Report of the National Museum, Part II* (Washington, DC: Government Printing Office, 1901), 198.

to Yellowstone as a “zoological reservation,” not that far from a “zoological park.”²³

To understand the development of zoological gardens as they exist today, most look to Europe. For example, in the late 18th century, the Jardin des Plantes in France (originally the Jardin du Roi and the Jardin des Plantes médicinales) added semi-domestic animals to the grounds, and kept more exotic species such as monkeys caged in buildings separate from the manicured gardens. Following France’s lead, 19th century European zoological parks evolved into public spaces based on these kinds of private royal menageries with exotic collections of lions, tigers, elephants, and bears displayed as the fruits and reach of empire. The term “zoological park” came from the establishment of the animal displays in Regent’s Park in 1828, where park managers added trees and shrubs to complement the animal collection. The idea of integrating park-like conditions with animals spread to the Continent later in the century. By the early 20th century, the word “zoo” became popular, thus placing “the accent on the contents of the space (zoology) rather than the space itself, doubtless to distinguish this type of park [i.e., one with animals] more clearly from other ones.”²⁴ Regardless of what visitors called them, the zoological park (or zoo) in Regent’s Park and others on

²³ Arnold Hague to S. P. Langley, January 8, 1891, LB 1, Item 2, document #263 (hereafter #263).

²⁴ Eric Baratay and Elisabeth Hardouin-Fugier, *Zoo: A History of Zoological Gardens in the West* (London: Reaktion Books, 2002), 79-80.

the Continent displayed the expanse of European empires, with animals serving as living representatives or “ambassadors” of occupied lands.²⁵

Park personnel made a commitment to protect wildlife within Yellowstone’s borders, however, most early superintendents also willingly trapped and shipped birds and large animals such as bears, elk, and antelope out of the Park. To this end, they developed and sustained a program of animal capture, shipments, and exchange, supplying Yellowstone specimens for scientific study as well as meeting the growing public interest in animal displays.²⁶ While protecting Yellowstone wildlife appears to be in conflict with trapping and transporting those animals out of the Park, in essence these two

²⁵ Zoos today routinely use the term “ambassadors” to describe or justify individual animals held for display. Several writers examine 19th and early 20th century European zoos as collections and displays of empire, including Baratay and Hardouin-Fugier, *Zoo, and Harriet Ritvo, The Animal Estate, The English and Other Creatures in the Victorian Age* (Cambridge, MA: Harvard University Press, 1987). Elizabeth Hanson, on the other hand, views American zoos from that same period as more like middle landscapes (e.g., like gardens and parks) situated between the city and wilderness. She also places college campuses in that same middle landscape. Hanson, *Animal Attractions: Nature on Display in American Zoos* (Princeton, NJ: Princeton University Press, 2002).

²⁶ That said, the military only served as stewards of the Park, and answered to the directives posed by the Secretary of the Interior and the Secretary of War. Congress, with its legal and funding priorities, also had its say. And the cavalry, with all its military might, often found it difficult to exert its power and adequately protect the Park and the animals living in it. While acting superintendents assigned to the Park may have wanted to display the cavalry’s power and control, they often found themselves overwhelmed by the immensity of the task at hand. In many instances, they failed utterly.

management activities served a similar function: the warehousing of Yellowstone wildlife in the nation's museums, zoos, and national parks.

This study investigates how this came to pass. How did Yellowstone come to be viewed as a zoological park that not only displayed animals for public enjoyment while also shipping representative wildlife of the American West upon demand to other museums, zoos and reserves? Although research for "Animals and Artifacts" started in the Yellowstone National Park Archives it soon became clear that the origins of these animal management practices, as well as the culture of specimen exchange and display that sustained them, did not originate in Yellowstone. Rather, the capture and display of Park animals built upon a long history of specimen shipments from Yellowstone to the Smithsonian, which in turn built its own programs on long-standing cultures of specimen exchange. Indeed, the Smithsonian not only looked to the Yellowstone region for unique objects for research and display, but also for surplus specimens to enter into a complex network of national and international exchange to increase the Institution's own collections. In so doing, the Smithsonian (and later the National Museum and National Zoo) helped define how the American public viewed the first National Park and the animals in it, and how early superintendents developed and administered the Park in response to that early vision.

Thus, this study does not open with the establishment of the National Park Service in 1916 or even with Yellowstone National Park in 1872. Rather it starts with the Smithsonian and the development of a culture designed to create knowledge while, at the same time, conserving for the future the nation's natural history and other artifacts. The Smithsonian functioned as what French sociologist Bruno Latour has referred to as a "Centre of Calculation," where a "tiny number of scientists is more than balanced by the large number of resources they are able to muster."²⁷ The Smithsonian served as this center for the nation and expanded its influence internationally through a system of specimen exchange and display. Starting in the early 1870s, the Smithsonian drew the Yellowstone region into that network, with Yellowstone National Park becoming one of the Institution's major sources of specimens for preservation, display, and exchange.

To understand how this system of specimen exchange originated and how Yellowstone became an important contributor to it, Part I, Centres of Calculation, examines the origins of the Smithsonian and highlights the inherent conflict between James Smithson's directive for the "creation and diffusion of knowledge," and the Institution's legislated mandate to curate the nation's natural history collections. While the Smithsonian inherited existing collections (e.g., from the 1842 United States Exploring Expedition or "Ex-Ex"), boxcar loads

²⁷ Bruno Latour, *Science in Action* (Cambridge, Massachusetts: Harvard University Press, 1987), 232.

of specimens and other artifacts also arrived from American interests around the world, particularly from expeditions into Yellowstone and other areas of the American West. In processing these acquisitions, along with a large number of donations from the 1876 Centennial Exposition in Philadelphia, the Smithsonian soon established itself not only as a center of calculation but also as a national model of *specimen exchange*. The sheer volume of specimens obtained through donation and exchange required a new building to house them, transforming the Smithsonian yet again, this time into a national model of *specimen display*.

Centres of Conservation (Part II) moves from the Smithsonian's emphasis on the creation of knowledge into its re-creation and conservation of American wildlife first in its museum and then in a zoo. Beginning with bison, Smithsonian scientists and taxidermists worked to bring these and other large American mammals back from the brink of extinction through life-like preservation and public display. They then took action to gather even more specimens facing the risk of extinction for preservation in the new National Museum. The Institution also hoped to establish a collection of *living specimens*, a "home and city of refuge for the vanishing races of the continent." For both kinds of displays, they turned to Yellowstone to stock these new centers, particularly since many believed the Park had failed to protect these large mammals, despite the best efforts of several administrations.

Animals and Artifacts (Part III) documents the contest for Yellowstone's animal resources posed by the Smithsonian and the challenge to define the meaning of the Park: Was it a city of refuge for the nation's vanishing wildlife or simply another national zoo? Was it a protected geological wonder and national pleasuring ground or the best-known government animal reservation? When it came down to competition between the Smithsonian, other institutions and individuals outside of Washington, and those living on the borderlands of the Park, who ultimately had priority access to wildlife and its display? The special arrangement between Yellowstone and the Smithsonian, coupled with growing national concern over the fate of wildlife in the American West, ultimately helped the nation view the Park not just as a unique geological wonder but as a kind of American Eden where iconic animals could be viewed and from which wildlife could be requisitioned and obtained upon request. Elk, bear, beaver, and even bison became viewed like any other excess or duplicate specimen. In the words of Secretary of the Interior John Noble, the entrance of these animals into the network of specimen exchange was "one of the valuable purposes for which the Park [had] been established." Protection of Yellowstone wildlife became linked to displays of that wildlife, both living and dead.

By viewing Yellowstone's history in relation to that of the Smithsonian, the National Museum, and ultimately the National Zoo, this study intends to shed new light on the history of Yellowstone wildlife and the important role it

played in the Park's early development. Through its relationship with these national institutions, Yellowstone helped elevate the iconic nature of the wildlife of the American West and focused national attention on the threat of its imminent demise. However, as documented in the pages that follow, the public display of animals soon equaled if not trumped the desire to conserve wildlife species as an end in itself. Thus, "centre of conservation" took on a new meaning in Yellowstone National Park, more closely associated with the animal displays in museums and zoos. Moreover, once the floodgate of specimen shipments opened in the Park, other museums and zoos looked to Yellowstone for their own "fine specimens" so that they, too, could both preserve and display America's frontier animal heritage.

When Congress established Yellowstone National Park in 1872, the series of superintendents appointed to manage it had no models to help them manage or plan for the future of the Park. Instead, they imagined and developed Yellowstone as need, national expectations, and personal interests arose. In many instances, the Smithsonian, with its own mandate for becoming a center of knowledge, helped define the Park instead, integrating Yellowstone directly into its network of animal displays. The following study attempts to better understand how that came to pass.

PART I:



CENTRES OF CALCULATION

2. THE SMITHSONIAN INSTITUTION:

TYPE SPECIMENS AND THE ORIGINS OF SPECIMEN EXCHANGE

The great value of the museum of the Institution at the present time consists in its being the depository of so many type specimens, or those upon which the first description of species has been established. These constitute the great attraction to the scientific investigators, as, however carefully prepared the published description or figures of any species may be, there is almost always some doubtful point to be settled alone by an examination of the types. For this reason these are always guarded with jealous care, and considered of much more value than new and undescribed materials. There are few collections embracing more original type specimens, or specimens relating to a large number of important works, than that of the Smithsonian Institution.²⁸

-- Spencer Baird, 1861

In his last will and testament, dated October 23, 1826, Englishman James Smithson bequeathed the bulk of his estate of approximately £100,000 to be held in trust for his nephew, Henry James Hungerford. Should Hungerford die without heirs, which he eventually did in 1835, Smithson added the following contingency: "I then bequeath the whole of my property ... to the United States of America, to found at Washington, under the name of the Smithsonian

²⁸ Spencer Baird, Report of Assistant Secretary, *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1860* (Washington, DC: George W. Bowman, 1861), 76.

Institution, an Establishment for the increase & diffusion of knowledge among men.”²⁹

Smithson added no other instructions, leaving historians to speculate about what he envisioned. The illegitimate son of the Duke of Northumberland and Elizabeth Keate Macie, a widow prone to sue everyone from her sister to her architect, Smithson himself never married. Instead, he focused his passions on finding social legitimacy in the world of science. An 1865 fire destroyed part of the Smithsonian building that held Smithson’s papers so few clues exist to explain his motivations. Why would someone donate his small fortune to a country he had never visited to create a monument to science in his name?³⁰

Smithson lived at a time when science and enlightenment thinking offered an alternative to the rigid European social structure. As his biographer noted, Smithson and his contemporaries looked to science as a way to overthrow “the system as it existed, of replacing a corrupt order based on superstition and inherited privilege with one that rewarded talent and merit – a society that would bring prosperity and happiness to the many rather than the few.”

²⁹ Smithsonian Institution. “James Smithson: Founder of the Smithsonian.” <http://siarchives.si.edu/history/exhibits/documents/smithsonwill.htm>.

³⁰ When discussing the Smithson endowment, historians often miss the fact that Smithson bequeathed his fortune first to his nephew, continuing the concentration of wealth in his family. Only after his nephew died without heirs did the funds pass to America for the establishment of the Smithsonian. Smithson’s will, which he wrote himself, appears to have been intended more as a snide rebuke of the British social order rather than a direct act of scientific philanthropy.

Smithson and his friends “proclaimed themselves citizens of the globe and pledged allegiance first of all to truth and reason.” As a country dedicated to the natural rights of man rather than the unnatural rights of the church and the aristocracy, Smithson most likely viewed America as an alternative to Europe where science could flourish and where his name would take on the legitimacy it lacked in England.³¹

Receiving an Englishman’s estate to pursue science did not sit well with some members of the American Congress, however. Many questioned the endowment’s constitutionality or considered it beneath the nation’s dignity to accept such a gift since it came to the U. S. government from a citizen of another country. When Congress finally agreed to send an agent to England to accept the estate, valued at approximately \$500,000 when converted to gold and deposited at the mint in Philadelphia in 1838, legislators argued about how it should be

³¹ Heather Ewing, *The Lost World of James Smithson* (New York, NY: Bloomsbury, 2007), 17. As Ewing explains, Smithson had been raised James Macie, the surname of his mother’s first husband. Smithson kept this name for 35 years, until the death of his mother in 1800, when he petitioned to change it to Smithson, a name that publicly announced his illegitimacy but placed him within the aristocracy. Ewing also notes that Smithson wrote his will in the summer of 1826, the 50th anniversary of the American Declaration of Independence, as well as the deaths of both John Adams and Thomas Jefferson, events that would have been well covered in the English press. *Ibid.*, 303. What Smithson may not have known was that John Quincy Adams’s first message to Congress in 1825 proposed a national investment in the advancement of science, including an astronomical observatory and a national university, ideas that were not well received at the time.

spent.³² They also had to agree on what Smithson meant by "the increase and diffusion of knowledge."

Smithson's will, in essence, called upon Congress to create an institution that would define the state of mid-19th century American science. Legislators suggested everything from a graduate school to a national library to a natural history museum or botanical garden, reflecting the expansive state of science and scientific inquiry in America in the mid-19th century. Because Congress could not decide on one overarching goal for the institutionalization of science, they opted to use the Smithson funds to support a little of everything, donating land from the public domain near the Capitol to create "grounds for a spacious park," as well as providing a site for a large building to house an art gallery, a library, a lecture hall, and a chemistry lab. Congress also transferred custody of the "national museum," the extensive collections of the 1842 United States Exploring Expedition (or "Ex-Ex") held in the U. S. Patent Office, and mandated the Smithsonian to receive "all the specimens that might be accumulated from other

³² Webster Prentiss True, *The First Hundred Years of the Smithsonian Institution, 1846-1946* (Washington, DC: n.p., 1946), 1-4. Various outstanding sums subsequently received from the estate brought the total bequest to approximately \$550,000, or approximately \$13,300,000 in 2010 if calculated using changes to the consumer price index available at MeasuringWorth.com, a project of the University of Illinois at Chicago. See <http://www.measuringworth.com/uscompare/relativevalue.php>. All subsequent conversions to 2010 dollars come from this site.

sources for the illustration of all branches of natural history, geology, ethnology, etc.”³³

Some of these requirements did not sit well with Joseph Henry, the first Secretary hired to administer the Smithsonian Institution. Henry believed the Smithsonian endowment, yielding approximately \$30,000 per year, could not support all the mandates set forth by Congress, and should not be used for those purposes in any event. A library or museum alone, if it were to be “worthy of the nation,” would over time absorb the whole of the annual income from Smithsonian’s endowment while doing nothing to “realize the intentions of Smithsonian, both as regards the increase and the diffusion of knowledge....”³⁴ In Henry’s view, the language of the will called for the Smithsonian “to assist men of science in making original researches, to publish them in a series of volumes, and to give a copy to every first-class library on the face of the earth.”³⁵ All other activities suggested by Congress went beyond the Smithsonian’s mandate and funding sources. He, therefore, applied Smithsonian’s short, forward-looking directive as his north star to set the Institution’s course during its formative years. That said, Secretary Henry did not object to the nation supporting a

³³ Joseph Henry, “Report of the Secretary,” *Annual Report of the Board of Regents of the Smithsonian for the Year 1867* (Washington, DC: Government Printing Office, 1872), 15.

³⁴ *Ibid.*, 13-16.

³⁵ Joseph Henry quoted in George Brown Goode, *An Account of the Smithsonian Institution: Its Origin, History, Objects and Achievements* (Washington, DC: n.p., 1895), n.p.

national library or museum. However, these institutions warehoused and displayed old knowledge. As such, Henry argued, Congress should pay for these institutions separately.³⁶

Joseph Henry had established this single-minded commitment to fundamental research long before 1846 when the new Smithsonian Board of Regents hired him away from Princeton. In 1837, he and Alexander Bache had toured London and Paris where they met many of the leading European scientists, attended scientific meetings, and experienced models of “scientific institutions committed to propagating the values embedded in the cause of original investigation.”³⁷ Not long after his return to the United States, Bache found employment supervising the coastal survey, while Henry, with an interest in magnetism, became one of the leading experimental physicists of his time.

³⁶ Henry also appears to have feared that Smithson’s funds would be used to set back American science rather than support its advancement. Natural history collections, with their connotation of musty cabinets of curiosity, suggested the past, whereas instrumentation, investigations, and measured observations (“Humboldtian” science) suggested the future. Collections represented old knowledge, and served only as a means to an end, not as an end on their own.

³⁷ Hugh Richard Slotten, *Patronage, Practice, and the Culture of American Science: Alexander Dallas Bache and the US Coast Survey* (New York, NY: Cambridge University Press, 1994), 26. Not surprisingly, the European models of scientific societies that so impressed Henry and Bache were the same models that Smithson appears to have rejected in his will.

Indeed, to this day, the National Academies of Sciences consider him the foremost American scientist of the 19th century.³⁸

In 1849, with the East Wing of the new Smithsonian building nearing completion, Henry set out to implement his vision.³⁹ In one of his very first acts, he introduced the fledgling institution into an international network of scientific exchange. The nation's leading learned societies already contributed to this network, exchanging publications and reports to stay abreast of scientific advances in Europe and other places around the globe. By entering into this existing network of international institutions, Henry could inexpensively realize the Smithsonian mission to increase and transfer knowledge simply through centralization. And, by offering to take the lead on behalf of other American institutions, including the American Philosophical Society, the American Academy of Arts and Sciences, the U. S. Coastal Survey, the Naval Observatory at Washington, and even the Commissioner of Indian Affairs, Henry positioned

³⁸ National Academy of Sciences, "Joseph Henry," www.nationalacademies.org/history/members/henry.html.

³⁹ "The East Wing and Range were the first portions of the Smithsonian Building to be completed. For over a year, all of the functions of the fledgling Institution were carried on within their walls; there was an office for the Secretary and one for the Librarian, a lecture hall, two laboratories, and an apparatus room. Adjustments to the ill-suited space were constant in the first few years, while the concept of the Institution was redefined by the forceful first Secretary. Joseph Henry made significant changes to adapt the East Wing to the purposes of a budding research institution rather than a public teaching college." Smithsonian Institution, "The Castle: A Tour of the Smithsonian Building in the 19th Century," <http://www.si.edu/oahp/sibtour/ew1.htm>.

himself and the Smithsonian at the nation's scientific center, through which all organizations could share and centralize their expertise while interacting with and contributing to the international world of science.⁴⁰

The international system of exchange upon which Henry built goes back to at least to 1832, when Alexandre Vattemare solicited the support of the director of the Royal Library of Munich to establish a national exchange program with the French Bureau of Fine Arts. Vattemare promised the cooperation of the King of Prussia and the King of Denmark, and also tried to enlist the support of the Empress of Russia as well. Vattemare argued that "all the large establishments founded by the munificence of governments in the interest of science and arts, namely, museums, collections, galleries, and libraries, possessed, besides the treasures they displayed, many others, which by reason of their abundance were condemned to be useless. The duplicates which formed this precious waste, the savant saw with regret, buried in the dust of forgetfulness." In other words, duplicates took up space and had little value in storage, but could be entered into a system of exchange to the benefit of all those interested in science and the arts. To make his case, Vattemare pointed to two hundred thousand duplicates in the Munich library and twenty-five thousand duplicate specimens in the entomological section of the Brazilian museum in

⁴⁰ George H. Boehmer, *History of the Smithsonian Exchanges* (Washington, DC: Smithsonian Institution, 1882), 15.

Vienna. Hidden collections, libraries, and museums around the world held innumerable “treasures lost to science and the world.”⁴¹

In November 1839, Vattemare traveled to America to gain support for his exchange program there. After being recommended by the Senate Library Committee, Congress passed a resolution in July 1840 to authorize the exchange of duplicates from the Library of Congress, and ordered fifty additional copies of public documents to be printed for that purpose.⁴² In 1842, Washington, Boston, New York, and Baltimore sent materials to France and, by 1848, Vattemare had reciprocated with forty-eight cases of materials to America. In 1849, when Joseph Henry moved into the new Smithsonian building and laid out his plans, he built upon this established network. Many of the procedures for exchange, including duty-free shipping, already had been negotiated. In 1850, when Henry hired Spencer Baird as his Assistant Secretary, Baird did not have to invent a system of exchange, but simply manage it.⁴³

⁴¹ Boehmer, *History of the Smithsonian Exchanges*, 2.

⁴² *Ibid.*, 3-5.

⁴³ The Smithsonian Board of Directors' first Assistant Secretary, Charles Coffin Jewett, had been appointed in 1848 to assume responsibility for the Smithsonian library. A young librarian from Brown with a passion for cataloging, Jewett soon came into conflict with Henry when he proposed to create a centralized catalog of the nation's books and other publications, and build a truly national library. See Paul H. Oehser, *Sons of Science: The Story of the Smithsonian Institution and its Leaders* (New York, NY: Greenwood Press, 1949, 1968), p 44, and *Ninth Annual Report of the Board of Regents of the Smithsonian Institution up to January 1, 1855, and the Proceedings of the Board up to February 24, 1855* (Washington, DC: Beverly Tucker, Senate Printer, 1855), 25. In a conflict that became increasingly public,

Only twenty-seven at the time, Baird had been teaching natural history at Dickinson College in Pennsylvania and serving as curator of the college museum. An avid collector, Baird arrived in Washington with two boxcars full of skins and taxidermied specimens of European and American mammals, botanical specimens, skeletons, and fossils. Baird also shipped to Washington over four thousand bird skins, reptiles and fish in solution, and bird's nests and eggs.⁴⁴ A good portion of Baird's collection had grown when he established his own network of exchange, entered into through correspondence with specimen collectors in the United States, its territories, and Europe. This experience made Baird uniquely qualified to manage Secretary Henry's new program of exchange. It also prepared him to envision and eventually create a natural history collection of national proportion.⁴⁵

When he first arrived at the Smithsonian, the new Assistant Secretary shipped and received publications and other printed materials as part of the

Henry fired Jewett in 1855, an act that Baird could not have missed as he also attempted to build his own national collection at the museum.

⁴⁴ Aston Nichols and Jennifer Lindbeck, "Spencer Fullerton Baird," <http://users.dickinson.edu/~nicholsa/romnat/baird.htm>. Baird's collection, together with the specimens in storage from the Ex-Ex and specimens shipped to the Smithsonian, particularly after the Civil War, formed the basis for the National Museum and what would eventually become the Smithsonian's National Museum of Natural History.

⁴⁵ Spencer Baird, "Baird's Report to Dickinson College as Curator of Museum, 1846," <http://users.dickinson.edu/~nicholsa/romnat/sfbrep.htm>. The "museum" that Baird curated was apparently his own collection, since he took it with him when he moved to Washington.

existing international network. Baird sent out publications generated by the Smithsonian, as well as those sent to the Institution for distribution by colleges and universities, historical and scientific societies, and geological surveys.⁴⁶ Unlike Secretary Henry, however, Baird also wanted to expand the Smithsonian's natural history collections, which he believed created and disseminated a different kind of object-based knowledge. In addition to pursuing his official duties, Baird worked in his spare time on his own system of specimen exchange. As part of this network, he corresponded with amateurs, collectors, and exploring parties alike, receiving plants, animals, and geological specimens. In exchange, Baird often sent publications or duplicate specimens to his correspondents, with other duplicates received redistributed to collectors or other museums or institutions.

Baird understood that the sheer volume of specimens he collected would one day overwhelm the Smithsonian's ability to store much less display them. As he wrote to his friend George Perkins Marsh in 1853, Baird hoped that "the

⁴⁶ Boehmer, *History of Smithsonian Exchanges*, 12-23. Domestic materials are summarized on page 42. These exchanges proved so successful and relatively inexpensive to pursue that Congress wanted to join in, requesting that governments exchange their official documents. Initially, the governments agreeing included Argentina, Chile, Great Britain, France, Germany, Norway, and Sweden. See *ibid.*, 46. By 1880, this network had grown to thirty-four countries, many with their own participating shipping agent. *Ibid.*, 71-72. "These all embraced the opportunity offered of procuring the national publication of the United States, and proffered complete series of their own in return." *Ibid.*, 47.

accumulation of a mass of matter thus collected (which the Institution cannot or will not 'curate' efficiently) [would] have the effect of forcing our government into establishing a National Museum, of which (let me whisper it) *I* hope to be director. Still even if this argument don't weigh now," he continued, "it will one of these days and I am content to wait."⁴⁷

Specimens of all types poured into the Smithsonian from around the country and from around the world. In 1854, for example, boundary surveys and expeditions throughout the American West shipped thirty-five kegs and barrels, twenty-six cans, 175 jars, ninety-four boxes, and thirty-two packages to the Smithsonian. Curators received the skins of deer, wolves, foxes, hares, lynxes, and several small mammals, a collection of aquatic and other bird skins from California and Louisiana, the remains of a large number of reptiles and fishes, marine invertebrates, fossils, mineral and plants, creating what the *New York Times* would later refer to as an object map of the new nation. Explorers even forwarded "specimens of Indian remains." Whether animal, vegetable, or mineral, these specimens represented in tangible, physical form the expansion and subjugation of the nation, with the Smithsonian providing a centralized home base in Washington where the scientific establishment could view and describe them. Baird and others distributed duplicate specimens to other

⁴⁷ Spencer Baird to Mr. [George P.] Marsh, July 2, 1853, quoted in William Healey Dall, *Spencer Fullerton Baird: A Biography, Including Selections from his Correspondence* (Philadelphia, PA: J.B. Lippincott Company, 1915), 305.

institutions and educational facilities to diffuse the new knowledge of these new lands the specimens represented.

While many shipments from the West, particularly those containing fish and reptiles, soon overwhelmed the Smithsonian's ability to receive, log, categorize and store them, the Institution still lacked a complete collection of North American mammals. Even though he objected to creating a natural history collection as an end in itself, in early 1855 Joseph Henry issued a circular, probably at Baird's request, asking various government agencies and individual collectors to send additional specimens. In response, approximately twenty-five hundred mammal specimens arrived at the Smithsonian, most shipped by surveyors working on the border with Mexico and other government-sponsored work west of the Mississippi. For example, a six-month Army exploration of the Missouri and Yellowstone rivers, during which Ferdinand Hayden served as resident geologist and naturalist, sent back one hundred and fifty mammal specimens, as well as six hundred birds, "skulls in large number," and several skeletons of the large mammals of the plains. As Spencer Baird reported in 1856, "[a]ll the large mammals of the plains, buffalo, elk, deer, bears, wolves, antelope, bighorn, &c., are represented in full by a series of skins, skeletons, and skulls, in perfect condition, fitted at any time to be mounted and placed on exhibition."⁴⁸ In 1857 the Institution even received one of its more interesting if not gruesome

⁴⁸ *Report of the Board of Regents of the Smithsonian Institution for the Year Ending 1856* (Washington, DC: Cornelius Wendell, Printer, 1857), 50.

natural history specimens representing the exploration of the West: a cast of Daniel Boone's skull, taken when his body had been re-interred.⁴⁹

Even though Baird's desire to increase the natural history collection countered Secretary Henry's directives, this growing number of specimens could still be viewed as contributing to the Smithsonian's research function. Scientists often visited the Institution or, in many instances, borrowed specimens for evaluation in their home studies or college teaching or research laboratories. Even Secretary Henry understood the value of these specimens for study and tried to define a balance between collections for the sake of display and those contributing to a better understanding of the natural world, particularly in the American West. While he never intended the Smithsonian to collect "a general museum of all objects of natural history," Henry did believe it important to develop a collection for research.

In January 1857, Henry set forth his vision of the Institution's natural history collection and noted the difference between research and specimen display. Those specimens kept by the Smithsonian, he wrote, should highlight "the peculiarities of the productions of the American continent, with a view to ascertain what changes animals and plants have undergone, how they differ in their present as well as their past forms from those on other portions of the globe, and also the distribution of the same species, and the relations which they bear to

⁴⁹ *Report of the Board of Regents of the Smithsonian Institution for the Year Ending 1857* (Washington, DC: William A. Harris, Printer, 1858), 50.

the soil and climate where they are found.”⁵⁰ Even a physicist like Secretary Henry understood the value of organizing and displaying an extensive collection for better understanding the nature of life. He expected the Smithsonian’s national collection to shed light on the vast natural history resources of the American continent and beyond, helping scientists better understand the nation’s biogeography. It might even help scientists understand the origins of life itself.

Almost three years before Charles Darwin published *On the Origin of the Species*, Henry wrote that the nature of life “is at present unknown to us, except in its relation to certain organic forms and changes in them.... Whilst every part of the earth is peopled with animals constructed in accordance with [four basic] types, the fauna of no two parts of the world are precisely alike. Difference in conditions of climate or soil, or difference in original character, [has] produced a diversity, the nature of which is an important object of the naturalist to investigate.”⁵¹ Natural history collections, systematically identified and displayed, provided the key to knowledge creation and understanding the diversity of life. Through study, classification, description, and publication, the Smithsonian collections enabled Americans to create their own homegrown knowledge and contribute to the international world of science.

⁵⁰ *Annual Report of Smithsonian Institution for 1856*, 41. Since Smithsonian Secretaries based their annual reports on departmental reports, Spencer Baird likely wrote these words on behalf of Henry.

⁵¹ *Ibid.*

Once a large hall within the newly completed Smithsonian building became available to house the research collection, workmen built and installed cabinetry to store and display it. However, the constant receipt of specimens from government expeditions, boundary surveys, the military, and private individuals threatened to overwhelm even this available space. Working with only one assistant (and later a Wooten desk) and without adequate storage, Baird tried to manage the growing collection by following the blueprint of the international exchange program, distributing duplicate cultural and natural history specimens to other institutions as time and funding allowed.⁵²

While referred to as a system of exchange, participating in the network did not necessarily result in one publication or report (or specimen) exchanged for another of equal value. Libraries, museums, and other warehousing organizations based their participation on a shared assumption that duplicates took up much-needed space and would be better stored elsewhere while stocking their own collections with new materials. Such a program also

⁵² In his history of “genetic rationality,” Philip Thurtle talks about Baird’s Wooten desk, a self-contained office or “secretary,” as a way of organizing the vast network of collectors and collections that Baird managed in the 1870s. Thurtle compares Baird’s natural history network with those commercial networks managed by industrialists with their own Wooten desks during that same time period. Thurtle, *The Emergence of Genetic Rationality* (Seattle, WA: University of Washington Press, 2007), 102. In many ways, the desk functioned like the museum itself, a place where Baird could sort, classify, and store into neat compartments the records and other materials he worked with in the museum.

distributed information and increased scientific knowledge, benefiting all participants in the long run. As part of the Institution's mandate to disseminate knowledge, Spencer Baird and others at the Smithsonian distributed excess natural history specimens by sending duplicates to teaching laboratories, colleges, and museums around the country for research and display.



Fig. 1: International Exchange Service unloading publications behind the Smithsonian Castle, n.d. (Smithsonian Institution Archives photo).

By 1856, Henry boasted that “no collection of animals in the United States, nor, indeed, in the world, can even now pretend to rival the richness of the

museum of the Smithsonian Institution in specimens which tend to illustrate the natural history of the continent of North America. Not only have representatives of animals of every part of the country been obtained, to illustrate the entire American fauna, but also specimens of the same animal, from different parts, have been procured, in order to determine the geographical distribution of a species.”⁵³ At the same time, however, Spencer Baird and others at the Smithsonian began to understand the inherent value of these duplicate specimens. Baird in particular began to treat some natural history specimens as a *de facto* currency, valuable in their own right, as a way to enhance the Institution’s collection. For example, in 1854, Baird arranged for the Smithsonian to send 199 specimens of North American birds, representing 145 species, to the Swedish Academy of Sciences in exchange for a “very valuable collection of skins and skeletons of north European mammalia.” That same year, the Smithsonian sent 104 lots of fishes and invertebrates to Louis Agassiz at Harvard, “in return for numerous donations of duplicates from his pre-eminently valuable collection.”⁵⁴ Baird soon realized he could “make additions

⁵³ *Tenth Annual Report of the Board of Regents of the Smithsonian ... up to January 1, 1856* (Washington: A. O. P. Nicholson, Printer, 1856), 31.

⁵⁴ *Eighth Annual Report of the Board of Regents of the Smithsonian Institution ... up to January 1, 1854* (Washington, DC: A.O.P. Nicholson, Public Printer, 1854), 42.

[to the museum collection] by exchange ... almost without the expenditure of a single dollar in the way of purchase.”⁵⁵

By the end of 1860, the Smithsonian had increased the size of its natural history collection to the point that Henry once again felt the need to re-clarify his directive that the Institution did not intend to “hoard up specimens for the exclusive study of those immediately connected with the establishment.” As importantly, he did not consider “duplicates merely as articles of commercial value...” His use of the word “merely” suggests that by 1860 even Henry understood the inherent “commercial value” of excess specimens, at least when it came to building a research collection. Still, he insisted that duplicate specimens be distributed “as widely as possible to scientific institutions in this country and abroad....”⁵⁶

That following year, as the Civil War potentially threatened the building’s very existence, Henry fought his own in-house battles, fine-tuning the distinction he wanted made when it came to collecting specimens and attempting to keep his Assistant Secretary in check. For Henry, the Smithsonian’s natural history collections represented two distinct types: specimens that already had been described (i.e., existing knowledge) and those that had not. Henry considered this second group of unclassified specimens much more valuable to scientists

⁵⁵ *Annual Report of the Board of Regents for the Year 1858* (Washington, DC: William A. Harris, Printer, 1859), 55.

⁵⁶ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1860* (Washington, DC: George W. Bowman, Printer, 1861), 45.

“interested in extending the several branches of natural history.”⁵⁷ Henry again directed that full sets of labeled (i.e., described) duplicate specimens be distributed to colleges for use in teaching natural history. While he acknowledged the amount of time needed to actually assemble and properly label a full set of shells, minerals, skins, or other specimens for use in the classroom, Henry still insisted they should not be stored or publicly displayed by the Smithsonian.⁵⁸

In essence, Henry argued, while the Smithsonian legitimately functioned as a “Centre of Calculation,” its mission mandated that it not serve as a center of specimen display. He viewed public displays as “incompatible with the means and design of the Institution.” Rather, in the spirit of the diffusion of knowledge, specimens should be distributed widely to other institutions such as that established by Louis Agassiz in Cambridge, Massachusetts, where instruction, systematic study and original research all took place, and where “specimens of all kinds, from every part of the earth are necessary.”⁵⁹ The Smithsonian served as a national research center, not an educational one.

⁵⁷ *Report of the Board of Regents of the Smithsonian Institution for the Year 1861* (Washington, DC: Government Printing Office, 1862), 41.

⁵⁸ *Report of the Board of Regents for the Year 1860*, 44-46; *Report of the Board of Regents for the Year 1861*, 41-42.

⁵⁹ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1862* (Washington, DC: Government Printing Office, 1863), 38. Ironically, this directive would help institutions like Harvard supplant the Smithsonian and

While Spencer Baird acquiesced to “the distribution of duplicates... and their judicious deposit at proper places in different parts of the world,” he countered that “the museum of the Institution” had great value because it housed so many type specimens. Moreover, Baird argued, few collections in the world held more type specimens or specimens directly related to important works of research. In spite of the Secretary’s reservations, Baird defended the idea of continuing to build a museum-quality collection through donation and exchange, arguing that the Smithsonian should accumulate as many fine specimens as possible to enhance its collections.⁶⁰ The Assistant Secretary continued to administer the overarching mandate of his employer by distributing excess specimens, all the while seeking new specimens through advantageous exchanges.⁶¹

The Smithsonian received more than inanimate shells, rocks, eggs, nests, and assorted insect and animal life preserved in alcohol or as skins, heads, and skeletons. Naturalists and others working in the field, along with wild animal

other early museums in knowledge creation, leaving the Smithsonian as the “nation’s attic” by the early 20th century.

⁶⁰ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1860* (Washington, DC: George W. Bowman, Printer, 1861), 76. Baird’s emphasis on type specimens was insightful. A type specimen (or holotype) is the example used when naming a new species or organism, thus, type specimens had a direct tie to the Smithsonian’s research.

⁶¹ Baird generally refused to accommodate requests for *specific* specimens from foreign institutions and collectors, since it was not the Institution’s policy to collect and distribute specimens upon request.

collectors who had grown bored with them, also shipped *living* specimens to the Institution. In the years between 1854 and 1856, for example, collectors sent to the Smithsonian a “huge grizzly bear,” captured as a cub but weighing five or six hundred pounds when it arrived in Washington, two lynx from the Upper Missouri, a jaguar, a “fine specimen” of the American antelope, which soon died in captivity, a Virginia deer, a gopher, a nutria, a raccoon, and several squirrels, wild mice, and moles. The Smithsonian also received a pair of young roseate spoonbills from Florida and snakes, frogs, and salamanders. In addition, several hundred living turtles arrived in Washington before being forwarded to Louis Agassiz in Massachusetts.

The Smithsonian reluctantly accepted this eclectic collection of animals, many of which had never been seen in Washington, D. C. except in the form of preserved skins. While the artists responsible for illustrating the surveying and exploring expeditions treated at least some of them as living models, the Smithsonian lacked the facilities to properly care for larger animals. For this they turned to Dr. C. H. Nichols, superintendent of the United States Insane Asylum. Nichols “cheerfully [received]” any animals the Smithsonian transferred to him since living animals provided a “source of harmless amusement and mental diversion to the patients of an insane asylum.”⁶² Since most of these animals did not live long in captivity, their remains returned to the Smithsonian to be added

⁶² *Tenth Annual Report of the Board of Regents of the Smithsonian Institution up to March 22, 1856* (Washington, DC: A. O. P. Nicholson, Printer, 1856), p 49.

to the research collections. Thus, even a government hospital soon found itself drawn into the Smithsonian's growing network of specimen donation, distribution, display, and exchange.

The arrival of animals, with the Smithsonian left to pay for their transportation, taxed the Institution's budget and Joseph Henry's patience. Still, collectors continued to ship living specimens to the Smithsonian C.O.D. In 1867, for example, T.A. Randall sent a number of living "*menopoma allegheniensis*" (large salamanders) from the Allegheny River. The Smithsonian kept a few of the animals for distribution or exchange at a later date, and forwarded the remainder to zoological gardens in Europe, initiating a precedent-setting system of living donations and exchanges between the Smithsonian and international zoos.⁶³

As the Smithsonian staff struggled to accommodate the arrival of additional specimens – ranging from the skeleton of a European moose to a live golden eagle from Illinois – Secretary Henry turned his attention to improving

⁶³ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1867* (Washington, DC: Government Printing Office, 1868), 51. That same year, the Smithsonian requested a shipment of European house sparrows from the Zoological Gardens in Hamburg. Hoping to counter the rising number of insects in and around the grounds of the Smithsonian, Secretary Henry planned to release the birds in the area surrounding the Capitol. The German zoo obligingly trapped and shipped to Washington two cages holding 300 birds, but only ten arrived alive. *Ibid.*, 75. Of those ten, apparently only five lived long enough to be released, taking up residence in the area near the Smithsonian building.

the Smithsonian grounds. The initial vision for the Smithsonian had included a pleasuring ground for the public's enjoyment. Indeed, Andrew Downing, the architect of the Mall, described the area stretching from the Capitol to the Potomac as an extensive park. And yet, Secretary Henry complained, the Smithsonian Park neither looked nor smelled like a public pleasuring ground. Visitors had "their sense of propriety... shocked and their olfactory nerves outraged, in approaching the building from the city, by having to cross that most disgusting object known as the 'canal,' though for years it has done no service of any value in that capacity." According to Henry, the "canal" was a "Stygian pool, from which are constantly ascending in bubbles, as from a [cauldron], mephitic vapors."⁶⁴ While Henry did not view the Smithsonian building as a public facility, such atmospherics detracted from the serious and refined nature of the research conducted there, a stench that potentially could discourage leading scientists or other elites from even visiting the building or enjoying its expansive grounds.⁶⁵

⁶⁴ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1868* (Washington, DC: Government Printing Office, 1869), 51-52.

⁶⁵ Henry's comments must have had some influence because, in the early 1870s, the canal was filled in and, with no apparent sense of irony, renamed Constitution Avenue. See Douglas E. Evelyn and Paul Dickson, *On this Spot: Pinpointing the Past in Washington, D. C.* (Herndon, VA: Capital Books, Inc., 2008), 102-103.



Fig. 2: Joseph Henry insisted that what was then known as the Smithsonian Park (now the National Mall) should be a public pleasuring ground as the architect had envisioned it. Henry died in 1878 before he could see his vision in full bloom in 1900 (Smithsonian Archives photograph).

The building itself also demanded Henry's attention. In 1865, fire destroyed much of the Smithsonian's upper stories and towers. In 1870, as specimens continued to arrive from the growing number of Western expeditions sponsored after the Civil War, Congress agreed to appropriate an additional \$10,000 in support of a National Museum and \$10,000 more for renovations of the building. This appropriation enabled Baird and others to reimagine the

building in ways better suited not only for research but also for public displays. This new National Museum, housed in renovated spaces within the Smithsonian “Castle,” consisted of a public viewing area where the animal, vegetable and mineral kingdoms, artistically arranged, would exhibit the principles of classification and the “habits and places [of specimens] in the economy of nature.” The new plan also called for the educational display of fossil animals, and the use of models, drawings, and “legible” descriptions for all specimens designed to illustrate key principles. Congressional support, coupled with a thoughtful approach to the exhibits, would “render the national museum much more creditable to the Government and the Institution than it has ever yet been,” Henry reported.⁶⁶

⁶⁶ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1870* (Washington, DC: Government Printing Office, 1871), 34-36. According to Smithsonian historian Pamela M. Henson, Henry insisted that if there were to be a national museum, it even should be managed by a different agency. “As new collections filled the nooks and crannies of the Castle, Henry had finally agreed in 1858 to accept a Congressional appropriation to care for them, with the fiction that the appropriation for the United States National Museum was to the Department of the Interior, not the Smithsonian.” In such a way, the National Museum became the fiscal responsibility of the Department of Interior, as opposed to the Smithsonian endowment. Henson, “Baird as Assistant Secretary and the Growth of a Dream,” Smithsonian Institution, <http://siarchives.si.edu/history/exhibits/baird/bairdc.htm>. In 1888, the Board of Regents requested formal transfer of the appropriation, since the National Museum had grown significantly and the Smithsonian already served as “the legal custodian of the Museum and its collections.”

Spencer Baird now had access to approximately three times more space for specimen displays. In 1871, he set to work “unpacking, labeling, cleaning, assorting, poisoning, etc.,” specimens that had, of necessity, been stored in the building’s basement. In just one year, Baird and his assistants identified more than ten thousand duplicate specimens, including 156 skeletons and skulls, 477 birds, 304 eggs of birds, and three thousand shells. They donated all of them to educational and scientific institutions or, as importantly, used them for exchanges with “principal museums at home and abroad.”⁶⁷ Congressional appropriations also allowed the Smithsonian to hire a permanent taxidermist, Joseph Palmer from England, who set to work improving the collection of mounted specimens and creating a series of casts taken from fresh fish that he painted to represent “the colored appearance of nature.”⁶⁸ These fish would soon become one of the highlights of the next big public display the Smithsonian prepared.

By the early 1870s, the Smithsonian had established itself as the national model for the promotion and diffusion of science, as well as the public display of the nation’s natural history. From its beautiful grounds and public lectures to its extensive network of exchange and artistically displayed artifacts and specimens

⁶⁷ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1871* (Washington, DC: Government Printing Office, 1873), 30-31.

⁶⁸ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1873* (Washington, DC: Government Printing Office, 1874) 36. In 1874, Palmer’s son, William, also joined the staff of the Smithsonian as a taxidermist.

(including living animals), the Smithsonian itself became the type specimen of what an institution dedicated to knowledge creation, preservation, education and public display should be.

3. YELLOWSTONE NATIONAL PARK:

THE SURVIVAL OF THE SPECIMENS

[I]f our people are ever to preserve living specimens of our most beautiful, interesting, and valuable animals, here, in their native forests and glens of this lofty cliff and snow encircled 'wonderland,' is the place and now is the time to do it.⁶⁹

-- Philetus W. Norris, 1877

Into the Smithsonian Institution's world of manicured grounds, exchanges, and animal displays, Ferdinand Hayden sent his first forty-five boxes of specimens in 1871 from the Yellowstone region. Congressional instructions establishing the Smithsonian had mandated these shipments, but the Department of Interior cemented the relationship through very specific instructions. Columbus Delano, Secretary of the Interior under President Ulysses S. Grant, instructed Hayden to "secure as much information as possible, both scientific and practical, ...[about] the geological, mineralogical, zoological, botanical, and agricultural resources of the country...." These collections, the Secretary of the Interior informed Hayden, should be as complete as possible, and forwarded to the Smithsonian.⁷⁰ Spencer Baird also corresponded with Hayden about his trip, giving him even more specific instructions, as he would any Smithsonian

⁶⁹ *Annual Report of the Secretary of the Interior on the Operations of the Department of the Interior for the Fiscal Year Ended June 30, 1877* (Washington, DC: Government Printing Office, 1877), 843.

⁷⁰ [Columbus Delano], 1871, in Aubrey L. Haines, *Yellowstone National Park: Its Exploration and Establishment* (Washington, DC: U. S. Department of the Interior, National Park Service, 1974), 99-100.

collector in the field. Baird asked the geologist to send to Washington “a large collection of all kinds of skulls and skeletons: many of each, at least skulls; antelope and mountain sheep especially, 20 of each! Also any perfect bison head.”⁷¹ Thus, from its earliest government-sponsored exploration, the Smithsonian drew the region that would become known as Yellowstone National Park into its network of specimen collection and exchange.

The relationship between the two scientists did not begin with Hayden’s expedition into the Yellowstone region, however. Baird and Hayden had corresponded many years earlier when Hayden hoped to become a collector for the Smithsonian. Like many young men and would-be naturalists of his generation, Hayden understood the central role the Smithsonian played in developing not only collections and new knowledge, but in advancing a scientist’s career. In 1853, for example, when Hayden was just twenty-four, he contacted the Smithsonian, writing to Baird that he was a young man without means, but willing to “endure cheerfully any amount of toil, hardship, and self denial provided I could gratify my strong desire to labor in the field as a naturalist.”⁷² He wrote again the following year to assure Baird that any “encouragement or assistance [Baird] may feel disposed to give me will have my

⁷¹ Spencer Baird to Ferdinand Hayden, June 2, 1871, quoted in Marlene Deahl Merrill, ed., *Yellowstone and the Great West: Journals, Letters, and Images from the 1871 Hayden Expedition* (Lincoln, NE: University of Nebraska Press, 1999), 21.

⁷² Ferdinand Hayden to Spencer Baird, February 16, 1853, Smithsonian Institution Archives, Record Unit 7002, Box 24, file 19 (hereafter RU 7002, Box 24, f 19).

most sincere gratitude and at some future day I am confident I will give you no occasion to regret it.”⁷³ While Baird encouraged all young naturalists as part of his network of collectors, how much support he actually provided to Hayden is unclear. Still, Hayden appears to have remembered his earlier promise, or at least understood the importance of keeping within the scientific orbit of the Smithsonian, which, by the early 1870s, had established itself as the center of all government collections.

Even though the Department of the Interior sent Hayden into the Yellowstone region, Hayden regularly reported back to Baird about what he had collected, promising to include “a full survey of the Flora and Fauna of our route” in his follow-up report. Before the party even reached the Yellowstone country, for example, Hayden wrote to Baird from Fort Hall that they had “made fine collections in all departments...”⁷⁴ These early collections included a donated mastodon tusk, presented to Hayden by Judge Lovell in Virginia City and, later, boxes of botanical and geological specimens collected in the area around Yellowstone Lake.⁷⁵ By the end of their 1871 expedition, Hayden and his fellow travelers shipped to the Smithsonian (or directly to experts who agreed to identify them on behalf of the Institution) 627 specimens of rocks, over one thousand specimens of minerals (e.g., from hot springs), fossil plants and

⁷³ Ferdinand Hayden to Spencer Baird, January 8, 1854, RU 7002, Box 24, f 19.

⁷⁴ Ferdinand Hayden to Spencer Baird, June 22, 1871, quoted in Merrill, *Yellowstone and the Great West*, 84.

⁷⁵ *Ibid.*, 102.

vertebrates, fish and samples of worms that infested them, insects, butterflies and reptiles.

One set of specimens eluded them, however. Throughout their explorations of the Yellowstone country, the scientists could not secure many of the large animals thought to live in the region. Even though the men reported seeing animal tracks, the party never encountered the herds of large mammals they expected to see. Even the hunters traveling with the group searching for both food and specimens usually returned to camp empty handed. Running low on food, they often resorted to tea and biscuits with an occasional small bird or two boiled in a pot.⁷⁶

That did not stop Hayden from describing, in a kind of scientific boosterism, the Yellowstone region's beautiful lakes, meadows, and the "best of grass, wood, water, and game." Coupled with descriptions of geological oddities like Old Faithful and the Cap of Liberty, and illustrated by William Henry Jackson's stunning photographs, these stories convinced Congress to protect the region while it still had the option to act. If they failed to set the area aside for the future, legislators predicted, individuals could "take possession of these remarkable curiosities, to make merchandise of these beautiful specimens, to

⁷⁶ "Reports from Congress of the United States," *Nature* 5 (March 21, 1872), 403.

fence in these rare wonders, so as to charge visitors a fee, as is now done at Niagara Falls, for the sight of that which ought to be as free as the air or water."⁷⁷

SIDEBAR:

From F. V. Hayden, Geological and Geographical Survey of the Territories (U. S.), Preliminary Report of the United States Geological Survey of Montana and Portions of Adjacent Territories, being a Fifth Annual Report of Progress, Washington, GPO, 1872, p, 164-165

AN ACT to set apart a certain tract of land lying near the head-waters of the Yellowstone River as a public park.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the tract of land in the Territories of Montana and Wyoming, lying near the head-waters of the Yellowstone River, and described as follows, to wit, commencing at the junction of Gardiner's River with the Yellowstone River, and running east to the meridian passing ten miles to the eastward of the most eastern point of Yellowstone Lake; thence south along said meridian to the parallel of latitude passing ten miles south of the most southern point of Yellowstone Lake; thence west along said parallel to the meridian passing fifteen miles west of the most western point of Madison Lake; thence north along said meridian to the latitude of the junction of the Yellowstone and Gardiner's Rivers; thence east to the place of beginning, is hereby reserved and withdrawn from settlement, occupancy, or sale under the laws of the United States, and dedicated and set apart as a public park or pleasuring-

⁷⁷ "House Committee on the Public Lands," in F.V. Hayden, *Preliminary Report of the United States Geological Survey of Montana and Portions of Adjacent Territories; being a Fifth Annual Report of Progress* (Washington, DC: Government Printing Office, 1872), 163.

ground for the benefit and enjoyment of the people; and all persons who shall locate, or settle upon or occupy the same, or any part thereof, except as hereinafter provided, shall be considered trespassers and removed therefrom.

SEC. 2. That said public park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish such rules and regulations as he may deem necessary or proper for the care and management of the same. Such regulations shall provide for the preservation, from injury or spoliation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition. The Secretary may, in his discretion, grant leases for building purposes for terms not exceeding ten years, of small parcels of ground, at such places in said park as shall require the erection of buildings for the accommodation of visitors; all of the proceeds of said leases, and all other revenues that may be derived from any source connected with said park, to be expended under his direction in the management of the same, and the construction of roads and bridle-paths therein. He shall provide against the wanton destruction of the fish and game found within said park, and against their capture or destruction for the purposes of merchandise or profit. He shall also cause all persons trespassing upon the same after the passage of this act to be removed therefrom, and generally shall be authorized to take all such measures as shall be necessary or proper to fully carry out the objects and purposes of this act. Approved March 1, 1872.

By the time Hayden's report to the US Geological Survey reached the printers in 1872, and the public began to learn of these natural wonders,

Congress already had passed legislation to establish Yellowstone National Park. Indeed, Hayden's report contains its text (see sidebar). So even though the 1872 legislation responded to national concerns about preserving natural wonders in the American West, including the region's wildlife, the legislation did not result from an informed public demanding the region's protection. That said, many Americans did not want another monument of natural beauty commercialized like Niagara Falls had been. Still others worried about threats of a different kind: the loss of bison and the great herds of other animals that helped define the popular vision of the American West.

As early as 1832, artist George Catlin believed the destruction of the bison imminent unless the government set aside a "nation's Park" for the animals' protection. These fears only increased over the next forty years as migrants into the American West cut down trees, plowed up the soil, extracted precious metals from the sides and hearts of mountains, and killed most of the wildlife in their way for food, sport, and the animals' hides, horns, and teeth. Many of these new westerners also shot any animal, large or small, threatening crops or domesticated animals. Regardless of their individual motivations, legislators acknowledged a national concern for wildlife protection in the language they used to set aside Yellowstone National Park.⁷⁸

⁷⁸ Yellowstone historian Aubrey Haines and others have documented the important role played by Jay Cooke of the Northern Pacific Railroad in developing and then promoting Yellowstone National Park as a tourist

Many confuse the 1916 Organic Act establishing the National Park Service with the original legislation establishing Yellowstone. The 1916 legislation called upon the new Park Service to “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The 1872 Act establishing Yellowstone National Park expressed different concerns. While it appears at first glance to cover vast legal territory, the content is relatively straightforward, centering on three mandates:

- 1) Set aside a large tract of government land for a national park or pleasuring-ground;
- 2) protect the timber, mineral deposits, natural curiosities, and other wonders, and retain them in their natural condition; and
- 3) prevent the wanton destruction and commodification of the park’s fish and game.

destination. Cooke, for example, supported Nathaniel P. Langford’s 1871 speaking tour about the Washburn Expedition into the Yellowstone region and its geological wonders, and sponsored artist Thomas Moran’s participation in the 1871 Hayden expedition into the region to document what Langford had seen. Cooke also actively promoted the idea of a national park similar to Yosemite, which he considered a “far inferior wonder” to that of Yellowstone. In November 1871, Cooke’s office even asked Hayden to recommend Yellowstone as a public park in his official report. See Haines, *Yellowstone National Park: Its Exploration and Establishment*, 109.

Just as the legislation defining the Smithsonian Institution eventually led to the development of the type specimen of *Museum Americanus*, Yellowstone National Park would become the holotype of *National park Americanus*.⁷⁹

While Congress clearly intended to protect the geysers and other natural “curiosities” in Yellowstone from exploitation, from the beginning they expressed a concern for the region’s wildlife. As George Anderson pointed out, however, the 1872 law establishing the Park protected the geological features of the Park (i.e., the “timber, mineral deposits, natural curiosities and wonders,”), but *regulation* protected the Park “against the wanton destruction of fish and game” and against their “capture for the purpose of merchandise or profit.”⁸⁰ Anderson, Yellowstone’s Acting Superintendent from 1891 to 1897, complained that since the early regulations allowed killing wildlife for both recreation and food, commodity hunters could always use these lax rules as their legal cover.

In 1882, George Bird Grinnell, a scientist and writer who promoted big game conservation and hunting from his position as editor of the magazine

⁷⁹ Yellowstone was not, however, the first large tract of land set aside by Congress on behalf of the public. In 1864, President Lincoln signed the Yosemite Grant, releasing land to the state of California to protect the Yosemite Park area on behalf of the American people. Even earlier, in 1832, President Jackson signed legislation to set aside land to protect the hot springs of Arkansas, a park that early National Park Service annual reports routinely list as the first national park.

⁸⁰ George Anderson, “Protection of the Yellowstone National Park,” in Theodore Roosevelt and George Bird Grinnell, eds., *Hunting in Many Lands: The Book of the Boone and Crockett Club* (New York, NY: Forest and Stream Publishing Company, 1895), 378-382. Emphasis in original.

Forest and Stream, worried that the time soon would come “when the large game of the West will no longer exist in any considerable numbers, when so far as the hunter is concerned it will be practically exterminated.” He blamed the demise of these animals on the rapid movement of railroads and people into the West, but viewed this “settling up of the country” as progress in the interest of civilization. Iconic animals like “the buffalo, the elk, deer and moose will disappear” in the wake of these inevitable changes, he wrote, but “sentiment cannot be permitted to stand in the way of such improvement.” While Grinnell believed that the large mammal herds of the American West would disappear eventually, like others he looked to Yellowstone to preserve living specimens of these once great herds. Yellowstone served as “a place where for all time the different animals might remain undisturbed by the hunter, might propagate their species, and might show to the grandchildren of the present generation the game that their forefathers used to hunt.”⁸¹ Congress established Yellowstone to serve as wildlife’s last refuge, according to Grinnell. But even though Congress clearly intended to protect the animals of the region, it would take additional legislation to prevent visitors and others from killing Park wildlife for food, sport, or profit.

Once President Ulysses S. Grant signed the Yellowstone National Park Act on March 1, 1872, Nathaniel P. Langford received a letter from the Department of the Interior appointing him superintendent. The appointment came without pay,

⁸¹ [George Bird Grinnell], “Their Last Refuge,” *Forest and Stream* 19, no. 20 (December 14, 1882), 382-383.

but Langford, with links to Jay Cooke, the Northern Pacific Railroad, and other business and development interests in Montana, did not seem deterred. That summer, he joined Ferdinand Hayden and a follow-up party of surveyors working in the new Park. Langford's report to the Secretary of the Interior, his only report during his five-year tenure as superintendent, outlined a series of recommendations, including the need for infrastructure improvements such as roads to facilitate travel and regulations to prohibit the killing of wild game except for personal use (i.e., for food).

Langford described the fledgling Park as a national research and educational destination. He envisioned a time when tourists and scientists alike would visit the nation's pleasuring ground for the purposes of research and exploration. As he wrote, the "whole country is full of interest, and presents to tourists a rare opportunity for exploration, and to scientific men a wonderful field of investigation."⁸² In essence, Yellowstone could function much like the Smithsonian, as a center for research, knowledge creation, and public display of the natural history of the American West. Or, at minimum, the Park would provide a source of the specimens that would facilitate such study.⁸³

⁸² Nathaniel P. Langford, *A Report of the Superintendent of Yellowstone National Park for the Year 1872* (Washington DC: Government Printing Office, 1873), 8.

⁸³ In 1874, a landscape architect suggested an elaborate vision for the national park to include a National Observatory, Forest Institute, a National Swimming School, Race Grounds, National Rowing Clubs, Botanical Gardens, Zoological Gardens, Geological Museums, Health 'Cliniques,' the Graffenberger Watercure Institution, and 'thousands of grounds for erecting private villas.'" While the

Secretary of the Interior Columbus Delano agreed, acknowledging the importance of Yellowstone and its resources. Delano also urged that Yellowstone safeguard “specimens of the notable wild animals common to the country, but fast disappearing from the forests, mountains, and plains of the West.” As he explained, “American bison and buffalo, the elk, moose, and deer, and mountain sheep would thrive in the Yellowstone Park, and I am informed that certain portions of [the Park] could, with but little trouble, be so protected as to secure their immunity from destruction. The suggestion is a good one, and early direction should be given to carry it into practical effect.”⁸⁴ This argument resonated with decision makers in Washington and the general public in the East where many of the large ungulates had been eliminated or, like the white-tailed deer, appeared to face imminent extinction through over hunting. Yellowstone provided an opportunity to save many of these same animals in a place where they were far “more concentrated and more numerous.”⁸⁵

National Park might still be a blank slate, both James Garfield, in Congress at the time, and Ferdinand Hayden viewed Knut Forsberg’s ideas as beyond what they envisioned for the National Park, at least for the present time. Hampton, *How the U. S. Cavalry Saved Our National Parks*, 35-36.

⁸⁴ *Annual Report of the Secretary of the Interior for 1873* (Washington, DC: Government Printing Office, 1873) 56. Scientists and others routinely referred to bison (*Bison bison*) and American buffalo as the same species or, in cases like this, as unique species. Bison is the correct term for the animals living in North America and will be used here except when quoting others. “Buffalo” technically refers to an animal that lives in Asia and Africa.

⁸⁵ Wright, *Wildlife Research and Management in the National Parks*, 4.

Without funding, however, Langford and Delano's ideas for physical improvements and for the conservation of Yellowstone wildlife were just that – ideas. It would take five years before Congress appropriated the funds needed to begin to transform Langford's ideas into a national destination that could provide a source of specimens for scientists and educators in the East, animal displays for the nation, and passengers for the Northern Pacific Railroad. More than a decade would pass before administrators of the Park had the resources needed to actively protect Yellowstone wildlife.

In 1877, newly elected President Rutherford B. Hayes appointed Carl Schurz as his Secretary of the Interior. Ironically, Schurz took Nathaniel Langford's idea of scientific men working in Yellowstone to heart and dismissed Langford and appointed Philetus W. Norris, "'a gentleman," Schurz claimed, "who visits the park in the interests of science.'"⁸⁶ Many have referred to the second superintendent as the Park's first scientist, since Norris, who administered Yellowstone for five years, built on Nathaniel Langford's call for scientific study of the Park. Norris expressed a particular interest in investigating the origins and effects of Yellowstone geysers, and regularly collected boxes of geological and other specimens to send to the Smithsonian.

⁸⁶ Quoted in Hampton, *How the U. S. Cavalry Saved Our National Parks*, 42. Norris, like Langford, also explored the region in search of land and other business development opportunities.

He also submitted reports on cultural artifacts, burial mounds, and other signs of the early inhabitants of Yellowstone and surrounding areas.

But Norris, a former fur trapper and Union Army officer, also had a history of speculation and land development and made a direct connection between a commitment to furthering science and the promotion of tourism. For example, Yellowstone specimens had been sent to public and private museums, the display of which Norris maintained added “to a correct knowledge of, and desire to visit, the matchless ‘wonder-land.’” At the same time, however, Norris expressed disdain for those who visited the Park and took home their own specimens (i.e., souvenirs) by chipping off samples of rocks, hot springs deposits, and petrified trees, referring to the “millions of specimens ... obtained by the grossest vandalism.”⁸⁷

⁸⁷ Philetus Norris, “Report on the Yellowstone National Park [for 1877],” in *Annual Report of the Secretary of the Interior for the Fiscal Year ended June 30, 1877* (Washington, DC: Government Printing Office, 1877), 842. This problem continued, with Acting Superintendent George Anderson complaining that “[t]ourists continue to gather specimens when not watched and write their very commonplace names over nature’s most exquisite beauties.” *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1892* (Washington, DC: Government Printing Office, 1892), 7. Anderson later erased all the names “written or scratched on the beautiful formations” and arrested those whose names appeared. He made those he identified go back to erase their names to set an “excellent” example. *Report of the Superintendent of Yellowstone National Park to the Secretary of the Interior, 1893* (Washington, DC: Government Printing Office, 1893), 10.

To emphasize the importance of protecting the resources of the Park and its contributions to science, Norris added a special section in his annual report, titled "Scientific Specimens," in which he boasted of his exploits climbing cliffs and canyons in the name of science to secure "rare and interesting specimens from geysers, obsidian cliffs, fossil forests, and Sheep Eater haunts." Specimens he collected included several miniature cones from the terraces in Mammoth Hot Springs similar to those sent to the Smithsonian in 1872 by Ferdinand Hayden.⁸⁸ In 1879, the boat carrying Norris's large collection of Yellowstone specimens to Washington capsized, resulting in what he considered "a total loss to science and the world."⁸⁹

Undaunted, Norris set out to assemble another collection, writing that the specimens would be of "interest to the thinking portion of our people" and of value to scientists everywhere. Again, he emphasized the difficulty and danger associated with collecting, "especially while exploring on rocky crags, in scorching sulphur basins, or on snowy mountain sides."⁹⁰ But he endured the risks in the name of science.⁹¹ Norris also collected a pair of antlers that he

⁸⁸ *Annual Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior for the Year 1880* (Washington, DC: Government Printing Office, 1881), p 20.

⁸⁹ P. W. Norris, *Report upon the Yellowstone National Park to the Secretary of the Interior for the Year 1879* (Washington, DC: Government Printing Office, 1880), 7.

⁹⁰ *Annual Report of the Superintendent of Yellowstone for 1880*, 15.

⁹¹ Norris's description of his physical exploits in the name of science builds on a tradition of scientists writing about the conquest (and commercialization) of

believed would prove to be the heaviest ever seen in Washington. These large antlers, “peculiar in form,” led him to ask a series of questions, including whether or not the Park might be home to a cross between the moose and the elk, or if the horns themselves simply represented “a freak of nature?” Another possibility might be that a subspecies of the elk family lived in the Park. He sent these, too, to the Smithsonian for the “careful consideration of naturalists.”⁹²

During his five-year tenure, Norris aggressively pursued scientific specimens and expressed disdain for tourists doing the same. But he saved his greatest outrage for those who slaughtered elk, deer, antelope, moose, and bison in the Park, not for food “but mostly for their pelts and tongues, often run down on snow shoes and tomahawked for wolf or wolverine bait...” Norris condemned this slaughter, but the shooting of wildlife *per se* and even the commodification of animal body parts did not appear to bother him. Rather,

nature as if it reflected on their masculinity. This contrasted with the alleged feminine appreciation of nature expressed by late 19th and early 20th century naturalists or “posy pickers.” During the Hetch Hetchy debate, for example, one newspaper portrayed John Muir in a dress and apron with flowers in his cap, using a broom to sweep away the flood waters of the proposed dam. Michael L. Smith discusses Muir, Clarence King, and others caught up in the “genderization” of the environment are discussed in *Pacific Visions: California Scientists and the Environment, 1850-1915* (New Haven, CT: Yale University Press, 1987).

⁹² *Annual Report of the Superintendent of Yellowstone for 1880*, 39.

Norris considered this wasteful hunting a squandering of “wholesome, nutritious, and delicious food ... wantonly destroyed....”⁹³

What Norris viewed as a blatant waste of public natural resources resulted in one of the earliest proposals for establishing what amounted to a program of captive breeding and animal displays in Yellowstone National Park. Norris suggested the Park enter into a network of international animal exchange, but in this case for profit. Similar to the Smithsonian’s system, Norris proposed a centralized solution for the protection of living specimens in the Park, with the appointment of two or three “herdsmen” to protect, domesticate, and display representative Yellowstone wildlife. The Park would then sell the animals’ young as specimens to zoologists throughout the world, with excess animals slaughtered for their flesh and furs. Such an approach would, according to Norris, render the animals “permanently attractive and profitable to the park and to the nation.”⁹⁴

Norris returned to his idea the following year, recommending that the government grant leases to private parties to act as “sub-agents of the government to protect and gradually domesticate a portion of these elsewhere nearly extinct animals...” Noting the abundance throughout the Park of suitable building and grazing sites, and a surplus of timber for constructing enclosures,

⁹³ *Annual Report of the Secretary of the Interior on the Operations of the Department for the Fiscal Year Ended June 30, 1877* (Washington, DC: Government Printing Office, 1877), 842.

⁹⁴ *Ibid.*, 843.

Norris advised that bison could be “as easily and reliably reared as domestic cattle,” while also preserving “a few specimens of the elk, antelope, and other animals of great interest to future tourists.”⁹⁵

Norris did not, however, recommend this solely as a profit-making venture, or as a means of feeding an anticipated influx of hungry visitors to the Park. If the Department of Interior failed to authorize such steps as he outlined he, too, feared that “[w]ithin a decade the buffalo, the bison, and, in fact, the most of these larger animals will be extinct or extremely rare elsewhere in the United States.”⁹⁶ Equating wildlife with any other Park resource worthy of protection, Norris argued that “now is the time, to preserve living specimens of the dwindling remnants of our most beautiful, interesting, and valuable native animals and birds.”⁹⁷

That said, Norris clearly recognized the commercial potential of such a venture, and recommended that “responsible parties” be given leases to “protect and gradually domesticate a portion of these elsewhere nearly extinct animals with no other cost to the nation than the exclusive right within certain prescribed districts of raising hardy vegetables and domestic animals for themselves, which

⁹⁵ *Annual Report of the Secretary of the Interior on the Operations of the Department for the Fiscal Year Ending June 30, 1878* (Washington, DC: Government Printing Office, 1878), 986-987.

⁹⁶ *Annual Report of the Secretary of the Interior for 1877*, 843.

⁹⁷ *Annual Report of the Secretary of the Interior for 1878*, 986.

are also necessary for the use of future tourists in the wonder-land. "⁹⁸

Additional "specimens of the elk, antelope, and other animals of great interest to future tourists" could be held in enclosures for public viewing.⁹⁹ Before the Smithsonian had even dreamed of, much less proposed, a national zoo, Norris envisioned one within the confines of Yellowstone National Park: a place where animals of the American West, particularly the large ungulates, could be kept in captivity, bred, and distributed around the country and around the world. Such a system guaranteed that visitors would see living specimens of the same animals that the Smithsonian exhibited in its museum in Washington. Besides, Park visitors would need the food.

Norris returned to the topic yet again in 1879, pointing to strict laws in Montana Territory that prohibited the shooting of bison and the possession of "green hides." Norris made a passionate plea to decision makers in Washington: "If the sagacious leading gentlemen of that thriving Territory deem it necessary and feasible to thus supplement ordinary stringent game laws to preserve a remnant of the buffalo and bison that so recently grazed in countless millions upon the nutritious pasturage of their plains and valleys, should not we make systematic efforts for their protection in the park?" Norris called upon the

⁹⁸ Ibid.

⁹⁹ "Report of the Yellowstone National Park," in *Executive Documents of the House of Representatives for the Third Session of the Forty-Fifth Congress, 1878-'79, Volume IX, Report of the Secretary of the Interior* (Washington, DC: Government Printing Office, 1879), 987.

Secretary of the Interior to protect all and domesticate “a portion” of the Park’s wildlife to “perpetuate specimens of these and our other most beautiful, interesting, and valuable indigenous animals when elsewhere found only in the natural histories of extinct species.”¹⁰⁰

Norris defined the Park as a national resource that could contribute to both the scientific knowledge on display in the nation’s museums and the public’s enjoyment. But if Norris had his way, the Park also would provide refuge for the last of the mega fauna of the American West that many feared faced imminent extinction. Indeed, he returned to this proposed Park function year after year in his reports.¹⁰¹ To make that vision a reality, however, Norris needed a herdsman to shepherd the animals on display.

In 1880, with a new \$15,000 appropriation for the Park, the Secretary of the Interior’s office hired Harry S. Yount. Before his appointment as Yellowstone’s first gamekeeper, Yount had served as a wrangler on the Hayden expedition, collected specimens for both Hayden and Spencer Baird, and often guided hunters throughout the Yellowstone region. Paying him a salary of \$1,000 per

¹⁰⁰ P. W. Norris, *Annual Report, Yellowstone National Park, to the Secretary of the Interior, for the Year 1879* (Washington, DC: Government Printing Office, 1880), 22.

¹⁰¹ Acting Superintendent George Anderson later defined Norris as “a valuable man for the place and the time” but believed Norris’s commitment to the construction of roads and bridle paths, exploration, and research – not the preservation of game, which Norris hunted for food – would be his lasting legacy in the Park. Anderson, *Hunting in Many Lands*, 382.

year (or approximately \$22,000 in 2010 dollars), the Park also provided a cabin on the east fork of the Yellowstone River at Soda Butte, a place where Park bison and elk often wintered. In addition to keeping watch over the herds in the winter, during the rest of the year Yount guided parties of dignitaries into the Park and killed game to feed men working on roads and other improvements. While in Mammoth, he also conducted daily scans with field glasses from the cavalry's gun turret as well as regular patrols to protect wildlife from "wanton slaughter by some of the tourists and a band of Bannock Indians on the North Madison."¹⁰²

¹⁰² "Report of the Gamekeeper," in P. W. Norris, *Fifth Annual Report of the Superintendent of the Yellowstone National Park* (Washington, DC: Government Printing Office, 1881), 63. Bannocks from Fort Hall continued to hunt south of the Park, in the same game-rich area where outfitters like Yount and later Elwood Hofer often guided "gentlemen sportsmen from all parts of the world." For example, in 1888, Hofer reported seeing Bannocks or visiting what he believed to be a recently abandoned Bannock hunting camp. In both instances, Hofer no doubt looked out for the interests of his own sport hunters from New York and Washington when later reporting these encounters. Lieutenant George Goode also located a Bannock hunting party outside the Park boundaries and, assuming they had been hunting in the Park or might hunt there in the future, told them to return to their reservation. No one reported telling Hofer and his parties to leave the area but as Superintendent Moses Harris wrote, "it is believed that a single one of these [Native] hunting parties works more destruction during a summer's hunt than all of the gentlemen sportsmen put together who annually visit this region." That same year Superintendent Harris also reported a fire south of the Park that he believed had been started by the Bannocks, who either were careless with fire, had deliberately set a fire to flush game from forested areas, or both. Bannocks were seen on occasion within the Park boundaries, but they never were caught, like Howell and others, killing

Because Yount had traveled throughout the Yellowstone region and knew the wildlife in it, he understood how difficult the job of protecting its animals would be. Large animals ranged throughout the Park and easily wandered out of it depending on the weather and the time of year. Thus, in his first report as gamekeeper, Yount urged the hiring of a police force to guard the Park's animals, noting that with protection, wildlife would "remain, increase, and much of it soon [would] become domesticated."¹⁰³ In his second and final report of September 1881, in which he also submitted his resignation, Yount again reflected on the impracticality of the task he had been assigned: "I do not think that any one man appointed by the honorable Secretary, and specifically designated as a gamekeeper," he wrote, "is what is needed or can prove effective for certain necessary purposes...." Instead, he argued, "a small and reliable police force of men, employed when needed... is what is really the most practicable way of seeing that the game is protected from wanton slaughter...."¹⁰⁴

animals within the Park, nor were they known to take only commercially viable body parts (e.g., the teeth or heads, etc.). For Harris's report and affidavits, see *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1889* (Washington, DC: Government Printing Office, 1889), 13-19.

¹⁰³ "Report of the Gamekeeper," in *Annual Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior for the Year 1880* (Washington, DC: Government Printing Office, 1881), 50.

¹⁰⁴ "Report of the Gamekeeper," in *Fifth Annual Report of the Superintendent of the Yellowstone*, 63. Yount worked as gamekeeper in the Park for two seasons, and yet historians and others writing about Yellowstone often identify him as the

Yount's recommendations suggested a need for a greater commitment in the Park from the federal government, something that conflicted with Norris's view of Yellowstone's relationship with Washington. While Norris pushed for increased funding to protect Yellowstone and to improve access for visitors, many of Norris's ideas relied on leasing rights in the Park to "civilians," such as private herdsmen and builders of hotels, all of whom would benefit financially. As Norris argued in 1881, he did not believe it "the purpose of Congress in dedicating this heritage of wonders ... to ... legalize a perpetual drain upon their treasury."¹⁰⁵ While Norris has been lauded as the Park's first scientist, he should be better known as the Park's first proponent of privatization and exploitation of those resources. Indeed, a visitor to the Park that following summer expressed concern that Norris's management ideas set dangerous precedents, particularly when it came to wildlife.

In the summer of 1882, General Philip H. Sheridan led a party of scientists north from Jackson Hole through Yellowstone. Sheridan, best known for his scorched-earth policies during the Civil War and his campaigns against Native

Park's "first ranger." Indeed, he has received such an iconic status in that role that the National Park Foundation's annual recognition for excellence in "rangering" is called the Harry Yount Award, and features a full bust of Yount in his cowboy-like regalia. While Yount recognized the need for the establishment of a Park ranger police force, perhaps the Foundation's award, consciously or not, recognizes Yount's work protecting Yellowstone wildlife.

¹⁰⁵ Norris, *Fifth Annual Report of the Superintendent of the Yellowstone National Park*, 72.

people, often invited scientists to join him or parties under his command in the West.¹⁰⁶ When in the Park in 1882, Sheridan learned of a land deal arranged with the Yellowstone Park Improvement Company and the Department of the Interior. Sheridan returned to Washington and angrily reported that the Park had been “placed in the hands of private parties for money making purposes.” Unlike Norris, who saw the resources of the Park as ripe for private development, Sheridan argued that the federal government should make Yellowstone improvements, not private parties. Taking the 1872 establishing legislation at its word, Sheridan argued that Congress had established Yellowstone for the benefit of the nation not for the enrichment of a few.

Sheridan voiced particular concern about the Park’s wildlife, which he reported being “killed off rapidly, especially in the winter.” Unlike Norris, however, Sheridan did not suggest a captive-breeding or domestication program. He argued instead for extending the Park’s boundaries, increasing the area of the Park by 3,344 square miles. He believed Yellowstone should function as a “preserve for the large game of the West, now so rapidly decreasing.” In addition, he personally offered to take responsibility for protecting these

¹⁰⁶ For example, when he sent George A. Custer into the Black Hills in 1874, Sheridan also invited Yale paleontologist O. C. Marsh on the expedition. Marsh sent his student, George Bird Grinnell, with Custer instead.

animals, keeping out skin hunters and others by bringing troops to Yellowstone to “give a place of refuge and safety for our noble game.”¹⁰⁷

Sheridan’s recommendations received widespread press coverage in publications as diverse as *The Nation*, *Forest and Stream*, and *The American Naturalist*. As a result, in 1883 Congress outlawed hunting of any kind in the Park and, in 1886, Congress assigned the Army to protect Yellowstone, signaling the Park’s critical national role in preserving “these splendid species ... in this their last refuge.”¹⁰⁸ Even though Congress did not expand the size of the Park to accommodate wildlife, this sequence of events still suggests an almost single-minded focus on the protection of wildlife in Yellowstone within its existing borders. Norris and his two assistants worked to protect the spectacular geysers and hot springs from vandalism as well, but men like Sheridan and even Norris seemed to intuit, almost from the beginning, that the Park provided the best hope for preserving the mega fauna that once roamed in great herds in the American West. To do so, however, the animals needed to be confined within the boundaries of Yellowstone National Park.

While they argued over the details, in its first ten years, Park administrators transformed Yellowstone into a centralized location, much like

¹⁰⁷ P. H. Sheridan, *Report of an Exploration of Parts of Wyoming, Idaho, and Montana, September, 1882, made by Lieut. Gen. P. H. Sheridan* (Washington, DC: Government Printing Office, 1882), 17-18. For more on Sheridan’s report and its impact, see Hampton, *How the U. S. Cavalry Saved Our National Parks*, 53-60.

¹⁰⁸ Grinnell, “Their Last Refuge,” 383.

the Smithsonian, for the preservation and display of natural history specimens. By the mid-1880s, several American museums and zoos displayed wildlife from the American West, including the American Museum of Natural History in New York and, in 1889, the last of the California grizzly bears displayed in San Francisco. But to view a complete display of the nation's natural history heritage and cultural representatives of its conquests in the West, Americans had two choices: the Smithsonian in Washington D. C., where they could see life-like specimens behind glass, or Yellowstone National Park, where they could experience the last of the nation's heritage in a "natural museum." Protecting wildlife for public display within that living museum soon became one of Yellowstone's primary functions, if not its main goal.

4. CENTENNIAL EXHIBITION:

OBJECT MAPS OF U. S. COMMERCIAL RESOURCES

A museum is an institution for the preservation of those objects which best illustrate the phenomena of nature and the works of man, and the utilization of these for the increase of knowledge and for the culture and enlightenment of the people.... The educational results of expositions, though undeniably important, are chiefly incidental, and not at all proportionate to the prodigal expenditure of energy and money which are inseparable from every great exposition....¹⁰⁹

-- George Brown Goode, 1897

On March 3, 1872, just two days after Congress established Yellowstone National Park, the U. S. Centennial Commission officially organized and began preparations for the 100th anniversary of American Independence in Philadelphia. What better way to celebrate the nation's founding than to showcase its commercial products and vast natural resources? In 1874, the Board of Regents appointed Assistant Secretary Spencer Baird to oversee the Smithsonian's contributions to this international exhibition of American commerce.

As part of the Smithsonian exhibit, Baird wanted to showcase the Institution's vast collections and its work. He set to work identifying, as dictated by Congress, "such articles and material as will illustrate the functions and administrative faculties of the Government in time of peace and its resource as a

¹⁰⁹ G. Brown Goode, "The Relationships and Responsibilities of Museums," *Science* 2, no. 34 (August 23, 1895), 199.

war-power, and thereby serve to demonstrate the nature of our institutions and their adaptation to the wants of the people.”¹¹⁰ Because the interests of several government agencies overlapped, and they would share the same government-sponsored building on the Exhibition grounds, organizers agreed to delegate responsibility for different displays. For example, the Agriculture Department took the lead on representing plant life, the Smithsonian shared exhibit space with the U. S. Commission of Food-Fishes, and the Interior Department displayed the ethnology and archaeology of the United States, to which the Smithsonian contributed from its extensive collections.¹¹¹ These well-defined responsibilities and displays allowed Baird and his staff the time needed to focus on developing a show-stopping collection of the nation’s natural history.

Baird does not appear to have given much thought to the contradiction between displaying natural history specimens as objects of research and education in Washington while simultaneously presenting them in Philadelphia as objects of cold hard cash. He had, after all, acknowledged the commercial value of specimens when using them as objects of exchange. The inherent conflict probably would not have concerned him in any event.¹¹² Indeed, in the

¹¹⁰ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1875* (Washington, DC: Government Printing Office, 1876), 58.

¹¹¹ *Ibid.*, 60.

¹¹² George Brown Goode would later make a distinction, writing “The museum differs from the exposition or fair both in aims and in method... The exposition or exhibition and fair are primarily for the promotion of industry and commerce; the museum for the advancement of learning.... The educational results of

process of assembling the Philadelphia displays, Baird began to see that natural history specimens, particularly animals, also might have an industrial value, above and beyond their interest to science. Their inherent value as commodities, separate from their value as commodified specimens, might even make American manufacturers and producers more inclined to support his efforts to create a national display of them in Washington.¹¹³

Because the Smithsonian still lacked a complete collection of the large fauna of the American West, and because Baird believed the general public would be most interested in the physical objects displayed at the exposition, both he and Secretary Joseph Henry sent out requests for “first rate specimens, in the best condition, of Rocky Mountain animals.” Henry distributed his institutional request in the form of a circular asking for specimen donations or loans. Baird, on the other hand, contacted individual naturalists with whom he had corresponded as well as those recommended by others, offering to pay

expositions, though undeniable important, are chiefly incidental, and not at all proportionate to the prodigal expenditure of energy and money which are inseparable from every great exposition.... Those expositions which have been most successful from an educational standpoint have been the ones which have most fully availed themselves of museum methods, notably the London Exhibition of 1851 and the Paris Exposition of 1889.” Goode, *Science*, 199. Interestingly, Goode did not list the 1876 Exhibition, in which he had invested a “prodigal expenditure of energy.”

¹¹³ *Annual Report of the Smithsonian Institution, 1875*, 46. If Baird could enlist the support of industrialists in displaying the nation’s animal and other resources after Philadelphia, he believed he might have a powerful ally in convincing Congress to establish a truly national museum.

reasonable rates for any fine specimens collectors could send. For example, Baird contacted naturalist and taxidermist Martha Maxwell in Boulder, Colorado, asking not just for skins but also for an “artistic presentation of some animal group” for which he offered “to pay a fair price ... [and] to introduce it into the exhibition under your name.”¹¹⁴ Baird encouraged Maxwell to exhibit her taxidermy in the Women’s Pavilion, set aside specifically to display women’s work, but also offered to purchase an animal group for the Smithsonian. “I shall be glad to have you enter the lists not only with your own sex who may take a part in the exhibition,” Baird wrote to her in 1875, “but also with the taxidermists of the male sex.” For the Smithsonian, Maxwell suggested an allegory of the nation’s independence featuring a maid, an eagle, a lion, and a waterfall. Perhaps misreading the point of her proposed tableau, Baird most objected to the lion, believing it to represent “an old world form.”¹¹⁵

¹¹⁴ Spencer Baird to M.A. Maxwell, October 19, 1875, RU 53, reel 61, vol. 58. Baird also suggested Maxwell display some of her best examples of taxidermy in the Women’s Pavilion. As discussed later, the Women’s Pavilion apparently did not consider taxidermy as “women’s work,” so Maxwell displayed her collection of Colorado wildlife in one of the state pavilions.

¹¹⁵ Quoted in Maxine Benson, *Martha Maxwell, Rocky Mountain Naturalist* (Lincoln, NE: University of Nebraska Press, 1986), 129-130. Ironically, one of the iconic illustrations from the Centennial features three white women in flowing gowns looking west as they tower over a Native American and a black man. Suggesting that the past lay behind the nation, with the “natives” at its feet, progress stretches out before them in the form of factories, government buildings, and the railroad in the American West.

He also contacted hunters like Cheyenne resident Harry Yount, who had collected specimens for Ferdinand Hayden and later would become Yellowstone National Park's first gamekeeper. Baird provided Yount with what amounted to a shopping list of mammals of the American West, requesting "good specimens of ten male & female Rocky Mountain sheep and goat, a pair of antelope, a white tailed deer, the female black-tailed or mule deer, bears, especially the cinnamon, the large wolf and coyote, the kit fox and common fox, wolverine, badger, beaver, wild cat lynx, panther, fisher, the woodland or mountain buffalo and almost any of the small animals."¹¹⁶

With money in hand to support the Philadelphia exhibition, Baird could pay hunters outright and no longer had to limit his requests to specimen exchanges. As a result, hunters and trappers also contacted the Smithsonian. Because these inquiries came from outside his usual network, Baird agreed to purchase animals but asked that they send only their "best specimens" in the flesh (i.e., gutting them only) by express, no doubt trying to ensure that the animals arrived in a displayable condition.

Baird received shipments of American wildlife from around the country, but a large number of the mega fauna came from the American West where individual hunters and collectors still could find them. Boxes of specimens also arrived from more than a dozen expeditions into the American West, including

¹¹⁶ Spencer Baird to Harry Yount, October 30, 1875, RU 53, reel 61, vol. 58.

those led by Ferdinand Hayden, John Wesley Powell, and Lt. George Wheeler. Even the U. S. Naval Observatory's December 1874 Transit of Venus expedition, with observers in Japan, Russia, and China, sent specimens to the Smithsonian. Adding a total of 12,578 specimens in 1875, the mammal specimens alone must have transformed the Smithsonian work areas and basement into something resembling a large slaughtering ground. By contracting with outside taxidermists, the Smithsonian more than doubled the number of mounted animals in the mammal collection and greatly increased the number of birds.¹¹⁷

Baird saw the Centennial as an opportunity to establish a truly great collection of natural history specimens that would exist beyond the Philadelphia venue. The assembled collection "belongs to the Government and to the National Museum," he wrote, and "it will all be brought back to Washington, where, with proper facilities to be furnished by Congress, it will be displayed to interested visitors, it is hoped for centuries to come." But for that he required a new building:

¹¹⁷ Baird reported receipt of "a series of skins of the fur-seal and sea-lion, presented by the Alaska Commercial Company, twenty specimens of the former and five of the latter constituting the contribution.... From Mr. Charles E. Aiken, of Colorado, several specimens of mountain-buffalo and other animals have been received. Capt. James Gilliss has supplied the black-tailed deer; Colonel Brockett, a fine elk; Mr. P. T. Barnum, specimens of various animals that have died in his menagerie, such as the eland, giraffe, sea-lion, ostrich, &c Rev. R. R. McLeod, of Houlton, Me., has furnished nearly all the mammals of Maine, such as the caribou, the beaver, the porcupine, the fisher, the marten, &c." *Annual Report of the Smithsonian Institution, 1875*, 47-50.

[T]he Smithsonian Building will be entirely inadequate to accommodate this collection in its return from Philadelphia, [Baird warned in 1875] especially even now it is overcrowded and packed from top to bottom with thousands of boxes, for the proper exhibition of the contents of which there is no space or opportunity at the present time. It is to be hoped that action at an early day will be taken by Congress looking toward a proper provision for this emergency, especially when it is realized that the materials are thus available for a National Museum that shall be equal, in its extent and completeness and in its educational advantages, to that of any nation in the world.¹¹⁸

Thus, even before the Centennial had opened its doors, Baird prepared Congress (and Secretary Henry) for what he anticipated would become, at the end of the Centennial year, an emergency.

While lobbying for a new building, Baird still had to organize “an ‘object map’ of all the resources of the wonderful land we live in.”¹¹⁹ And he had to accomplish this within the Centennial display guidelines that one historian has referred to as a “classified landscape of commodities.”¹²⁰ Henry and Baird agreed to develop two distinct exhibits in Philadelphia, in essence mirroring the interests of the Secretary and his assistant. One area highlighted the Institution itself, including its “history, condition, functions, workings, and general results.” It featured the Institution’s program of international exchange and publications

¹¹⁸ Ibid., 70-71.

¹¹⁹ “The Nation’s Centennial: Smithsonian Institution Exhibit,” *New York Times*, April 2, 1876.

¹²⁰ Bruno Giberti, *Designing the Centennial: A History of the 1876 International Exhibition in Philadelphia* (Lexington, KY: The University of Kentucky Press, 2002), ix.

and showcased the results of a 25-year Smithsonian-sponsored meteorology program on a 16 x 12-foot United States map created by the U. S. Postal Service. The remainder of the area assigned to the Smithsonian featured the vast economic and natural resources of the one-hundred-year-old nation through specimen displays that Baird believed would be of great interest to the general public.

Baird enlisted the assistance of geologist and mining engineer William P. Blake to secure specimens and develop the Smithsonian's exhibit of the nation's mineral wealth. Baird then assigned his young assistant and protégée, George Brown Goode, to oversee the displays of fish and animals. Goode, who eventually would head the National Museum and develop an elaborate system of museum classification, came to the Smithsonian in the winter of 1873 to help identify and arrange the Institution's ichthyological specimens. In yet another unique twist of Baird's use of natural history specimens for exchange, the Assistant Secretary offered this young curator from Wesleyan University the opportunity to live and work (without pay) at the Smithsonian. In exchange, Goode could send duplicate specimens back to his museum in Connecticut where he remained on the payroll.¹²¹ Baird then asked the young man to work

¹²¹ S. P. Langley, "Memoir of George Brown Goode, 1851-1896," in *Annual Report of the Board of Regents of the Smithsonian Institution for the Year Ending June 30, 1897, Report of the National Museum, Part II* (Washington, DC: Government Printing Office, 1901), 45. According to Langley, the staff at the time consisted of

with him in Philadelphia, where Goode was charged with displaying “all the species capable of any economical application to the wants of mankind” and those of “special interest to the naturalist,” including mammals, birds, reptiles, amphibians, fish, and even worms.¹²²

Goode took to the assignment with both enthusiasm and creativity. For example, in addition to an impressive exhibit of taxidermied American mammals, he displayed on ice approximately 200 varieties of fresh fish, provided daily, free of charge, by a New York fishmonger.¹²³ Goode froze some of the fish for permanent display, but others were cooked up and served to visitors at the end of each day, surely one of the few times a natural history exhibit resulted in visitors eating the specimens on display.¹²⁴

Throughout the Smithsonian exhibit area, Goode’s displays emphasized the practical and economic value of the nation’s wildlife. The exhibits also

“only thirteen persons, including ‘honorary collaborators and subordinates.’”
Ibid.

¹²² U. S. Centennial Commission, *International Exhibition, 1876: Main Building* (Philadelphia, PA: John R. Nagle and Company, 1876), 80.

¹²³ *Annual Report of the Smithsonian Institution, 1875*, 66-67. The Centennial Commission recognized several contributors including the Smithsonian for “[i]ts successful efforts for the increase and diffusion of knowledge, as shown by its researches, publications, and system of international exchanges, and its display of the animal and mineral resources of the United States.” *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1876* (Washington, DC: Government Printing Office, 1877), 81.

¹²⁴ That said, if Norris had had his way, he, too, would have displayed and then eaten the animals in Yellowstone.

featured the technologies developed to pursue and capture animals (e.g., guns, hooks, tackle, nets and traps), decoys and disguises, and means of preserving and using animal products (e.g., oils, glues, drugs, perfumes, fertilizers, etc.). Animal applications included everything from furs to bone umbrella handles to whale oil.¹²⁵ The resulting exhibits illustrated the malleable meaning of specimens, as well as the power of interpretation and relationships when exhibiting natural history. They also highlighted the fine line between science and commerce. A bison robe draped over the back of a carriage seat representing its commercial value as a blanket and source of warmth could just as easily become another's research specimen or, mounted on a frame and stuffed, another's taxidermied display.

This commercial boosterism probably did not meet the long-term science and educational vision Baird had in mind for a national museum. And yet in the short term, the Centennial exhibit delivered much-needed external funding to commission new specimens. Moreover, it provided administrative cover to support a team of taxidermists who prepared birds and animals that demonstrated the power of public displays. Goode and others enhanced this power by exhibiting the larger animals in naturalistic poses in open areas, as opposed to behind glass. In one of the Smithsonian's more dramatic exhibits, one that "riveted public attention," individual examples of large animals of the

¹²⁵ *Annual Report of the Smithsonian, 1875, 63-64.*

American West, including taxidermied elk, bison, deer and moose, towered over visitors on a three-tiered pedestal, with additional sets of antlers exhibited on the display's base.¹²⁶

¹²⁶ James Conway, *The Smithsonian: 150 Years* (New York, NY: Knopf, 1995), 115. My thanks to Steve Rogers of the Carnegie Museum of Natural History for noting that the moose on the tower of animal resources featured antlers that had been mounted backwards, indicating the uneven state of taxidermy and zoology at the Smithsonian at the time. Although Yellowstone National Park did not make any formal contributions to the Exhibition, the Smithsonian had received so many specimens from the Yellowstone region from F. V. Hayden and, later, commissions from hunters, the Park must have been well represented. In addition, Goode carved out 20 feet of space for F. V. Hayden and J. W. Powell to exhibit specimens, reports, maps and photographs from western expeditions, including those into Yellowstone. G. Brown Goode to Spencer Baird, April 27, 1876, RU 7002, Box 21, f22. Hayden's exhibit also appears to have been a success because the Centennial judges later commended him "for the great interest and value of the exhibits themselves, and the ability, skill, and thoroughness with which Dr. Hayden has conducted his surveys." Francis A. Walker, ed., *United States Centennial Commission, International Exhibition, Reports and Awards, Vol. VIII, Groups XXVIII-XXXVI and Collective Exhibits* (Washington, DC: Government Printing Office, 1880), 329. Specimens from the region were no doubt on display since Hayden had shipped boxes to the Smithsonian in 1871 and 1872.



Fig. 3: Smithsonian display of U. S. mammal resources at the Centennial Exhibition, 1876 (Smithsonian Archives photograph).

Smithsonian Secretary S. P. Langley would later credit Goode's representation of the large animal resources of the country as "the model on which all subsequent exhibits of the kind were based." Indeed, Langley argued, the physical arrangement of specimens in Philadelphia had a "lasting influence on exhibition work everywhere."¹²⁷ In essence, Goode used individual taxidermied animals in concert to tell a story, in this case a commercial one. But he also presented the largest mammals, most taken from the American West, outside of glass cases. The animals stood above visitors and yet were almost close enough to touch. Goode later wrote that seeing is a way of knowing, with museums offering a powerful environment for teaching through what he called "object lessons." In Philadelphia, these animal objects taught about national prosperity, the reach of a relatively new country founded on conquest of western lands, and a future tied in part to the nation's wildlife heritage. And yet these same specimens, when systematically reordered and displayed in the Smithsonian, taught visitors about the methodical world of science and, ultimately, the threat of extinction.

As part of his contribution to the Philadelphia exhibit, Goode prepared a 100-page classification of animal resources of the United States to help guide and

¹²⁷ S. P. Langley, "Memoir of George Brown Goode," *National Academy of Sciences, Biographical Memoirs, Vol. IV* (Washington, DC: National Academy, 1902), 164. The displays certainly impacted all subsequent exhibits at the Smithsonian as they overwhelmed all available space when Goode shipped them back to Washington.

interpret the displays in Philadelphia. The classification included a list of substances derived from the animal kingdom, with synopses of useful and injurious animals, and a classification of the methods of their capture and utilization.¹²⁸ While meant to highlight the commercial nature of the exhibits, Goode's report directly linked animal displays to Joseph Henry's goal of advancing knowledge, using the form of the scientific paper to resolve the conflict between science and commerce as well as between displays and new knowledge.¹²⁹ Goode acknowledged what Nathaniel Langford and Philetus Norris in Yellowstone National Park already knew: that science, economy, and even tourism could function in concert, with one readily speaking the language of the other. As Goode demonstrated in Philadelphia, they could be one and the same. Indeed, in the case of bison and some of the other larger animals of the American West, they could be represented in the taxidermied form of the exact same animal.

¹²⁸ George Brown Goode, *Classification of the Collection to Illustrate the Animal Resources of the United States* (Washington, DC: Government Printing Office, 1876).

¹²⁹ While the Department of Interior did not feature the relatively new Yellowstone National Park that year in Philadelphia, visitors did see geological samples taken from the hot springs, photographs taken during the Hayden expedition, and at least one of Thomas Moran's paintings of the Park. Most interestingly, there is a good possibility that most if not all the large American wildlife featured prominently on a towering pedestal came from the Yellowstone area.

Not all animal displays in Philadelphia included such a clear commercial message, however. Featuring many of the same life-like animals, the display in the Kansas-Colorado state pavilion ostensibly also represented Colorado's animal (i.e., commercial) resources. The Territory of Colorado sponsored the animal display, probably viewing it as a means of advancing its petition for statehood.¹³⁰ But by removing the wildlife from their glass boxes and placing them together in realistic settings, the display also documented the ecological diversity of the territory's mountains and plains.

Looking more like a Peaceable Kingdom of the American West than a scientific, orderly construct, the exhibit included over 100 mammals and nearly 400 birds in a "miniature landscape." It even included a waterfall cascading into a pool stocked with fish and fringed with grass and ferns. The pond featured turtles, beaver, muskrats, and waterfowl that all "seemed at home upon its margin."¹³¹ The water features appeared so natural that visitors reportedly took

¹³⁰ Colorado would indeed be granted statehood that summer.

¹³¹ Mary Dartt, *On the Plains and Among the Peaks, Or How Mrs. Maxwell Made Her Natural History Collection* (Philadelphia, PA: Claxton, Remsen, and Haffelfinger, 1879), 6. The Kansas-Colorado building contained about 12,000 square feet of display space. Homer E. Socolofsky, "Kansas in 1876," 43, no. 1 (Spring, 1877), 1-43. Available online at <http://www.kshs.org/p/kansas-historical-quarterly-kansas-in-1876/13268>. Colorado occupied approximately one-fourth of the building in the west wing, assigning Maxwell an entire wall for her display. Maxine Benson, *Martha Maxell, Rocky Mountain Naturalist* (Lincoln, NE: University of Nebraska Press, 1986), 132.

drinks. Photographs from Philadelphia show the taxidermist herself sitting among the animals, one more odd specimen from the American West.



Fig. 4: Martha Maxwell and her Colorado display at the Centennial Exhibition, 1876. A combination of commerce, spectacle, and science, the exhibit included a waterfall and pond stocked with fish (Boulder Historical Society Collection photograph).

This large exhibit of Colorado wildlife featured the work of Martha Maxwell, one of the naturalists with whom Baird had corresponded about

securing specimens. Maxwell had also contacted the woman in charge of the Centennial's Women's Pavilion, hoping to contribute taxidermied specimens to the proposed display of "women's work" in Philadelphia, but she received no reply. As one reviewer at the time complained, the Women's Pavilion featured "scarcely anything characteristic, or illustrative of the advance made by women in the industrial scale," showcasing instead "every variety of needle-work known to the feminine mind."¹³² This environment does not sound particularly well suited for the display of hundreds of taxidermied animals, even though it did represent the work of a woman.

The collection displayed in the state pavilion came from Maxwell's private museum and taxidermy shop in Colorado where she, too, dreamed of operating a western center of knowledge creation and animal displays. She once told Spencer Baird that she hoped her museum might become "'a kind of academy of science, perhaps an adjunct to the State university'."¹³³ She also expressed

¹³² William H. Rideing, "At the Exhibition, Part III, Women's Work and Some Other Things," *Appleton's Journal* 15, no. 378 (June 17, 1876), 792. My thanks to Steve Rogers at the Carnegie Museum of Natural History for pointing out that by 1887 a manual for arts and profit for women included a full chapter on taxidermy. See *Ladies' Manual of Art or Profit and Pastime: A Self Teacher in All Branches of Decorative Art Embracing Every Variety of Painting and Drawing on China, Glass, Velvet, Canvas, Paper and Wood. The Secret of All Glass Transparencies, Sketching from Nature, Pastel Crayon Drawing, Taxidermy, Etc.* (Chicago, IL: Donohue, Henneberry & Co., 1887, 1890).

¹³³ Quoted in Scott Weidensaul, *Of a Feather: A Brief History of American Birding* (Orlando, FL: Harcourt, 2007), 124. She also desired to "'build up a temple of

concern about the decline of wildlife populations in her state, viewing her museum as an animal sanctuary of sorts. Even though shooting an individual animal shortened its life, Maxell believed through taxidermy she gave “their forms perpetual memory.”¹³⁴ This idea positioned her years ahead of the Smithsonian’s chief taxidermist, William Temple Hornaday, who later would make similar arguments about his bison collection.

Even though Maxwell expressed goals comparable to those of the Smithsonian, her Centennial exhibit contrasted sharply with the Institution’s displays in Philadelphia. Her exhibit, which she titled “Women’s Work” in a not so subtle dig at the Women’s Pavilion, transformed her into a celebrity. The exhibit showcased her impressive taxidermy expertise along with her skills with a gun, a talent that seemed to impress visitors in Philadelphia even more.¹³⁵ At the same time the exhibit served to educate the public and even scientists about Colorado’s diversity of wildlife. It created such a spectacle that people lined up to have their pictures taken with it.

science that shall be a credit to *our sex* and an acquisition to the world.’” Quoted in Benson, *Martha Maxell*, 118.

¹³⁴ Quoted in Marcia Myers Bonta, *Women in the Field: America’s Pioneering Women Naturalists* (College Station, TX: Texas A & M University Press, 1991), 37.

¹³⁵ Maxwell’s sister later wrote that visitors constantly asked if it were even possible for such a petite woman to kill so many animals: “‘Did she kill all these animals?’ ‘Did she kill them [all]?’ ‘How did she do it?’ ‘What did she do it with?’” Dartt, *On the Plains and Among the Peaks*, 8.

But appreciation for Maxwell's work went beyond the general public. Leading naturalist Elliott Coues described Maxwell's exhibit as one of the most valuable single collections he had seen, "mounted in a manner far superior to ordinary museum work."¹³⁶ Coues took the collection so seriously that he used scientific nomenclature to describe the more than fifty mammal species on display, a list that Maxwell's sister later published in a book about Maxwell and her collection. Smithsonian ornithologist Robert Ridgway produced a comparable "systematic catalog of the birds contained in the 'Colorado Museum,'" writing that the collection included "excellently mounted specimens," many of which were "wholly unlooked for" in Colorado.¹³⁷ By the time the Centennial Exhibition closed, Maxwell had lost her museum space in Colorado so she intended to sell the collection while she still resided in

¹³⁶ Elliott Coues, "Notice of Mrs. Maxwell's Exhibit of Colorado Mammals," in Darrt, *On the Plains and Among the Peaks*, 217. Taxidermy initially did not enjoy widespread scientific support, so Coues's recognition of Maxwell's collection was particularly noteworthy. As the grouping of birds became increasingly fashionable in the late-19th century, for example, Coues had complained that habitat groups took up too much space and were "entirely out of place in a collection of any scientific pretensions.... Birds look best on the whole in uniform rows, assorted according to size, as far as a natural classification allows." Quoted in Frederick A. Lucas, "The Story of Museum Groups, Part I," *The American Museum Journal* 14, no. 1 (1914), 3.

¹³⁷ Robert Ridgway, "Mrs. Maxwell's Colorado Museum, Catalogue of the Birds," in Darrt, *On the Plains and Among the Peaks*, 226.

Philadelphia.¹³⁸ For this, she naturally would have looked to Spencer Baird and the Smithsonian. Baird, unfortunately for Maxwell, was not buying.

Baird viewed the Centennial Exhibition as an opportunity to increase both the number of specimens in Smithsonian's collections as well as those in his network of exchange. In the spring of 1876, while representatives from states, territories, and other countries still busied themselves setting up displays, Goode wandered from pavilion to pavilion, asking for donations and, in some instances, offering specimens in exchange. For example, in May 1876, Goode talked to the South Australia Commission about donating its display of birds and mammals at the close of the exhibit. The Commission agreed, but only if they could receive specimens from the Smithsonian in exchange.¹³⁹

By arguing that states and countries could save the expense of shipping exhibits home while contributing to the nation's centralized repository of cultural and natural history specimens, the Smithsonian dramatically increased

¹³⁸ As a self-employed naturalist and taxidermist, Maxwell appears to have been determined to use her success in Philadelphia to help sell the collection to fund her other goals, including putting her daughter through college. Maxwell also briefly took classes herself at the Woman's Laboratory at the Massachusetts Institute of Technology (MIT).

¹³⁹ George Brown Goode to Spencer Baird, May 26, 1876, RU 7002, Box 21, f 22. Goode and Baird were so successful in securing donations that President Grant, in his annual message to Congress on December 5, 1876, thanked all those who donated their displays and recommended that a permanent building be built or purchased for the permanent housing of the exhibits, which proved themselves to be "a great benefit in the information imparted and the pride of country engendered." *New York Times*, December 6, 1876.

its collection.¹⁴⁰ Specimens and material culture shipped to Washington often represented the entire collections of many states, private exhibitors, and foreign governments from Austria to Venezuela. Moreover, most foreign representatives in Philadelphia promised to complete any collections “illustrating the natural products and industries of their respective countries whenever the arrangement of the collections shows the deficiencies.”¹⁴¹ Baird initially stored all these specimens and displays in the Armory building in Washington until a permanent home could be found.

With so many complete or near complete collections sent back to Washington at the close of the Centennial Exhibition, it seems odd in retrospect that the Smithsonian did not acquire Maxwell’s impressive and popular display of wildlife diversity in the American West. Some have speculated that because of Maxwell’s gender, men like Baird and Goode did not take her seriously. And yet Baird expressed interest in her work even before the Centennial, offering to display it. Because of the support she received from Baird, Ridgway, Coues and others, it seems more likely that Maxwell fell victim to the Smithsonian’s system

¹⁴⁰ *Annual Report of the Smithsonian Institution for 1876*, 43-44. The railroads had agreed to donate the freight on 21 cars coming and going from Philadelphia, with the Smithsonian paying for any excess over the agreed amount. In the spring of 1876, Baird had shipped 21 carloads of specimens and he returned to the Smithsonian with 42 boxcars. These shipments actually represented three times the volume of the original, since Baird, to hold down costs, used hay cars that held 50 percent more than traditional freight cars.

¹⁴¹ *Ibid.*, 80.

of specimen exchange. Leaving Philadelphia with more specimens than the Smithsonian could possibly exhibit, and acquiring those specimens free of charge or with promises of exchange, purchasing Maxwell's collection may simply have been a luxury the Institution could not afford.

As it turned out, Baird returned to Washington with more specimens than he could store and with multiple duplicates that needed to be distributed. In some instances he opted to donate complete collections to others. For example, the Assistant Secretary gave the U. S. Navy Department an exhibit of iron, chain-cables, and cords donated by the Russian Navy. To the Department of Agriculture he transferred "sections of wood, fibers, grains, seeds, &c." As Baird noted in his report on the Exhibition, "[s]uffice it to say, that so far as the Bureau of Education, the Department of Agriculture, the Smithsonian Institution, and the Commission of Food-Fishes are concerned, the collections promise to exceed in magnitude their own Centennial exhibitions."¹⁴² He predicted that the impressive collection he had assembled, virtually free of charge, would result in "a most instructive and important museum.... We are assured that no such collection as this is to be found in any part of the world..." Thinking again in terms of these specimens' inherent commercial value, Baird estimated that with

¹⁴² Ibid., 78.

the Philadelphia contributions added in, the museum collection had grown to be worth at least one million dollars.¹⁴³

With the Smithsonian flush with new specimens that overwhelmed all available space, in 1878 Congress appropriated funds to construct a new building to house and display them. Joseph Henry died that same year, so Baird found himself not only in charge of the entire Smithsonian Institution, but also overseeing the design, construction, and ultimate display of all the specimens to be housed in the new building. Constructed next door to the Smithsonian Castle, the National Museum opened its doors on March 4, 1881 for the inauguration ball of President James Garfield. After the inauguration, Smithsonian curators stocked the building with specimens and opened the National Museum to the public in October.¹⁴⁴

The successful Smithsonian exhibits in Philadelphia resulted in three outcomes worth noting. First, functioning like a museum, the Centennial Exhibition centralized and highlighted the work of government agencies and the fruits and reach of the new nation. In this context, the wildlife and other natural history exhibits in the Government Pavilion also provided the public an opportunity to experience the potential of a truly national museum. At a time when most collections tended to feature individual skins, skulls and/or skeletons

¹⁴³ Ibid., 79-80.

¹⁴⁴ With an even newer National Museum of Natural History opened on the mall in 1910, this building became known as the Arts and Industry building.

stored in drawers, or individual specimens mounted on pedestals or shelves behind glass, the life-like animals of the American West representing the nation's animal resources (and those representing the animals of Colorado) fascinated visitors. The pedestal upon which Goode placed the largest mammals literally elevated the animals above the musty image of research collections or the cabinets of curiosities of an earlier age. These animal displays may have represented "old knowledge," as Henry described it, but as the Centennial demonstrated, these "object maps" of the country caught the imagination of the American public much more than the Smithsonian's publications, graphs, charts, and weather data. Even President Grant expressed his support, writing that the "success of their labors was amply attested by the sustained attention which the contents of the Government Building attracted during the period of the Exhibition, from both foreign and native visitors."¹⁴⁵

Secondly, the sheer volume of specimens accumulated before and during the Centennial Exhibition resulted in a real need for the construction of a separate building to house the Smithsonian collection. Even before the establishment of the Smithsonian, Congress referred to the Ex-Ex collections and other specimens held by the nation as the "National Museum." Now those extensive collections would have a dedicated building for public display. The new National Museum that opened its doors to the public in 1881 could hold its

¹⁴⁵ *New York Times*, December 6, 1876.

own when compared to any American museum, including the Academy of Natural Sciences in Philadelphia, and the fledgling American Museum of Natural History in New York, and maintain its centralized function.¹⁴⁶ In 1853, Baird had written to his friend George Perkins Marsh expressing a willingness to wait for the Smithsonian (and the nation) to catch up with him on the need for a national museum. In 1876 the time had come. Baird had positioned himself at the center of a vast network of exchange, resulting in boxcar loads of specimens and even, as in the case of George Brown Goode and others, new museum personnel. Now Baird finally had the “proper facilities” needed to ensure that the Smithsonian collections could be viewed and protected into the future.¹⁴⁷

A third and final outcome represents a slightly different result in the context of the history of animal conservation and displays. Because of the strength of the Institution’s system of exchange, demonstrated and brought to

¹⁴⁶ The Academy of Natural Sciences in Philadelphia was founded in 1812, and moved into a new public museum space in 1876. Elites of New York City (e.g., Theodore Roosevelt Sr. and J.P. Morgan) established the American Museum in 1869. That museum moved into a new building at its current location on the west side of Central Park in 1877. Early correspondence and reports suggest, however, that Spencer Baird and even Secretary Joseph Henry viewed the Smithsonian in relation to other European national museums and collections (e.g., the British Museum established in 1753, also through a private bequest, or the French Jardin Royal des Plantes Médicinales that became the Muséum National d'Histoire Naturelle in 1793). While the National Museum would soon compete with the American Museum for wildlife specimens in the American West, it does not appear that the early secretaries saw themselves in competition with other American museums at the time.

¹⁴⁷ *Annual Report of the Smithsonian Institution for 1876*, 70.

fruition in Philadelphia, the Smithsonian did not acquire Martha Maxwell's highly popular Colorado collection. In retrospect, this appears to be a major oversight given Baird's goal of creating a collection that would be viewed by "interested visitors ... for centuries to come." Even at the time, Maxwell's collection, now known only through photographs, served as a naturalistic bridge between the static displays popular with scientists, and the family and other habitat groups that came to dominate the Smithsonian and other museum exhibits in the late 19th century.¹⁴⁸ Indeed, had Baird and Goode acquired the Maxwell collection at the time, it may have influenced an entirely different and more naturalistic direction of early animal displays. Instead, the Smithsonian soon followed a very different path, one that took its chief taxidermist to Montana.

¹⁴⁸ When Maxwell died in 1881 her daughter gave the Colorado collection to a New Yorker who offered to find a buyer, but he displayed it himself before storing it in an unheated barn. Even though the museum establishment showed no interest in Maxwell's collection, organizers of the 1893 Columbian Exposition acknowledged the popularity of her "Women's Work," and contacted Maxwell's daughter about recreating the popular exhibit in Chicago. They found the exhibit in such poor condition, however, that they chose not to invest in its restoration. The collection remained in New York until the man holding it died in 1916, when someone dumped the display in a vacant lot, another odd and unsettling contribution to the history of animal displays. See Mary Dartt Thompson "What Became of Mrs. Maxwell's Natural History Collection?" typescript, 1924, RU 7171, Box 1, folder 2. A few of the smaller specimens survived and found their way into the Smithsonian's permanent 1876 Centennial exhibition under Maxwell's original title, "Women's Work." The original National Museum, now known as the Arts and Industry building, is itself under repair, so the fate of these remaining specimens is unclear.

PART II:



CENTRES OF CONSERVATION

5. IN THE BEGINNING WERE THE BISON:

HABITAT GROUPS AND THE VITAL SPARK

It seems hard and cruel, (does it not?) that we civilized people with all the luxuries and comforts of the world around us, should be drawing from the backs of these useful animals the skins of our luxury, leaving their carcasses to be devoured by the wolves – that we should draw from that country, some 150 or 200,000 [bison] robes annually, the greater part of which are taken from animals that are killed expressly for the robe, at a season when the meat is not cured and preserved, and for each of which skins the Indian has received but a pint of whiskey! ¹⁴⁹

-- George Catlin, 1841

In 1882, a year after the new National Museum building opened its doors and the same year P. H. Sheridan returned to Washington to campaign on behalf of Yellowstone wildlife, a taxidermist joined the Smithsonian to make his own contributions to animal conservation. Unlike Sheridan, however, William Temple Hornaday worked to preserve dead animals, and to elevate the art of taxidermy within the world of science and animal conservation.¹⁵⁰ In so doing,

¹⁴⁹ George Catlin, *North American Indians* (New York, NY: Penguin, [1841], 1989), 264-265.

¹⁵⁰ In his book on taxidermy, Hornaday wrote that “a great naturalist [i.e., Louis Agassiz] declared that a skin stuffed is a skin spoiled.” William Temple Hornaday, *Taxidermy and Zoological Collecting* (New York, NY: Charles Scribner’s Sons, 1891), 229. While the Smithsonian collection of taxidermied specimens had grown significantly at the close of the Centennial Exhibition, scientists often dismissed taxidermy as a method for preserving research collections. Given the descriptions of early techniques, that left specimens looking like “drowned and bloated things left on the sands by retreating tides ... its misshapen framework,

he took many of the same animals displayed in Philadelphia as representatives of the commercial future of the nation and transformed them into artifacts representing the nation's past.

Hornaday initiated his career a decade earlier at Iowa State College where he had studied botany, paleontology, and other sciences. The young student's ability to successfully mount a pelican skin so impressed the college president that he promptly offered Hornaday a job in the college museum. Hornaday chose to leave school after only two years, traveling east in 1872 to serve as an apprentice to French and German taxidermists at Ward's Natural Science Establishment in Rochester, New York, an excellent choice for a young, would-be taxidermist. Henry A. Ward was, in the words of one writer, "a museum builder. It was in his establishment that museums were made and sold."¹⁵¹ Working in the backrooms of Ward's, in other words, provided Hornaday with his real education.

The new apprentice from Iowa must have impressed Ward as well. Within a couple of years he allowed the young Hornaday to pursue exotic

its complete contrariety to life and nature, leans stiffly out of balance." J. Carter Beard, "A New Art," *Scribner's Magazine* 20, no. 1 (July 1896), 66-67.

¹⁵¹ C. T. Hurst, "William Temple Hornaday, Zoologist and Conservationist," *Bios* 9, no. 1 (1938), 8. Many writers describe Hornaday's first job in the Iowa State College museum, but Hurst appears to be the only one willing to admit Hornaday started as a museum janitor for the "princely prevailing wage of nine cents an hour." Even if Hornaday only worked as a janitor, he still would have had an opportunity to examine collections and various taxidermy mounts.

specimens, sending him on a global collecting trip first to Florida, Cuba, Barbados, Trinidad, Venezuela, and British Guiana, and then to India, Ceylon, the Malay Peninsula, and eventually Borneo. Hornaday returned to Ward's in 1879 with a zoological collection that Fairfield Osborn later described as "the richest and most varied ever made in the field by one man up to that time."¹⁵² Hornaday's collection included stacks of skins and the skeletons of mammals and birds, but he also shipped back "reptiles, fishes, crustaceans, starfishes, corals, and a few insects."¹⁵³

In November 1878, "in a forest reeking with live orang-utans and gibbons on the Sadong River, Borneo," Hornaday envisioned what he believed to be a new kind of taxidermy, one that engaged the viewer and told a story that could be easily read. Representing the orangutan's life and habits, he wanted to construct "the first large mammal group ever produced in America."¹⁵⁴ The animals would be placed in a natural-looking environment "to represent an actual section of the top of a Bornean forest" in such a way that "no scientific observer could find fault with its naturalness." But Hornaday also wanted to create something so provocative that it would bring him overnight fame. It took

¹⁵² Fairfield Osborn [Henry Fairfield Osborn, Jr.], "William Temple Hornaday," *Science* 85, no. 2210 (May 7, 1937), 445-446.

¹⁵³ Edward P. Alexander, *The Museum in America: Innovators and Pioneers* (Walnut Creek, CA: Alta Mira Press, 1997), 190.

¹⁵⁴ William Temple Hornaday, "Masterpieces of American Taxidermy," *Scribner's Magazine*, 72, no. 1 (July 1922), 3.

some convincing, but Hornaday persuaded Ward to let him work with five of the forty-three orangutan skins he had shipped from Borneo.

Hornaday arranged to give a presentation to the 1879 meeting of the American Association for the Advancement of Science (AAAS) in Saratoga, New York.¹⁵⁵ Since he had not completed the orangutan display by the time of his talk, Hornaday propped two life-like orangutans next to him at the podium. After describing the biogeography of Borneo, Hornaday described his quest to obtain “specimens of the Bornean *Simia*, and to study the different species from fresh specimens.” He expressed a particular interest in studying how orangutans lived and interacted, knowledge he planned to apply in new ways when he created his taxidermied displays.¹⁵⁶ Orangutans, Hornaday insisted, had both

¹⁵⁵ Hornaday, *Taxidermy and Zoological Collecting*, 230-231. Clearly, Maxwell’s Colorado museum displays and her 1876 exhibit predate Hornaday’s ideas by quite a few years.

¹⁵⁶ William Temple Hornaday, “On the Species of Bornean Orangs, with Notes on Their Habits,” in Frederick W. Putnam, ed., *Proceedings of the American Association for the Advancement of Science* (Salem, MA: American Association for the Advancement of Science, 1880), 438-455. Interestingly, Hornaday makes much of representing the habits and habitats of the orangutans in the field, and yet Bornean orangutans are notoriously solitary animals, rarely interacting except to mate. In his book *Two Years in the Jungle*, Hornaday tells of his difficulty finding orangutans in the field, and how he encounters and kills them one by one (i.e., not in groups). Guides brought additional dead animals into camp individually. Hornaday does, however, locate a baby with its mother and another youngster: “As soon as I fired at [the mother], she climbed with all haste up to her little one, which quickly clasped her round the body, holding on by grasping her hair, and, with the little one clinging to her, the mother started to climb rapidly away.... [A] young male about two years old, was discovered looking down from a nest

human-like hands and distinct facial characteristics with as many “peculiarities belonging to himself as can be found in the individuals of any unmixed race of human beings.” According to Hornaday, “orangs differ from each other fully as much as do either Chinese or Japanese, if not more.”¹⁵⁷

Hornaday’s argument implied that these orangutans (or men of the forest as their name suggests) belonged high on the Darwinian ladder of evolutionary progress, alongside other primates including humans. Indeed, Hornaday provided one of the earliest clues to his motivation for creating this new kind of habitat group. He argued that those “prejudiced against the Darwinian views,” and unwilling to “to admit his or her relationship” to orangutans might benefit from going to the forests of Borneo to “watch from day to day this strangely human form in all its various phases of existence.” Hornaday continued:

Let him see it climb, walk, build its nest, eat and drink and fight like human roughs. Let him see the female suckle her young and carry it astride her hip precisely as do the coolie women of Hindostan. Let him

overhead, which he immediately left and started to follow the old mother. As he went swinging along underneath a limb, with his body well drawn up I gave him a shot which dropped him instantly, and then we turned our attention to the female. She was resting on a couple of branches, badly wounded, with her baby still clinging to her body in great fright. Seeing that she was not likely to die for some minutes I gave her another shot to promptly end her suffering...” It appears that the scene Hornaday later recreated as “Fight in the Treetops” was indeed from memory, but in the field, he was the aggressor attacking the female and her young. William Temple Hornaday, *Two Years in the Jungle: The Experiences of a Hunter and Naturalist in India, Ceylon, the Malay Peninsula and Borneo* (New York, NY: Charles Scribner's Sons, 1885), 368.

¹⁵⁷ Ibid., 442.

witness their human-like emotions of affection, satisfaction, pain and childish rage, — let him see all this and then he may feel how much more potent has been this lesson than all he has read in pages of abstract ratiocination.¹⁵⁸

Hornaday's comments suggest that he designed this early habitat group, still under construction at Ward's when he gave this speech, with the overarching goal of educating the viewer about the basic tenets of evolution. As George Brown Goode demonstrated in Philadelphia, taxidermied animal displays can be assembled to tell any number of stories, often using the very same animals. Animal displays, in other words, do not create themselves. Using photographs, field measurements, live models when they had access to them, and a good dose of socio-cultural imagination, taxidermists reconstructed an animal's form from a stack of flat, lifeless, preserved skins. Traditionally, taxidermists mounted these animals in nondescript poses on pedestals for research and display. But in other instances, they assembled similar skins in more dramatic fashion. In 1867, for example, Jules Verreaux oversaw the creation of the sensational "Arab Courier Attacked by Lions." Looking at a stack of animal skins, and possibly motivated by the availability of a human corpse, Verreaux envisioned a scene in which lions attack a courier on his panicked camel.¹⁵⁹ Martha Maxwell, on the other hand, proposed using similar lion skins,

¹⁵⁸ Ibid., 454-455.

¹⁵⁹ Meant to be more spectacle than scientific or educational, the Verreaux exhibit won a gold medal at the 1867 Paris Exposition. Museum professionals of the

along with an eagle and a human (real or not she did not say), to create a tableau representing the nation's founding.¹⁶⁰

For his first major taxidermy display, Hornaday chose not to construct orangutans in a family group exhibiting human-like emotions of affection as he called it (although the American Museum of Natural History in New York would later commission just such a group). Instead, his first habitat group presented

time considered it "the most ambitious attempt of [taxidermy] of its day. Moreover, it was an attempt to show life and action and an effort to arrest the attention and arouse the interest of the spectator, a most important point in museum exhibits." In 1869, the American Museum in New York City purchased the exhibit, the first such taxidermied group the museum displayed. Verreaux's successful natural history company in France (Maison Verreaux) allegedly inspired Henry Augustus Ward to establish his own Ward's Natural Science Establishment in 1862 in New York. Frederic A. Lucas, "The Story of Museum Groups, Part I," *The American Museum Journal* 14, no. 1 (1914), 6-10. The theatrical Arab Courier exhibit has its own intriguing history. The Carnegie Museum of Natural History obtained the Verreaux exhibit in 1898 because, according to Stephen P. Rogers, a collection manager at the Carnegie and an expert in taxidermy history, "[i]t was considered gauche by the upscale New York crowd." By the end of the 19th century, any exhibit considered non-scientific no longer had a home in what was becoming one of the nation's great natural history museums. But there's more to give one pause when considering the history of taxidermy in the nation's 19th century museums. Rogers "confirms that the courier on display in Pittsburgh is a plaster mannequin, but adds an intriguing rider: 'Our Arab Courier is not a human mount as El Negro ... though it may have been real prior to 1899 when it was refurbished by Frederick Webster.'" Rogers quoted in Miquel Molina, "More Notes on the Verreaux Brothers," *Pula: Botswana Journal of African Studies* 16, no. 1 (2002), 32.

¹⁶⁰ That she did not construct such a display as part of her exhibit in Philadelphia suggests that she may have proposed the theatrical tableau to please Baird, much like her card-playing chimpanzees pleased visitors to her own museum in Colorado.

orangutans looking like aggressive “human roughs,” with the large, battle-scarred males in fierce combat, while the female flees, protecting her young. As Hornaday’s description suggests, this scene could be lifted from the streets of India (or “Hindustan”) or perhaps an immigrant neighborhood in New York City. Thanks to Hornaday’s work, Americans no longer needed to travel to the far-off jungles of Borneo to see the lessons of evolution writ large, even if those lessons were drawn mainly from the active imagination of a young taxidermist.¹⁶¹

¹⁶¹ Unless they leave behind specific explanations, deciphering why a taxidermist chooses to pose an animal one way over another can be fraught with difficulties. Even when they claim one presentation looks more “natural,” unless they are following a popular trend, what one taxidermist might consider truer to life might exaggerate or falsify nature instead, as all of Hornaday’s early work ultimately did. In the case of the fighting orangutans, Hornaday’s September 28, 1878 letter to Ward suggests that the young taxidermist wanted to make his name as a taxidermist, and advance financially. The family groupings present different challenges, since Hornaday again worked largely from his imagination when assembling them. Historians and social critics, from Donna Haraway and Michel Foucault to Steven Dubin and even Steven Conn, have commented on both the overt and hidden messages of social structure and power on display in museums, from messages of progress in local museums to the racism, sexism, and classism reflected in natural history displays. Hornaday’s work, starting with his “survival of the fittest” orangutans to his placid family groups from the American West with the large dominant male and contented family, demonstrates many if not all of these traits. Hornaday’s movement away from a show of evolution to one of harmony in the natural world may not only reflect his own personal life (he was married in 1879 and his only child born in 1881) but his desire to move away from the static individual specimens he worked on daily in the Smithsonian shop. Moreover, just like museums set out to distinguish themselves from mere cabinets of curiosities, and zoos from menageries or

Although others, including Martha Maxwell, produced habitat-like displays at the time, historians and Hornaday's contemporaries alike point to this realistic-seeming representation of orangutans as "the first habitat group," initiating a new trend in museum representations.¹⁶² Hornaday himself claimed that November 1878 marked the beginning of "scientific museum groups of large mammals, with natural or artificial accessories." As Hornaday's biographer James Dolph confirmed, Hornaday wrote to Ward from the field even earlier than that, on September 28, 1878, expressing his desire to mount what he considered to be a life-like exhibit that would change the history of taxidermy:

traveling animal shows, when Hornaday came to the Smithsonian, he hoped to advance himself personally as well as advance taxidermy as an art. Reviews at the time of his habitat groups confirm that he met his goal in this regard.

¹⁶² Historian Sally Gregory Kohlsted has written that when Hornaday unveiled his two orangutans at the American Association for the Advancement of Science meeting, "the movement toward habitat groups in the United States had begun." Kohlsted, "Henry A. Ward: the Merchant Naturalist and American Museum Development," *Journal of the Society for the Bibliography of Natural History* 9 (1980), 647-661. Hornaday's principal biographer, James Andre Dolph, also maintains that Hornaday "was largely responsible for the initial recognition of the habitat group as a legitimate method of museum exhibition. Dolph, "Bringing Wildlife to Millions: William Temple Hornaday, the Early Years: 1854-1896" (Dissertation, University of Massachusetts, 1975), 311. In his history of habitat groups, Lucas also points to Hornaday's contributions, but fails to mention Maxwell's work, although Lucas later admitted he had seen it in Philadelphia. So probably did Hornaday, since he briefly had returned from the field in 1876, and toured the Centennial with his fiancé. Ibid., 140. That a young and ambitious taxidermist would not have seen Maxwell's exhibit, one of the most popular displays in Philadelphia, seems hard to believe. Indeed, after returning to Borneo, it is hard to imagine Hornaday *not* thinking about how to make his own taxidermied sensation.

...we can set right to work & mount a very striking group (of two or three, of the largest & longest haired follows) getting it up very artistically & exactly from my sketches and measurements & notes, exhibit it in New York, get it pictured in Harper's Weekly, & generally talked about. I tell you we can get up a very striking group if done properly.¹⁶³

Hornaday later described the resulting display, which he called "The Fight in the Tree-tops," as featuring "a pair of immense and hideously ugly male orang utans [sic] fighting furiously while they hung suspended in the tree-tops. The father of an interesting family was evidently being assailed by a rival for the affection of the female orang utan, who, with a small infant clinging to her breast, had hastily quitted her nest of green branches and was seeking taller timber." The two life-like orangutans Hornaday propped up next to him at the podium in Saratoga caused the sensation he had intended, attracting the attention of scientists and museum directors alike. But then the animals were, as Hornaday admitted later, "a trifle sensational."¹⁶⁴

¹⁶³ Quoted in Dolph, 251.

¹⁶⁴ Hornaday, *Taxidermy and Zoological Collecting*, 230-231. Using what Steven Conn has referred to as "object-based epistemology," Hornaday saw the potential of taxidermy displays as educational tools to explain evolution. These orangutans, locked in mortal combat, stood as proxies for the universe of orangutans in the wild and the evolutionary history of all apes (and, thus, man). And, as proxies, they had stories to tell without the need of detailed descriptions or explanations. Clearly, the orangutans, fighting it out on the speaker's platform as Hornaday spoke of his adventures in Borneo, served as reconstructed artifacts from the planet's distant past, and communicated a new vision for museums and their role in both research and public education. As one writer observed in 1906, "'Museum specimens are not merely objects to be looked at, they should be illustrations of facts or exponents of ideas.'" Quoted in



Fig. 5: Original version of W. T. Hornaday's *Fight in the Treetops* with an unidentified human – probably Hornaday (Burns Archive photograph, burnsarchive.com).

With the Smithsonian's new National Museum about to open its doors, the Institution needed the services of another skilled taxidermist, particularly someone who knew how to mount mammals. After hearing Hornaday speak in New York, and seeing his work displayed next to him on the podium, George

Steven Conn, *Museums and American Intellectual Life, 1876-1926* (Chicago, IL: The University of Chicago Press, 1998), 4. Hornaday believed his first habitat group of orangutans illustrated the history of evolution. The positive response he received at the AAAS meeting, and the job offer that came to him from the Smithsonian not once but twice, suggest that the scientific world liked the story he had to tell.

Brown Goode, who had been appointed Assistant Director of the National Museum, encouraged Hornaday to apply for the job of chief taxidermist at the Smithsonian. Hornaday declined the offer out of loyalty to Henry Ward, so Smithsonian Secretary Spencer Baird sent a follow-up query.¹⁶⁵ With Ward's threatening personnel cutbacks, Hornaday reconsidered and, with Henry Ward's blessing, he traveled to Washington, D.C. for an interview, Hornaday's only companion "a 'stuffed' monkey scratching himself," carried in a box.¹⁶⁶

After some back and forth about the nature of the job and his qualifications and interests, on March 20, 1882, Hornaday accepted a position as the Smithsonian's Chief Taxidermist with a generous salary of \$125 per month (or approximately \$33,000 in 2010 dollars). Baird, Goode, and others at the Smithsonian looked to Hornaday to bring new life to the Smithsonian collection.¹⁶⁷ Hornaday, on the other hand, looked to the Smithsonian to do much the same for him, elevating his social status and his art in the world of science. Hornaday arrived in Washington the following week, and immediately started repairing the larger animals on display (e.g., an elk, moose, bison, rhinoceros, and sea lion), "a most necessary work," according to Frederick True, curator of the Department of Mammals.¹⁶⁸ Many of these poorly mounted

¹⁶⁵ Dolph, "Bringing Wildlife to Millions," 339.

¹⁶⁶ Quoted in *ibid.*, 338.

¹⁶⁷ William Temple Hornaday to George Brown Goode, March 20, 1882, RU 201, Box 17, f 7.

¹⁶⁸ Frederick True to Spencer Baird, April 1, 1882, RU 158, Box 5, f 10.

specimens, degraded over the years by insects, dust, and exposure to light, simply did not meet the high research and display standards of a national collection. Within two months, True reported that Hornaday's work had improved the appearance of these animals significantly.¹⁶⁹

Not all of Hornaday's early assignments focused on restoring old work, however. In April 1882, Hornaday's second month on the job, the Smithsonian received the remains of the elephant "Mungo," donated by circus owner Adam Forepaugh. Forepaugh sent the remains of the young animal to the Smithsonian just like others with exotic animal shows routinely did (e.g., the Barnum and Bailey Circus). Even though not full-sized, the dead elephant presented the new taxidermist with his first real challenge at the Smithsonian: to recreate Mungo so that the resulting specimen looked "as life-like as possible, regardless of time and labor." Secretary Baird requested that Hornaday make a similar commitment to all of his work.¹⁷⁰

¹⁶⁹ Frederick True to Spencer Baird, June 1, 1882, RU 158, Box 5, f 10.

¹⁷⁰ William Temple Hornaday to [Frederick] True, June 30, 1882, RU 158, Box 5, f 10. The accession of Mungo, in the flesh, is listed alongside a number of additional specimens ranging from the skin of a squirrel from Mexico to the "fresh" remains of cinnamon bear, the skeleton of which was "much broken" and of little value. Frederick True to Spencer Baird, May 1, 1882, RU 158, Box 5, f 10. In May 1882, the 24-year old Theodore Roosevelt of New York added 14 skins to the Smithsonian collection, including four species of mice, four species of squirrels, two woodchucks, a porcupine, and a skunk. Report of the Copyist and Assistant, July 1, 1882, RU 158, Box 5, f 10.

Frederic A. Lucas later described Hornaday's work on Mungo in *Science*. As Lucas explained, mounting large mammals for display in the early 1880s commonly involved constructing a wooden frame, draping the skin over the frame, and packing the skin with loose filling. This approach worked "well enough for long-haired animals, whose muscles are concealed," but an elephant, which can be both "lank and flabby," presented a formidable challenge, requiring "the height of taxidermic art."¹⁷¹ According to Hornaday, taxidermists should "recreate the animal [and] give it all that nature gave it, except the vital spark." With Mungo, Hornaday had a chance to demonstrate the art of taxidermy, and prove its power to give an animal "the look of *life*."¹⁷²

¹⁷¹ Frederic A. Lucas, "The Mounting of Mungo," *Science* 8, no. 193 (1886), 337-341.

¹⁷² William T. Hornaday, "Common Faults in the Mounting of Quadrupeds," in *Third Annual Report of the Society of American Taxidermists, March 24th, 1882, to July 1, 1883* (Washington, DC: Gibson Brothers, Printers, 1884), 67.



Fig. 6: William Temple Hornaday (center) with assistants working on a tiger form in the Smithsonian taxidermy studio, ca. 1886 (Smithsonian Institution Archives photograph).

The resurrection of Mungo and other individual specimens advanced the art of taxidermy and improved Hornaday's perceived status in Washington. In a letter to Henry Ward, Hornaday expressed satisfaction with both his new position and his work environment. He had moved from the workroom at Ward's into a center of science, where his colleagues treated him as "a gentleman," just like the other "scientific fellows." In the Smithsonian,

Hornaday hoped to flourish, develop his talents as a skilled taxidermist, and “work at [his] art as an artist.”¹⁷³

Unfortunately, the day-to-day processing of a centralized repository like the Smithsonian required Hornaday to work in full production mode. He and his assistant prepped shipments of research and other specimens arriving weekly, repaired skins and old mounts, and fleshed out, as it were, the new museum building and its animal displays. He also prepared duplicate specimens, including a juvenile orangutan, for future exchange.¹⁷⁴ While Hornaday desired to display his expertise at the Smithsonian, general museum production defined his early years. Hornaday’s only real creative respite came when he assembled specimens for the annual meeting of the Society of Taxidermists in New York, an exhibit designed solely to promote the art of taxidermy and the taxidermists who displayed their best work there.¹⁷⁵

Hornaday’s addition to the staff of the Smithsonian resulted in a significant increase in the number and quality of animals on display in the National Museum.¹⁷⁶ Indeed, Hornaday and his small staff so ably processed

¹⁷³ William Temple Hornaday to Henry A. Ward, May 4, 1882, quoted in Dolph, “Bringing Wildlife to Millions,” 350.

¹⁷⁴ William Temple Hornaday to Frederick True, June 30, 1883, RU 158, Box 5, f 10. This juvenile appears to have been kept and added to the orangutan display at the Smithsonian since a fleeing young orangutan appears in a later version.

¹⁷⁵ William Temple Hornaday to Frederick True, April 30, 1883, RU 158, Box 5, f 10.

¹⁷⁶ Frederick True to Spencer Baird, August 1, 1882, RU 158, Box 5, f 10.

animals for research and public display that True began to develop his department's "desiderata" for specimens, highlighting his particular desire to add more American mammal skins and skeletons to the collection.¹⁷⁷ As the displayed collection grew, scientists, taxidermists, osteologists, and even cabinetmakers negotiated how to fill the new museum building and, as significantly, argued to what purpose. During its earliest years, the new National Museum building displayed individual specimens as part of a systematic study of animal life, with an emphasis on those species found on the North American continent. Curators displayed most specimens behind glass or suspended from the ceiling to protect them from the general public who might otherwise want to reach out and pet them, they seemed so real.

In his new position as Associate Director of the Museum, George Brown Goode faced the overarching question of how to preserve thousands of natural history specimens, making them useful to science while still displaying them in a public venue. As curator of mammals, on the other hand, True needed to balance the display of taxidermied animals with a growing number of study skins, animal skeletons (i.e., the osteology collection), and even internal organs kept for research purposes. Perhaps thinking of ways to use museum space more efficiently, while adding an educational component, True suggested that the skeletons and [mounted] skins of animals be exhibited in the same cases.

¹⁷⁷ Frederic True to Spencer Baird, May 1, 1882, RU 158, Box 5, f 10.

“Such an arrangement,” True wrote, “would do much to destroy many erroneous notions gathered from observing only the exterior of animals.”¹⁷⁸ His suggested approach certainly would help strip away the artifice of taxidermy, showing the comparative anatomy of individual animals side-by-side with how they once looked “in the flesh.”¹⁷⁹

In late 1882 or early 1883, the National Museum acquired Hornaday’s orangutan display, which Henry Ward referred to as “the king of groups” and valued at \$2,000, more than Hornaday earned in a year. True displayed the group of fighting primates in the gallery of mammals, where it remained one of a kind, both as a habitat group and a display with an overt message or storyline.¹⁸⁰ Hornaday often argued for mounting and displaying more groups of animals but, with the exception of some small bird groupings, the National Museum lacked any commitment to pursue this direction. Instead, True assigned

¹⁷⁸ Frederick True to Spencer Baird, January 1, 1883, RU 158, Box 5, f 10.

¹⁷⁹ It appears that neither Goode nor Baird took his advice. This approach would later be used in displaying the skeletal remains of the famous 1887 racehorse Lexington, whose skeleton was once displayed in the National Museum’s Osteology Hall. In 2010, the Smithsonian transferred the skeleton to the International Museum of the Horse in Lexington, Kentucky, where it stood in front of a life-sized portrait of the original animal.

¹⁸⁰ While Hornaday later wrote that “The Fight in the Tree-tops” was purchased by the Smithsonian, Dolph maintains that Goode traded a number of valuable unmounted skins ... in exchange for the pace-setting exhibit.” Given the network of exchange Goode worked within, not to mention the steep purchase price, this sounds more likely. Hornaday, *Taxidermy and Zoological Collecting*, 233; Dolph, “Bringing Wildlife to Millions,” 356.

Hornaday to continue the thankless task of repairing individual and poorly constructed taxidermy, including an elk that refused to stand up straight. By the end of his second year, Hornaday expressed his frustration to Henry Ward, writing that he was growing “sick of the shop” and hoped to “step out from under the direction of Mr. True.”¹⁸¹

From the day he arrived at the Smithsonian, Hornaday desired to make his own way in the world of science and taxidermy. His monthly reports suggest, however, that Hornaday exerted little or no influence over the direction of the Smithsonian’s collection or its displays. Since he could not convince Baird, Goode, or True to mount animal groups, Hornaday appears to have resolved to obtain individual specimens that would provide a taxidermic challenge as well as make a strong artistic statement once on display. To this end, Hornaday took an active interest in expanding the museum’s network of specimen providers from whom he could receive unique specimens either through donation or exchange.¹⁸²

¹⁸¹ William Temple Hornaday to Henry Ward, December 28, 1883, quoted in Dolph, “Bringing Wildlife to Millions,” 383.

¹⁸² The museum purchased specimens from time to time, however, Hornaday and others were encouraged to find a way to secure specimens through exchange. For example, after attempting to find a suitable exchange for an African sable antelope offered for sale by Ward’s, Hornaday finally convinced the National Museum to purchase it outright. Funding at the end of the fiscal year was also sometimes made available for last-minute purchases.

In 1883, Hornaday received word that animal importer Henry Reiche had a sick hippopotamus in New York. Hornaday offered to take the animal's remains and pay all expenses associated with boxing up and shipping the animal to the Smithsonian. He also hinted that a large zoological garden might be established, so "the Director of the museum could easily make it to your advantage to send us all the [dead] animals that are on your hands."¹⁸³ That following year, Hornaday communicated with the superintendent of the Central Park menagerie, asking if he would be willing to send any of their dead animals to the National Museum. Since the Smithsonian could not pay for anything except transportation, and the menagerie would probably not be interested in any form of specimen exchange, Hornaday offered instead to work up some

¹⁸³ William Temple Hornaday to Henry Reiche, December 20, 1883, RU 210, Box 2, f 5. In other words, if Reiche shipped dead animals to the Smithsonian free of charge, the zoo under development might in turn become a grateful paying customer, purchasing living specimens from the importer for display. Which zoo Hornaday referred to in his letter is difficult to determine. A Zoological Society was established in 1870 in Washington, but there does not appear to be any significant Smithsonian involvement at that time. In 1877, a request for \$20,000 to establish a zoo was rejected by Congress. In 1886, P.T. Barnum offered to establish a zoo with \$200,000 of his private funds, probably as a place to keep his own animals when not on the road, but nothing came of that offer either, even though he had support for his idea. In arguing his point, he cited the decline of North American wildlife: "Many of the larger animals in this country are now rapidly disappearing from off the face of the earth, - notably the bison, the elk, and moose, - while numbers of the smaller representatives of our splendid mammalian and avi-fauna are unfamiliar to the eyes of the vast majority of the people of this country, from the simple fact that we are so poor in institutions where the living- specimens can be put on exhibition. " See R. W. Shufeldt, "A National Zoological Garden," *Science* 7, no. 174 (Jun. 4, 1886), 505.

“pretty pieces” of taxidermy for the superintendent’s parlor.¹⁸⁴ He also contacted the O’Brien’s Show menagerie about unique animals the Smithsonian would welcome should they die (e.g., yak, tiger, lion, leopard, etc.) and the St. Louis Zoo about securing the carcass of a lion, assuming it “has a good coat and would make a fine mounted specimen....”¹⁸⁵

As he worked to establish himself professionally and expand the network of donation and exchange initiated by Spencer Baird, Hornaday added his own unique twist: the commodification of animal parts. The Smithsonian’s budget limited the amount it could spend on outright purchase of specimens. Because Ward’s sold its specimens for specific dollar amounts, Hornaday started preparing lists of the Smithsonian’s duplicate specimens noting their cash equivalency. For example, he valued the skin of an 11-foot female sea lion in “first class” condition with no leg bones and a wooden skull at \$60, a one-week-old sea lion with both the skull and leg bones at \$20, and a snowshoe hare, also with skull and leg bones, at \$3.¹⁸⁶ In much the same way Baird had approximated the value of specimens for exchange, Hornaday went a step farther, viewing duplicates as currency, with a commercial value sometimes

¹⁸⁴ William Temple Hornaday to William Conklin, March 14, 1884, RU 210, Box 1, f 3.

¹⁸⁵ William Temple Hornaday to Add[ison?] Lake, May 11, 1885, RU 210, Box 2, f 4; Hornaday to John B. Winner, April 14, 1885, RU 210, Box 2, f 9.

¹⁸⁶ “List of skins picked out for Professor Ward and estimate of their value,” April 8, 1885, RU 210, Box 2, f 9.

trumping even its value for scientific study or educational display.¹⁸⁷ By calculating an approximate price for each skin, head, or skeleton, Hornaday could exchange excess specimens on the commercial market, particularly with his former employer at Ward's Natural Science Establishment.

As Hornaday began to define more fully the financial value of specimens, the Smithsonian's networks of exchange expanded to include the banking of specimens. In 1885, the same year that Hornaday created a list of available specimens and their cash value, Spencer Baird and P. T. Barnum worked out an agreement to furnish the Barnum Museum at Tufts College with duplicates "in exchange for the animals that may die in his menagerie." With this arrangement, the National Museum would send specimens requested by the head of the Barnum Museum, including the skeletons of primates, botanical specimens illustrating the flora of the western and southwestern states, ethnological specimens of all kinds, and copies of the Smithsonian publications. In exchange, the museum would receive the remains of circus animals that died at some future date.¹⁸⁸

¹⁸⁷ Henry Ward also offered Hornaday specimens for part cash and part exchange. For example, Ward offered him a rare Sable Antelope from Africa for \$125 cash or \$225 mounted, half cash and half exchange, warning that otherwise the specimen would be sold to someone abroad "which I do not like." Ward to William Temple Hornaday, November 11, 1886, RU 210, Box 2, f 9.

¹⁸⁸ This agreement would later lead to a disagreement over the remains of Jumbo the elephant, which Barnum would not give to the Smithsonian in spite of his agreement. Specimens also served as currency for the railroad. In exchange for

By the mid-1880s, Hornaday and Goode had expanded Spencer Baird's fledgling system to increase the number of Smithsonian specimens into a full-fledged commodities-like exchange. A network of private and government-sponsored hunters killed animals that the Smithsonian either assessed like any other product based on their size, condition, sex, and other attributes, preserved for display, or banked for future exchange. As successful as this growing exchange network became, however, Hornaday still found some specimens – particularly “fine specimens” of large American wildlife – difficult to obtain through exchange or even outright purchase.

Since the early 1870s, the Smithsonian had collected an assortment of mammal heads, skins, skeletons, and other body parts as they became available from Yellowstone National Park and elsewhere throughout the region. Its mammal collection, particularly those from the American West, also grew as part of the Smithsonian's preparation for the Centennial Exhibition. And yet the Institution's entire bison collection consisted of just two female skins, one

passes on the Chicago, Milwaukee and St. Paul Railway Company carrying Hornaday to Montana, Spencer Baird offered to “send a skin of the buffalo to any institution that [the president of the railroad] may name, as a return for the courtesies of the Company” assuming the “supply holds out.” Spencer Baird to William Temple Hornaday, December 23, 1886, RU 210, Box 1, f 2. Hornaday distributed some of his duplicate bison specimens from the Montana trip, but it is unclear whether or not this was at the request of the railroad president. However, Charles Fee, the general passenger and ticket agent for the Northern Pacific Railroad, that also provided passes, received a shipment of buffalo meat sent directly from Miles City, Montana. Charles Fee to William Temple Hornaday, December 20, 1886, RU 210, Box 2, f 3.

mounted for display, and a mounted skeleton of a male. Other than these three specimens, “the Museum was actually without presentable specimens of this most important and interesting mammal.”¹⁸⁹

In much the same way that Hornaday had identified circus managers and other potential sources of unusual animals to showcase his taxidermy skills, early in 1886 he sent out similar queries to Montana ranchers and military personnel trying to acquire bison specimens or locate remaining bison herds. In this instance, however, he did not receive encouraging responses. As Hornaday later recalled, all of his inquiries elicited the same response: “‘There are no buffalo any more, and you can’t get any anywhere.’”¹⁹⁰

Reports from Hornaday’s correspondents contrasted starkly with earlier estimates of 60 to 100 million bison roaming the North American Great Plains.¹⁹¹

¹⁸⁹ William T. Hornaday, “The Extirpation of the American Bison, with a Sketch of its Life History,” in *Annual Report of the Board of Regents of the Smithsonian Institution, for the Year ending June 30, 1887, Part II* (Washington, DC: Government Printing Office, 1889), 529. The current Smithsonian Department of Vertebrate Zoology research collection includes bison heads, horns, skeletons, skins, and other assorted parts received from Yellowstone. While undated, some of these earliest specimens were collected by P. W. Norris, placing them sometime between 1877 and 1882, when Norris served as the Park’s second superintendent.

¹⁹⁰ Ibid. Hornaday estimated the actual number of wild bison to be fewer than 300, and most of those he believed lived in the backcountry of Yellowstone National Park where he could not gain access to them.

¹⁹¹ Current scholarship, which has examined weather patterns and carrying capacity, questions these numbers. Dan Flores, for example, has estimated the number of bison on the Great Plains at twenty-eight to thirty million. Andrew C.

The expansion of the railroads, sport hunters, and a booming market for bison hides and other remains, coupled with the movement of people and cattle into areas once inhabited by large herds of free-roaming animals, put large wildlife at risk throughout the American West. One day, Hornaday predicted, Americans would find it difficult to comprehend that bison once existed in such large numbers that they created a serious annoyance and even “a dangerous menace” to travel across the plains. He also believed that the size and range of the bison population would never happen again, “if the present rate of large game destruction all over the world can be taken as a foreshadowing of the future.”¹⁹² Quite simply, he warned, the nation and world faced a crisis of massive large-animal extinctions.

Hornaday’s Montana correspondents confirmed that in recent years no bison had been seen anywhere between the Yellowstone and Missouri Rivers, in the Judith Basin, or the Powder River country. Rancher Henry R. Phillips, however, reported that a few bison still might be found outside of Miles City,

Isenberg suggests the population may have fluctuated between twenty-seven and thirty million. Flores, “Bison Ecology and Bison Diplomacy: The Southern Plains from 1800 to 1850,” *The Journal of American History* 78, no. 2 (1991).

Isenberg, *The Destruction of the Bison: An Environmental History, 1750-1920* (Cambridge, UK: Cambridge University Press, 2000).

¹⁹² Hornaday, “The Extirpation of the American Bison,” 392. Unlike Flores and Isenberg, Hornaday believed, “It would have been as easy to count or to estimate the number of leaves in a forest as to calculate the number of buffaloes living at any given time during the history of the species previous to 1870.” *Ibid.*, 387.

Montana. While others discounted this report, Hornaday decided if he wanted to secure his most desired specimens and, in the process, define his own approach to taxidermy and advance his career, he needed to return to the field. Hornaday urged Smithsonian Secretary Spencer Baird to send a small expedition to Montana to see if any surviving remnants of the great buffalo herds could be located there. Hornaday argued his point, not using the language of wildlife conservation but of specimen exchange that Baird himself had once championed:

In a very few years, when the zoologists of this country awake to a realization of the fact that specimens of America's grandest mammal are no longer procurable in the field, such specimens as have been gathered in by the thoughtful will attain a very high value. The scientific museums which will come into existence during the next decade and from that time onward, will naturally look to this Institution for specimens, and if they do not find them here it is not likely they can elsewhere.¹⁹³

Since it seemed unlikely that any institution or individual would ever be able to collect a large supply of bison specimens, Baird agreed that the Smithsonian needed to "undertake the task of providing for the future as liberally as possible." Thus, in the spring of 1886 Hornaday led a Smithsonian expedition in search of the last wild bison in North America. He intended to return with twenty to thirty skins, an equal number of skeletons, and at least fifty skulls.¹⁹⁴ Hornaday traveled to Montana not to capture and protect the last of

¹⁹³ William Temple Hornaday to Spencer F. Baird, March 10, 1888, RU 201, Box 17, f. 9.

¹⁹⁴ Hornaday, "The Extermination of the American Bison," 529-530.

these free-roaming bison for posterity, but rather to kill and, thus, preserve the remains of these animals for science and public display.

On May 9, 1886, Hornaday arrived in Miles City, Montana. With two assistants and a small military escort, Hornaday crossed the Yellowstone River and headed northwest in search of specimens. When he and his party reached the area recommended by Phillips, the rancher assured Hornaday that he would find a small herd of about thirty-five bison within a range of 15 to 30 miles. The party established a permanent camp, their military escort returned to Fort Keogh, and Hornaday enlisted the services of one of Phillips's ranch hands and a Cheyenne Indian named White Dog, who, according to Hornaday, "knew no more about the country than we did."¹⁹⁵ For days they scoured the plains of Montana to no avail.

Eventually the group encountered a bison calf that they lassoed and brought back to camp alive.¹⁹⁶ Ten days later they located two bull bison, killing

¹⁹⁵ Ibid., 532.

¹⁹⁶ William T. Hornaday, "Progress Report of Explorations for Buffalo in the Northwest, Spring of 1886," Washington, DC, July 10, 1886, RU 201, Box 17, f 9. In his in-house progress report, Hornaday describes how his party lassoed the lone buffalo calf that had been separated from a small herd of adults. In the process the other animals "made off at high speed, and quickly disappeared in the bad lands" and in spite of several hours of "hard riding the chase had to be given up for that day." In his printed report, however, Hornaday fails to mention that they scared off the herd, writing instead that the calf had been "abandoned by its mother because it could not keep up with her.... Had its mother remained with it, or even in its neighborhood, we should at least have seen her, but she was nowhere within a radius of 5 miles at the time her calf was

"the largest and finest one." But as Hornaday wrote to Baird, the hunting party was "just in time to be too late" since the animals they killed had started to shed their winter coats, rendering "their skins worthless."¹⁹⁷ The skin of the dead animal, with its "very unkempt, seedy, and trampish look," made it unsuitable for display. So the party took only the skeleton, and the skin of the head and neck, leaving the remains of the animal on the plains, just like thousands of hunters before them had done.¹⁹⁸ Another bull bison shot near Sand Creek already had shed its winter coat, so Hornaday preserved the skin and skeleton and prepared both for shipment to Washington.

In his haste to secure the last specimens of American bison for display, Hornaday appears to have forgotten or perhaps never knew that bison and other wildlife shed their thick fur in the spring, with the hair falling out in clumps. Hornaday found the resulting "unkempt" appearance unsuitable for representing their species in the nation's capital. Resolved to return to Montana in the fall, when the animals' coats would "be in the finest condition," Hornaday

discovered. Nor did she return to look for it, as two of us proved by spending the night in the sage-brush at the very spot where the calf was taken. Colonel Dodge declares that 'the cow seems to possess scarcely a trace of maternal instinct, and, when frightened, will abandon and run away from her calf without the slightest hesitation.'" Hornaday, "Extirpation of the American Bison," 400.

¹⁹⁷ William Temple Hornaday to Spencer Baird, June 1, 1886, RU 209, Box 17, f 9.

¹⁹⁸ William Temple Hornaday, Progress Report, July 10, 1886, RU 209, Box 17, f 9.

promised to lead “a hunt on a liberal scale.”¹⁹⁹ Having traveled to Montana in pursuit of twenty to thirty mountable skins, the Smithsonian Expedition for Museum Specimens, as Hornaday called his group, returned to Washington in the spring of 1886 with only one skin, plus two “fresh” bison skeletons, three bleached skeletons, seven skulls, and one head. He also shipped to Washington a live bison calf, which he named “Sandy,” that later died in captivity.

¹⁹⁹ Hornaday, “Extermination of the American Bison,” 533. After reporting on the unkempt appearance of his first kill, Hornaday goes on to disparage some cowboys he encountered who reporting seeing a herd of 35 bison, killing “two of them merely for sport, as usual,” leaving the rest for the wolves and foxes. Ibid.



Fig. 7: Hornaday and the bison calf "Sandy" in the Smithsonian Park, 1886 (Smithsonian Archives photograph).

Hornaday's party also made a "miscellaneous collection of skins and skeletons of smaller mammals and birds," including one "good antelope skin." But as Hornaday complained, even the antelope they killed were "quite worthless on account of the looseness of the hair. During the latter part of May, and from that time on until the long winter[,] hair is completely shed... leaving the skin clad only with a thin growth of new, mouse-colored hair an eighth of an inch long."²⁰⁰ Hornaday, with his exacting standards of what representative animals should look like, wanted only fine specimens for public display.

Returning from Montana, Hornaday wrote that he was "more than ever impressed with our wants in the way of good mountable skins of fine specimens, and still more of the imperative duty which devolves upon some institution to collect a store of skins to meet the demands of the future when the bones of the last American bison shall be bleaching on the prairie." He wanted to collect a minimum of thirty "first-class specimens" (fifteen old bulls, seven cows and eight young of various ages) but, if possible, he desired forty specimens so that the duplicates could be "held for distribution when the famine for buffalo sets in about three years (or less) from this date."²⁰¹ These excess specimens would be banked on behalf of the nation for later distribution and exchange.

²⁰⁰ Ibid., 531-532.

²⁰¹ Ibid.

Having practiced his rifle skills over the summer, on September 24, 1886, Hornaday returned to Montana with one assistant, a student from Kansas.²⁰² Fearing he might not be alone in his quest, Hornaday warned Secretary Baird not to publicize his success in locating bison, or “there would be parties starting out at once to compete with us.” “There are only enough buffalo here for us....”²⁰³ But Hornaday and his party faced competition from more than museum hunters or other thrill-seekers hoping to get a shot at one of the last free-ranging American bison. One of the cowboys in his party killed and gutted the “largest and possibly finest bull,” leaving the animal in the field for Hornaday to skin. When Hornaday returned the following day, he found that “during the night a band of Indians had pounced upon [the bison], robbed us of his hide, cut off all the meat, and broken the leg-bones to get at the marrow.” Worse, Hornaday continued, the “head was still on the carcass, unskinned. One side of it the redskins had painted yellow, the other side they painted red, and around one horn they had tied a strip of flaming red flannel.” The “defiance” of these marauders appears to have upset Hornaday as much as the loss of “our splendid old bull.”²⁰⁴

²⁰² W. Harvey Brown, a student from Kansas, traveled with Hornaday as an unpaid assistant. Brown kept a journal excerpted in *Montana: The Magazine of Western History* 31, no. 4 (Autumn, 1981).

²⁰³ William Temple Hornaday to Spencer Baird, October 19, 1886, RU 208, Box 9, f 7.

²⁰⁴ Ibid. Hornaday would later kill another old bull, a “very fine specimen,” measuring 5 feet 6 inches in height at the shoulders” and yet another, “truly

Members of Hornaday's fall collecting expedition, which again included workers from a local ranch, interpreted the remains of the bison and the coloring of its head as a "war sign" and a warning to leave the area. In his published report, Hornaday complained bitterly about "the skulking thieves," who had "robbed us of our hard-earned spoil" and yet "through laziness they had left the head unskinned." But as he explained privately to Secretary Baird, Hornaday believed it more likely "a little game of bluff that they are trying to play on us."²⁰⁵

With both men and horses needing rest, and several animal skins to cure, Hornaday agreed to take time off to recuperate. But first, he added, "we are going to look for those Indians who stole our hide."²⁰⁶ If he had to hunt Indians in order to kill bison, he was willing to do so. He also planned to report them to the cavalry. Hornaday later learned that a small group of Indians identifying themselves as Assiniboinés had visited a local ranch, but Hornaday never saw them or signs of any other Indians. And he never recovered the bison skin nor took his revenge.²⁰⁷

magnificent specimen," which was even two inches taller. This animal became the "commanding figure" of Hornaday's first bison display, alongside the bison calf from the spring expedition that later died in captivity. Hornaday, "Extermination of the American Bison," 540-545.

²⁰⁵ William Temple Hornaday to Spencer Baird, Oct 19, 1886, RU 208, Box 9, f 7.

²⁰⁶ Ibid.

²⁰⁷ Hornaday, "Extermination of the American Bison," 537. While the visitors to the ranch identified themselves as Assiniboine, Hornaday initially wrote to Baird

Hornaday appears to have missed the true meaning of this particular animal display. In much the same way that he used orangutans to tell a story about evolution, immigration and family life, and would later rely on bison to warn about the risk of large-animal extinctions, the Assiniboine or other indigenous people, who had the good fortune to come across a freshly killed bison, had left behind an animal display that told an even more compelling story. Indeed, the bison head displayed on the Montana plains had been as carefully and thoughtfully prepared as any specimen in the Smithsonian. Plains Indian cultures often associated red flannel “flags” or ribbons with prayer.²⁰⁸ Thus, coloring an object red may have identified the bison’s remains as sacred. According to Hornaday, one half of the skull had been “daubed” with yellow paint, which may have served as light holes to the animal’s spirit. Or perhaps

from the field that the “red paint business was the work of Chief Gall!” He later believed the thieves were really Piegans (i.e., Blackfeet), because Blackfeet were, according to Hornaday, “the most notorious horse and cattle thieves in the Northwest.” If they would steal your horses, he suggested, they would also steal your dead bison if given a chance.

²⁰⁸ To this day, many Native people tie red flannel on offerings of tobacco, on gravesites, and other sites considered sacred (e.g., at the Little Big Horn Battlefield). Vine Deloria relates the experience of White Bull, a Minneconjou Sioux, who lost his way in the snow while hunting. A “big buffalo” appears to him as if in a dream, rolls in the snow, and when the animal rises “one side of his body seemed covered with white paint. The other side was red. Tied to his horn on the white side was a white shell, and tied to his horn on the red side was a streamer of red flannel.” After the bison leaves, the snow lifted and White Bull’s horse “carried him on in a daze and stopped at Sitting Bull’s tipi.” Vine Deloria, *The World We Used to Live In: Remembering the Powers of the Medicine Men* (Golden, CO: Fulcrum Publishing, 2006), 113.

those who had discovered the animal simply asked for more in the form of blessings from the bison.²⁰⁹ One thing is certain: the bison head represented the last of its species on the plains of Montana as clearly as Hornaday's fine specimens would later represent them in the Smithsonian. Unable to see beyond their own worldview, Hornaday and those with him that day simply misinterpreted another form of animal display.

Threatened by winter weather and having killed as many bison as they could find, including another large male Hornaday shot on one of their last days in the field, Hornaday and his assistant returned to Washington. They brought with them the remains of twenty-five bison, "as complete and fine a series as could be wished for." When Hornaday included the heads, skeletons, and two fetal remains, the two 1886 expeditions to Montana resulted in a total collection

²⁰⁹ Clearly, individuals and cultures bring different motives and methods for displaying and interpreting the remains of American wildlife. Curley Youpee, Director of Cultural Resources for the Fort Peck Assiniboiné and Sioux Tribes, maintains that the Smithsonian and its "reigning fallacy" simply did not know how to interpret the signs left behind by those who took the bison. Youpee also questioned the Hornaday party's interpretation of the head being left behind as a sign of war or even as a warning. The Fort Peck Assiniboiné and Sioux Tribes had just agreed to a reservation order. If the Indians who stumbled across the bison were indeed Assiniboiné as a group of Indians in the area later identified themselves, "it would be very unlikely that anyone would threaten or jeopardize the peace which took so long to achieve." Youpee to author, personal correspondence, December 16, 2010. On the other hand, this bison may have been tracked by whoever had taken it, and the Smithsonian party had simply rushed in ahead of them for the kill. If that were the case, then Hornaday had almost managed to steal *their* bison. If so, Hornaday would have no doubt left just the opposite "display" of science on the plains: a skinless, headless carcass.

of ninety-four bison specimens. In addition, the party brought back antelope, deer, coyotes, rabbits, sage grouse, and “specimens of all the other species of birds and small mammals to be found in that region at that season.” Indeed, Hornaday returned to Washington with enough skins and other specimens from eastern Montana to mount a habitat display similar to the one created by Martha Maxwell. Instead, Hornaday opted to create animal families that, “besides the group of buffaloes, [included] a family group of antelope, another of coyotes, and another of prairie dogs, all with natural surroundings.”²¹⁰

An 1888 article in the Washington *Star*, which Hornaday claimed to be both “graphic and accurate,” described the resulting display of Montana bison as “a new departure in mounting specimens for museums” with “each piece or group an object lesson, telling something of the history and the habits of the animal.” The large male bison Hornaday killed during one of their last days in the field served as the display’s focal point:

It is around the great bull that the romance and main interest of the group centers. It seemed as if Providence had ordained that this splendid animal, perfect in limb, noble in size, should be saved to serve as a monument to the greatness of his race, that once roamed the prairies in myriads. Bullets found in his body showed that he had been chased and hunted before, but fate preserved him for the immortality of a Museum exhibit.²¹¹

²¹⁰ Ibid., 546.

²¹¹ Ibid., 547.

Hornaday had achieved his goal of introducing habitat groups into the National Museum based on his own ideas of the natural world. Martha Maxwell's first attempt at taxidermy featured a female bird with ruffled feathers fighting off the attack of another bird on her nest. In Hornaday's new, less theatrical approach for the National Museum, male "toughs" no longer fought over a fleeing female. Instead, a large male bison stood watch over his family much like the museum looked over the animals themselves, protecting them from the extinction that many believed would be their fate.²¹²

²¹² As Donna Haraway has pointed out about similar family displays at the American Museum of Natural History, this idea of the dominant male and his animal family had little to do with the actual natural history of the animals on display. Haraway, "Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-36," *Social Text* 11 (Winter 1984/85). Like the orangutans that Hornaday had seen living solitary lives in the field, but chose to present as aggressive, social animals when he returned to the shop with their skins, bison live sexually segregated lives except during mating season and rarely if ever assemble in small mixed groups.



Fig 8: Hornaday's 1888 bison exhibit complete with native grasses in the National Museum's South Hall (Smithsonian Archives photograph). The Museum of the Northern Great Plains in Fort Benton, Montana, now features Hornaday's restored display in its "Hornaday/Smithsonian Buffalo and Western Art Gallery."

Hornaday's creation of an idealistic family tableau would soon dominate animal displays for years to come. As significantly, however, the exhibit of Montana bison, displayed with genuine western sod, began the process of recreating and preserving an interpretation of the American West through museum specimens, particularly those animals Hornaday and others believed faced extinction. This desire to capture, preserve, and display the nation's

natural history past would come to define the Smithsonian's transition from knowledge creator to one focused on animal and other displays. This new emphasis on wildlife conservation, preserving in life-like poses what many feared would soon be the last representatives of these iconic American wildlife, would also help cement the Smithsonian's relationship with Yellowstone National Park, a place that many considered the last, best source of these animals.

6. THE SMITHSONIAN AND LIVING SPECIMENS:

A RAPIDLY DEGENERATING COUNTRY

In the center of the exhibit, upon a sod-covered pedestal, was a skeleton of a bison from which the hide had been removed, showing the condition in which the carcasses are left upon the plains by the hide-hunters; and on adjoining screens were specimens of the various grades of commercial hides, with a schedule of their past and present market values.²¹³

-- Smithsonian Annual Report, 1889

Sometime between 1884 and 1888, William Temple Hornaday appears to have experienced a sudden change of heart or what one historian has referred to as a "conversion."²¹⁴ Once an avid collector and exhibitor of taxidermied dead animals, by 1888 Hornaday used the medium of taxidermy to promote the preservation of living specimens. The displays he mounted for the exhibit in New Orleans in 1884 and in Cincinnati in 1888, the first a "grand group" and the other an "extermination exhibit," significantly changed how the Smithsonian displayed and described animals for the benefit of the public.

In 1876, before the Smithsonian had hired Hornaday as Chief Taxidermist, George Brown Goode displayed taxidermied animals in Philadelphia to illustrate their importance for providing the "wants or luxuries of man," as well as the

²¹³ *Annual Report of the Board of Regents of the Smithsonian Institution, for the Year ending June 30, 1889, Report of the National Museum* (Washington, DC: Government Printing Office, 1891), 166.

²¹⁴ Hanson, *Animal Attractions*, 26.

means for using, killing, and processing them.²¹⁵ The success of the Centennial Exhibition led Congress to call upon the Smithsonian repeatedly to use its collections as a means of “illustrating the resources of the United States.” In 1884 alone, Congress directed the Smithsonian to participate in three more commercial fairs: the Cincinnati Industrial Exposition, the Southern Exposition in Louisville, and the World’s Industrial and Cotton Centennial Exposition in New Orleans.²¹⁶ This continual push to create animal displays required the Smithsonian Chief Taxidermist William Temple Hornaday to focus on how he wanted to display animals. As he had with the orangutans, Hornaday also needed to decide the overarching story he wanted these specimens to tell.

Even though he had only four months to prepare, Hornaday proposed “a grand group” for public display in New Orleans.²¹⁷ Still working to establish himself and his reputation through the art of taxidermy, he viewed New Orleans as an opportunity to showcase his expertise. He followed the basic format of Smithsonian displays up to that date, highlighting animals as important products in themselves that provided food, fur, and ivory, and those animals that posed a threat to productivity, such as wolves, skunks, gophers, raccoons, and red

²¹⁵ [Spencer Baird] to Joseph Henry, January 18 1877, RU 70, Box 5, f 1.

²¹⁶ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1884* (Washington, DC: Government Printing Office, 1885), 63-64.

²¹⁷ William Temple Hornaday to Spencer Baird, May 14, 1884, RU 210, Box 1, f 2.

foxes.²¹⁸ But he expanded the concept of the display, seeing the exposition as an opportunity to circumvent museum requirements to only exhibit individual specimens.

For New Orleans, Hornaday proposed a “grand group, temporarily only,” in which “the habitat of each specimen and its geographical relation to the others could be very instructively indicated.” He assured Secretary Spencer Baird that he would not “render any of the specimens less valuable as [individual] case specimens in the museum,” but proposed that he “make both the most instructive and beautiful display of animals ever seen in an Exposition....”²¹⁹ A sketch Hornaday prepared shows both large and small animals displayed together on an artificial, treed mountain upon which single and, in some instances, pairs of specimens stand. Although modest in comparison, Hornaday’s drawing has an uncanny resemblance to Martha Maxwell’s exhibit in Philadelphia, designed to showcase Colorado wildlife in its habitat.²²⁰

²¹⁸ William Temple Hornaday, List and Classification of the Mounted Mammal Specimens Proposed to be Exhibited at the New Orleans Exposition by the U. S. National Museum, May 14, 1884, RU 70, Box 19, f 19.

²¹⁹ William Temple Hornaday to Spencer Baird, May 14, 1884, RU 210, Box 1, f 2.

²²⁰ From the description in the National Museum’s annual report, it is difficult to determine if the presentation altered much if any from the one first mounted by Goode, with the mammals displayed as products, including specimens of fur from “nearly every fur-bearing animal in the United States.” It displayed 160 specimens of mammals, including ruminants, porpoises, manatees, and monkeys, sloths, bats, and insectivores. *Annual Report of the Board of Regents of the Smithsonian to July, 1885 Part II* (Washington, DC: Government Printing Office: 1886), 35-36. As in previous expositions, the Smithsonian used the additional

New Orleans hosted its exposition in 1884. By 1888, when called upon to create yet another animal display for the Centennial Exposition of the Ohio Valley in Cincinnati, Hornaday's view of animal displays had changed dramatically. Two years after his trip in search of the last free-roaming bison, Hornaday viewed the display of animals in a new light. He no longer wanted to represent taxidermied animals as commodities. Nor did he wish to educate the public on individual animals and their habitats. Rather, his "extermination exhibit," as he referred to it, showcased animals at risk of extinction and, as in most expositions, the weapons used to kill them.²²¹ Hornaday directed "public attention to this universal war of extermination which is now being prosecuted against all our best game animals."²²²

In a unique combination of taxidermied animals, stacks of animal skins that had sold for a few pennies each, a collection of "weapons of destruction" used to kill American wildlife, photographs, and even paintings, Hornaday created a multi-media display to preach "a sermon upon the extermination of the

appropriations to produce 149 new taxidermied specimens. Ibid., 58. Regular participation in these exhibits also led to yet more specimen donations, resulting once more in a "serious problem" since the National Museum had no place to house them. Spencer Baird lobbied yet again for another, even bigger museum building. Ibid, 10.

²²¹ William Temple Hornaday to Henry Horan, June 11, 1888, RU 70, Box 28, f 7.

²²² William Temple Hornaday, "Report of the Department of Living Animals of the U. S. National Museum, 1889," reproduced in *Miscellaneous Documents of the House of Representatives for the First Session of the Fifty-First Congress, 1889-90* (Washington, DC: Government Printing Office, 1891).

native animals of North America.”²²³ Hornaday wanted to educate both the general public and legislators about native wildlife and to encourage them “to pass a protective law that would really protect these animals ... from purposeless and wanton destruction.”²²⁴ Hornaday hoped his provocative display would create national interest in animal conservation, but much to Hornaday’s chagrin no one seemed to pay much attention to that message.

When the newspapers showed little interest in his exhibit, Hornaday asked George Bird Grinnell to review the exhibit in *Forest and Stream*.²²⁵ Grinnell had no one to call upon in the Cincinnati area, but offered to print an anonymous letter if one were provided.²²⁶ True to his word, *Forest and Stream* published a lengthy review of the exhibit that Hornaday later reproduced in his own report of the exhibit. In the letter, the writer (presumably Hornaday himself) describes “a startling exhibit ... brought together by Mr. W. T. Hornaday, to illustrate and impress upon the mind of the observer the fact that nearly all of our most conspicuous and interesting game quadrupeds are rapidly being exterminated, and will soon disappear forever. The lesson [the exhibit] teaches is both

²²³ *Report of the National Museum of the Smithsonian Institution, for the Year Ending June 30, 1889* (Washington, DC: Government Printing Office, 1891), 150.

²²⁴ Quoted in *ibid.*, 418-420.

²²⁵ Hornaday was so discouraged by the lack of media coverage of the exhibit that he hoped he never had to prepare another exposition as long as he lived. “A plague upon ‘em all,” he wrote. William Temple Hornaday to Earll, November 2, 1888, RU 70, Box 28, f 7.

²²⁶ George Bird Grinnell to William Temple Hornaday, August 27, 1888, RU 210, Box 1, f 7.

impressive and saddening to every lover of animated nature, and like all the lessons taught by the National Museum collections, it is strictly true.”²²⁷

Hornaday’s motivations can be difficult to read, but this change of focus from specimen hunter to protector of living animals appears to have happened sometime between his Montana bison-hunting trips in the spring and fall of 1886 and his trip to the West Coast in the fall of 1887. His biographer believes Hornaday began to see the world differently while writing his report on the extermination of the bison. Having conducted an extensive census of the few remaining bison and having seen their bleached skeletons on the plains, “Hornaday [had] an understanding of the tragic fate of the buffalo which few other men possessed.”²²⁸ The death of the bison calf he brought back from Montana, named Sandy after the light color of the animal’s skin, also may have impacted Hornaday. Before adding the young bison to the family group he prepared for the National Museum, Hornaday placed the recreated version of Sandy, like a sentinel, outside the Smithsonian’s taxidermy studio door. While these experiences no doubt contributed to the change of direction he pursued, it seems most likely that Hornaday’s experiences in 1887 had the greatest influence on him.

²²⁷ Quoted in *Report of the National Museum of the Smithsonian Institution, for the Year Ending June 30, 1889* (Washington, DC: Government Printing Office, 1891), 418-420.

²²⁸ Dolph, “Bringing Wildlife to Millions,” 503.

Early in 1887, while working on the bison exhibit that, for him, represented and preserved for posterity the last of the free-roaming bison, Hornaday received an enticing letter from Lieutenant A. C. Robertson of the 1st Cavalry. He offered to escort Hornaday into what Robertson believed to be the last of the nation's big game territory north of Flathead Lake in Montana. "The country to which I desire to go is one of the few remaining strongholds of game left in the Northwest," Robertson informed him, "and contains numerous goats, sheep, bear, deer, some elk, a few moose and many of the inferior game animals." The Lieutenant, whom Hornaday had never met, offered to place "everything, including horse and equipment, rifle ammunition, etc., at [Hornaday's] disposal," and to show him "a model army expedition, run on old hunter's principles, and a rare opportunity (for the modern West) for game.... I can promise you such a hunt as you will probably not get again in this rapidly degenerating country."²²⁹

In early 1887, Hornaday still desired to collect and display more animals from the American West, and asked Spencer Baird for permission to join the hunt that he named "the Rocky Mountain Expedition." Hornaday wanted to secure quality specimens for the Smithsonian before it was too late, pointing out that the museum's "mounted specimens of the mountain goat, elk & grizzly bear are old specimens, and very far below what should be shown in the National Museum of

²²⁹ Quoted in William Temple Hornaday to Spencer Baird, March 24, 1887, RU 7002, Box 26, f 1.

the United States.” He argued, as he had on behalf of improving the bison collection, that the museum needed a series of fine specimens, including a male, female, and at least two young of each North American species. And time was of the essence because the “mountain goat, sheep, elk, moose and grizzly bear, as well as the blacktail deer are fast being exterminated, like the buffalo, and each year are growing scarcer and more difficult to obtain.” Again, he wanted to get into the field and “secure a fine series of specimens of every species obtainable” while the animals could still be collected and preserved.²³⁰ Spencer Baird approved the trip but only if Hornaday could secure free passes from the railroad. In this Hornaday apparently failed, since he did not join the Montana hunt.²³¹

At the same time that he tried to secure passage to hunt animals, however, Hornaday also applied to curate a new vivarium as part of the expanding

²³⁰ William Temple Hornaday to Spencer Baird, March 24, 1887, RU 7002, Box 26, f 1. Hornaday estimated the trip would cost \$450, or \$297 if rail passes could be secured. Ibid. In June 1887 Hornaday still planned to pursue animals for display, requesting that the Smithsonian pay for “special articles of wearing apparel” required for high altitudes based on recommendations he received from Robertson, suggesting that he viewed this as a true adventure. William Temple Hornaday to George Brown Goode, June 6, 1887, RU 201, Box 17, f 12.

²³¹ Robertson’s follow-up comment in November that Hornaday should “march boldly upon some [Congressional] committee with your demand for pecuniary assistance,” and Baird’s expressed condolences on the failure of the trip, suggest that Hornaday could not secure the necessary funding either for sundries or transportation or both. C.E. Robertson to William Temple Hornaday, November 27, 1887, RU 210, Box 2, f 5.

museum collection. He asked Goode for \$500 to acquire “desirable live animals, and the food supply of the same.” Through the specimen exchange system he had helped develop, Hornaday had made contacts with several suppliers, and had learned how to use the network to the Smithsonian’s advantage. So in addition to purchasing a core group of living specimens, Hornaday felt confident that if appointed curator he could “secure every year, as gifts, hundreds if not even thousands of dollars worth of live animals of desirable kinds.”²³²

Thus, in the summer of 1887, Hornaday found himself promoting and personally pursuing two distinct forms of animal displays in Washington – one of dead specimens and another of living ones. Even though he did not receive permission to hunt with the U. S. Cavalry, Goode secured passage for Hornaday in a U. S. Fish Commission rail car so that he could collect living animals for display behind the museum. Much later Hornaday referred to the living animals he kept at the Smithsonian as a “little try out zoo on the Museum grounds.”²³³ When Hornaday left in pursuit of those animals in 1887, however, he did not appear to have a national zoo in mind. Indeed, the museum report maintained that Hornaday had been appointed curator of a department of living animals to “afford to the taxidermists an opportunity of observing the habits and positions of the various species, with a view to using the knowledge thus acquired in the

²³² William Temple Hornaday to George Brown Goode, June 25, 1887, RU 201, Box 17, f 10.

²³³ Quoted in Dolph, “Wildlife for the Millions,” 569.

mounting of skins for the exhibition series of mammals.”²³⁴ This may have been an administrative ruse on Goode’s part, but by the time he returned to Washington, Hornaday viewed the need to create such a wildlife refuge as imperative. Hornaday focused on saving the last of the bison, but expressed concern for other large wildlife in the American West as well.

The idea of maintaining a small collection of living animals (or Department of Vivaria) had always been part of the plan for the National Museum. When the new National Museum building opened in 1881 next to the Smithsonian Castle, for example, it showcased a number of living animals in the rotunda, including an owl monkey from Costa Rica, two marmosets and a young deer from Columbia, and a number of snakes. The basin of the rotunda fountain featured fish, some of which came from the carp ponds the Smithsonian maintained near the Washington monument.²³⁵ In addition, Hornaday routinely kept a “small collection of living animals” as models, saving him the time and expense of traveling to Philadelphia to photograph them in the city’s zoological park.²³⁶ When the animals no longer served the needs of the taxidermist,

²³⁴ *Annual Report of the Board of Regents of the Smithsonian Institution, for the Year Ending June 30, 1888, Report of the U. S. National Museum* (Washington, DC: Government Printing Office, 1890), 20.

²³⁵ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1882* (Washington, DC: Government Printing Office, 1884), 157-158.

²³⁶ *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1884, Part II* (Washington, DC: Government Printing Office, 1885), 72.

Hornaday either sent them to the Philadelphia zoo for living display or had them killed and added to the museum collection as a dead specimen.

His trip west in the back of a U. S. Fish Commission railcar appears to have changed that.²³⁷ Stopping in St. Paul, Fargo, Mandan, Helena, Tacoma, and Portland before returning via Salt Lake City and Cheyenne, the fish cars distributed carp and other species while Hornaday sought out living specimens to become part of the Smithsonian collection. He also contacted taxidermists and hunters to obtain dead specimens since Hornaday, only in his early 30s, still appears to have lost interest in tackling the rigors of the field himself. As he confided to Goode, he hoped the resulting network of contacts he made on the trip would allow him to secure the specimens the Smithsonian needed. He still may have felt some lingering bitterness over not being able to join Robertson's hunt, but he wrote that "[h]unting has ceased to be a novelty to me.... I really

²³⁷ The 1871 establishment of the U. S. Commission of Fish and Fisheries ("Fish Commission"), headed by Spencer Baird, foreshadowed the Smithsonian's commitment to reviving animal populations in the American West. Concerned about the decline of fisheries in the Northeast, Baird convinced Congress to fund science and conservation in an effort to increase the availability of fish for food. Goode assumed the unfunded position upon Baird's death. The Fish Commission's rail car Hornaday rode in delivered living carp and other food fish to stock ponds and streams in the West, before returning to Washington with living animals.

dread the necessity of having to take to the field again for the most laborious hunting one could possibly engage in.”²³⁸

Instead, at stops along the railroad line, he arranged for local hunters to secure the finest specimens available for the National Museum’s “great series of family groups.” His wish list included black bears, panthers, gray wolves, deer, moose, caribou, red foxes, raccoons, and badgers. He did not even bother to look for additional bison, writing later that the animals “in a wild state are so very few, and have been so carefully ‘marked down’ by hunters,” that if it hadn’t been for the small herd in Yellowstone, “not one of these buffaloes would be living to-day.” And, he added, the price on their heads alone ranged from \$25 to \$50 each in taxidermist shops.²³⁹

Hornaday expressed an urgent fear that competing hunters would kill off the best and biggest specimens before he could get them. In addition to sport and trophy hunters, he also feared competition from other museums. On his trip to the West Coast, Hornaday learned that the American Museum in New York

²³⁸ William Temple Hornaday to George Brown Goode, November 1, 1887, RU 201, Box 17, f 12.

²³⁹ Ibid. In 1891, George Anderson wrote that “fine” bison heads could bring \$400 to \$1,000 (or \$9,890 to \$24,7000 in 2010 dollars). The “most effectual way to break up this business,” he added, “would be the prosecution of the taxidermists who purchase the specimens – possession of which is prohibited by the laws of all the adjoining States.” *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1891* (Washington, DC: Government Printing Office, 1891), 10. Even the \$50 cited by Hornaday in 1887 would be worth about \$1,180 in 2010.

planned a series of collecting trips, proposing “to knock the stars right out of the sky with the collection they will make.” Hornaday hoped that his own hunters would collect “good & fine” specimens before it was too late. The museum must secure “as fine specimens as ever grew,” he wrote to Goode, “for we are doing our work for all time, to stand as fit representatives of their kinds when the species are no longer to be seen alive.”²⁴⁰ Hornaday contacted one hunter who offered to send the Smithsonian a family of white wolves (a male, female and four young) for \$50.²⁴¹ Hornaday felt so pressured that he even wrote to the notorious hide hunter, Vic Smith, about securing both living and dead specimens of Rocky Mountain wildlife. Smith had made his reputation killing thousands of bison, a fact that only a couple years earlier Hornaday had derided in his report on the extermination of the bison: “Smith ... took part in the [1883] killing of this last ten thousand, and he declared that ‘when we got through the hunt there was not a hoof left. That wound up the buffalo in the Far West, only a stray bull being seen here and there afterwards.’”²⁴²

While he wanted to ensure that the museum collected the finest specimens of American mammals for posterity, Hornaday did not want to leave the fate of American wildlife in the hands of the Smithsonian taxidermy shop alone.

²⁴⁰ William Temple Hornaday to George Brown Goode, November 1, 1887, RU 201, Box 17, f 12.

²⁴¹ William Temple Hornaday to George Brown Goode, October 12, 1887, RU 201, Box 17, f 12.

²⁴² Hornaday, “Extermination of the American Bison,” 512.

Throughout the trip, Hornaday acquired living animals and made new contact with taxidermists and hunters willing to alert the National Museum as other live animals became available for sale. At the prices quoted, Hornaday estimated that the museum could afford to keep a herd of twenty deer, ten antelope, and four elk behind the Smithsonian. Hornaday also expressed interest in securing at least one grizzly and cinnamon bear “to settle finally & satisfactorily the vexed question of species of the grizzly & cinnamon.”²⁴³ He even hoped to assemble living specimens of deer, antelope, and perhaps mountain sheep, to display not behind glass but in corrals. “Buffaloes we must have, of course!” he added.²⁴⁴

Throughout the trip Hornaday acquired living specimens, either by gift or purchase, arriving back in Washington on November 9, 1887 with a full load, including three foxes, a cinnamon (i.e., black) bear, a white-tailed deer, a mule deer, a black-tailed deer, five prairie dogs, two badgers, a golden eagle, and what referred to as a spotted lynx but was probably a bobcat. He also returned with a number of antlers, antelope skins for mounting, and the skin of a grizzly bear. An adolescent deer purchased in Helena died once it reached Washington, so Hornaday added its skin to the museum collection.²⁴⁵ While in Helena,

²⁴³ William Temple Hornaday to George Brown Goode, October 20, 1887, RU 201, Box 17, f 12.

²⁴⁴ Ibid.

²⁴⁵ William Temple Hornaday to Frederick True, November 19, 1887, RU 210, Box 2, f 7. Hornaday suggested to True that one “exceedingly fine” set of antlers in velvet might look good on a mounted head, suggesting that in some instances

Hornaday also cut a cartload of living “prairie sod (buffalo grass, cactus, etc.)” to use for the base of his bison display and a Montana antelope group he planned.²⁴⁶

Once back in Washington, Hornaday moved his new collection of living specimens into a hastily assembled 25 x 106-foot building with temporary cages behind the Smithsonian’s main building. This living museum opened its doors on December 31, 1887 and soon became extremely popular with the public. As Hornaday no doubt intuited, once these living specimens went on display, collectors, hunters, army personnel, and others offered even more living animals. If the cost of shipping could be covered, many, including George Bird Grinnell, offered to send animals on demand for “love and affection” -- of the Institution or the hunt Grinnell did not say.²⁴⁷ Others wanted to unload pet monkeys and other wild animals that had worn out their welcome. As one Texas collector wrote, “I enjoy catching ‘varmints’ and keeping them awhile, but when I get tired of them I find it hard to give them to some one who will care for them properly.”²⁴⁸

even individual animals on display in the National Museum might not be as true to life as they were presented to be.

²⁴⁶ William Temple Hornaday to George Brown Goode, October 20, 1887, RU 201 Box 17, f 12 .

²⁴⁷ George Bird Grinnell to William Temple Hornaday, August 27, 1888, RU 210 Box 1, f 7.

²⁴⁸ Amory R. Starr to William Temple Hornaday, July 30, 1888, RU 210, Box 2, f 6.

Others saw an opportunity to make some easy cash, offering to sell the Institution everything from a large white snake to a pair of gray foxes to a grizzly bear cub. One dealer in New York had a manatee that Hornaday clearly wanted, believing manatees to be at risk of extinction, but he had to decline the offer for lack of space. Indeed, Hornaday had to turn away a full menagerie of animals including a camel, a lion, an ostrich, three moose, a caribou, and three antelope. Hornaday even had to refuse W.F. Cody's offer to leave "on deposit" a herd of eighteen bison, "the third largest herd existing in captivity," for lack of adequate space to display them.²⁴⁹

While he did not have enough room to board Cody's eighteen bison, Hornaday still felt an urgency to obtain a smaller number of the animals for the Smithsonian. On his trip to the West Coast, Hornaday had heard alarming news about the continued killing of bison in or around Yellowstone, confirmed by the mounted heads he saw in taxidermy shops. Hornaday predicted that if the Smithsonian didn't act, the animals faced "certain destruction within two or three years." Much as Hornaday had argued in 1886 for killing bison specimens for the museum to preserve them, the following year he urged the Smithsonian to act quickly to obtain living ones before the bison ran out of time.

²⁴⁹ William Jones Rhees, ed., *Smithsonian Institution, Documents Relative to its Origin and History, 1835-1899, Vol. II 1887-1899* (Washington, DC: Government Printing Office, 1901), 1242-1247.

Living bison specimens still could be purchased for what Hornaday considered reasonable sums, but prices would soon rise to \$500. The Smithsonian would be “anathematized” for having done nothing to ensure their survival, particularly since Yellowstone National Park seemed incapable of protecting the few remaining animals within its borders. As Hornaday wrote to Goode while still collecting in the West:

I am firmly convinced that we could at this next session make an attack in force on Congress, and, using the buffalo as a lever of Archimedes, secure an appropriation of \$5,000 for the purchase & preservation alive of a herd of buffaloes and other wild animals. I may be sanguine, but I really think the necessities of the case could be set forth so strongly that the request could not be refused. Why not make the effort?²⁵⁰

Behind that warning remained the very real possibility, Hornaday feared, that bison might soon be unavailable at any cost.

Hornaday pledged that, if given a few hundred dollars each year, he would “bring together within three years the finest collection of American animals (alive) in this country – or any others – and also a series of mounted groups which will lay all other efforts in that direction completely in the shade.”²⁵¹ Based on what he had seen in the West, and the stories he had heard about bison slaughters, Hornaday’s thinking had changed significantly. The man who once asked for support of killing off the last of the bison for a museum,

²⁵⁰ William Temple Hornaday to George Brown Goode, October 20, 1887, RU 201, Box 17, f 12.

²⁵¹ Ibid.

now wanted national support to keep those same animals alive alongside their taxidermied cousins.

Upon his return to the Smithsonian in 1887, Hornaday wrote another, even more impassioned letter to Goode about the national need for protecting the American bison. In 1886, the U. S. Cavalry had been assigned to protect Yellowstone National Park. The nation looked to Yellowstone for preservation of the bison, one of the “most striking and conspicuous species on the continent.” But even the cavalry did not seem to be up to the job, Hornaday argued, not for lack of interest or commitment, but because they needed more troops to adequately police the Park. The available facilities and housing, centralized in Mammoth Hot Springs, also left unprotected for long periods of time the vast distances traveled by game, particularly in the winter.²⁵² As one of the Smithsonian’s major sources of animal specimens and other artifacts for display, Yellowstone now stood as one of the final refuges for the survival of the bison. But Hornaday feared that the government could not or would not protect them there.

Hornaday had two concrete solutions. First, he proposed an 8-foot high fence around Yellowstone Park’s entire perimeter. The barrier would not keep people out, as the House Committee on the Public Lands had warned when they first proposed the Park, but keep Yellowstone’s living wonders *in* to protect and

²⁵² William Temple Hornaday to George Brown Goode, December 2, 1887, RU 201, Box 17, f 10.

display the animals for generations to come. "With the entire park so enclosed it would be a comparatively easy matter to make of it the greatest game preserve in the world," Hornaday predicted. Like Superintendent Philetus Norris before him, Hornaday recommended that the National Park be transformed into a zoological park – i.e., a park with animals -- with the primary goal of keeping all wildlife confined within the Park's boundaries for their own protection.²⁵³

Others had recommended partially fencing Yellowstone's wildlife as a way of preserving it, but Hornaday proposed more. In addition to enclosing Yellowstone's circumference, the Smithsonian or National Museum or both should "assume the responsibility for farming and preserving a herd of live buffaloes which may, in a small measure, atone for the national disgrace that attaches to the heartless and senseless extermination of species in a wild state.... Is it not only desirable but imperative that we should have a herd [in Washington] fit to be shown as one belonging to the National Government, and not to be equaled by that of any private individual?"²⁵⁴

Hornaday's recommendations did not yet include the establishment of a zoological park, but his ideas for the Smithsonian inched beyond the Department of Living Animals approach of showcasing one or two specimens of different species behind the Castle building. Hornaday wanted to purchase six to ten bison to form a breeding herd. The animals would be held in Washington in

²⁵³ Ibid.

²⁵⁴ Ibid.

trust for the nation. It was, he said, “the duty of the Smithsonian” to intervene on behalf of the bison before their time ran out.

Goode or the new Smithsonian Secretary, Samuel P. Langley, apparently agreed, because within days Hornaday had in hand a signed \$15 voucher to pay M. C. Rousseau in the Dakota Territory to scout out the availability of bison in private hands. The Smithsonian desired as many specimens as possible, but given its limited budget it wanted at least one “fine bull and 2 cows for \$300 delivered at the railroad in good condition.” If Rousseau also could purchase two yearlings for \$25 each, Hornaday wanted them as well. And in case there might be any doubt, Hornaday made it clear that he wanted “no half breeds, nor any save full blood buffaloes.”²⁵⁵

While Rousseau investigated the availability of bison for sale, Hornaday continued his own quest to build the Smithsonian’s American wildlife collection, seeking specimens, both living and dead, for display. He expanded his network of taxidermists trying to arrange for specimen exchanges, and again contacted

²⁵⁵ William Temple Hornaday to M. C. Rousseau, December 8, 1887, RU 210, Box 2, f 5. Before the eugenics movement had taken a real hold of American science in the early 20th century, many still expressed a negative reaction toward “half-breeds” in both human and animal populations. Declaring that “a half-breed is an abomination,” Madison Grant would later help Hornaday establish the American Bison Society in 1905 at the New York Zoological Society to “preserve all remnants of the American bison *without any cross-breeding*” [emphasis in original]. Quoted in Jonathan Peter Spiro, *Defending the Master Race: Conservation, Eugenics, and the Legacy of Madison Grant* (Lebanon, NH: University of Vermont Press, 2009), 63.

hunters like Vic Smith, quoting the prices the Smithsonian would pay for skins. Hornaday also kept the door open for living specimens should Smith or others be able to capture them. Writing from Montana on Park County sheriff's stationery, Smith reported that unexpected events had prevented him from being able to pursue the family of goat specimens Hornaday had requested, so Smith had arranged for a friend in Helena to "have the Indians get them." If they weren't successful, Smith offered to take Hornaday hunting west of the Park, where he could guarantee as many mountain sheep of all sizes that Hornaday wanted, and most other game as well. Except, that is, for bison.²⁵⁶

Rousseau's contact refused to sell any cows from his small herd, but in March 1888, the same month the National Museum unveiled its new mounted bison exhibit, Hornaday received a letter about a pair of bison, the female in calf, that might be available for purchase. Having seen so many other opportunities fall through, Hornaday jumped at the chance to purchase the pair, even though

²⁵⁶ Vic Smith to William Temple Hornaday, March 27, 1888, RU 210, Box 2, f 6. Hornaday and Smith exchanged letters in which Hornaday sought to find out where Smith hunted and where he intended to get specimens. There is nothing in the letters to suggest he was not sincere in wanting to hire Smith, but Hornaday also contacted George Bird Grinnell to see if he knew whether or not Smith was responsible for recent killing of bison. See for example, William Temple Hornaday to Vic Smith, n.d. [ca. January 1888], RU 210, Box 1, f 7; Vic Smith to William Temple Hornaday, January 31, 1888, RU 210, Box 2, f 6; and George Bird Grinnell to William Temple Hornaday, January 12, 1888, RU 210, Box 2, f 6.

he did not know how he could pay for them.²⁵⁷ Goode contacted Eugene G. Blackford, New York Commissioner of Fisheries, asking if he would be willing either to purchase and donate the animals, or purchase them with the promise of repayment after the Smithsonian received its fiscal year appropriation. Blackford agreed to donate the bison, stating simply that the request pleased his fancy.²⁵⁸

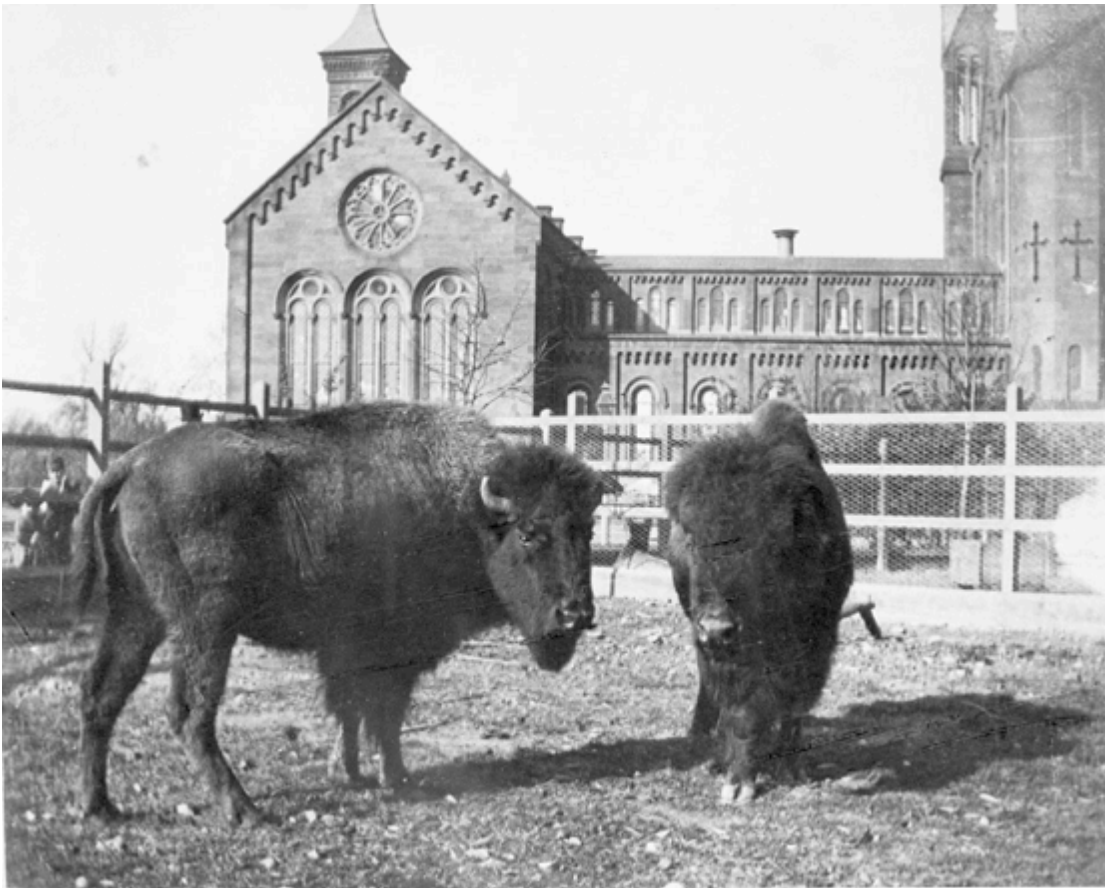


Fig. 9: Display of living bison behind the Smithsonian, ca. 1888 (Smithsonian Archives photograph).

²⁵⁷ William Temple Hornaday to Frederick D. Nowell, April 4, 1888, RU 210, Box 2, f 3.

²⁵⁸ *New York Times*, April 14, 1888.

On behalf of the Smithsonian, Hornaday already had accumulated an impressive collection of living animals and birds, representing the full spectrum of wildlife of the American West. These included the two bison paid for by Blackford, but also a jaguar from Eagle Pass, Texas (a “magnificent specimen, of great size and beauty”), two black bears from El Paso, and a young female big horn sheep, described as a “great rarity... [with] only one other specimen alive in captivity.” The sheep had been captured by Indians in northwest Montana and paid for by George Bird Grinnell. In addition, visitors could see three elk “deposited” by W.F. Cody, (i.e., kept in Washington while not on the road), deer, a spotted lynx and a panther, two badgers, multiple foxes, a coyote, and several different species of birds. By the summer of 1888, Hornaday kept a total of 172 American mammals, birds, and reptiles in pens and other enclosures behind the Smithsonian, living representatives of the American frontier. By June 1889, that number had almost doubled, reaching 341 specimens.

The conditions in which they lived behind the Smithsonian, however, left something to be desired. Most of these mammals, birds, and reptiles, according to Hornaday, ended up housed together in a “small and ill-ventilated building heated by steam, which, during exhibition hours ... usually filled with visitors to an uncomfortable extent.” Unlike the overcrowding of the museum, however, these conditions “caused extreme trouble, not only to provide properly for the

shelter and comfort of the specimens, but to keep them from either killing or injuring each other.”²⁵⁹

While the large and most valuable animal specimens were “alive and in good health,” this less-than-ideal temporary facility inevitably resulted in animal deaths, including a gray wolf, an antelope, and a young deer.²⁶⁰ But in these cases, the curators simply moved the animal remains from the external display area behind the Smithsonian building and into the National Museum to be preserved as skins and skeletons, some of which eventually would be mounted in life-like poses and again placed on public display. So even Hornaday’s “embryo zoo,” as one Smithsonian correspondent referred to it, entered into the museum’s expanding network of specimen display and exchange.²⁶¹

Hornaday’s views about American wildlife, in retrospect, appear to have completely changed since he first wrote to Secretary Baird from Montana the previous year. The Institution’s Chief Taxidermist had seen bison on its native heath, making him “more than ever impressed with our wants in the way of

²⁵⁹ *Annual Report of the Board of Regents of the Smithsonian Institution to July, 1889* (Washington, DC: Government Printing Office, 1890), 26.

²⁶⁰ *Ibid.*

²⁶¹ Reference to the “‘embryo’ Zoological Garden” in Thomas Robinson to William Temple Hornaday, May 26, 1888, RU 210, Box 2, f 5. This process of moving specimens from one display area to another continued into the 20th century. In a letter written to Elwood Hofer, for example, Frank Baker wrote of one of Yellowstone’s porcupines having an accident “and as a result has been transferred to the National Museum.” [Baker] to Elwood Hofer, September 18, 1900, RU 74, Box 70, f 6.

good mountable skins of fine specimens, and still more of the imperative duty which devolves upon some institution to collect a store of skins to meet the demands of the future, when the bones of the last American bison shall lie bleaching on the prairie." Now that the Smithsonian had those skins in hand, and a pair of bison living behind the Institution, Hornaday believed the Smithsonian needed to protect these last living legacies of America's frontier heritage. Their protection would provide atonement "for the national disgrace that attaches to the heartless and senseless extermination of the species in a wild state."²⁶² But Hornaday needed more space and better facilities suitable for bison if he planned to "replenish their races" along with the other North American wildlife "so rapidly vanishing from the continent...."²⁶³

In his arsenal of arguments for creating such a refuge, Hornaday pointed to the popularity of the Smithsonian's living animals with Washington visitors and residents alike, and even with those in other states and territories who offered to donate animals. Based on this general support, Hornaday asked for and received permission to devote a portion of his time explaining to members of Congress a much grander plan of preserving the bison and other game animals, specimens of which (living or dead) were becoming increasingly difficult to obtain. In much the same way that Hornaday had promoted a fence to protect Yellowstone animals, now he argued that living animals collected in Washington

²⁶² William Temple Hornaday to George Brown Goode, December 2, 1887.

²⁶³ *Annual Report of the Smithsonian Institution, 1889*, 26.

also should be protected within an expansive fenced enclosure, creating a national reserve for the conservation of American wildlife.

Such a living collection would serve as “a constant object lesson, under the eyes of the legislature, and in this way, a most important adjunct to the larger reservations like the Yellowstone Park....” Creating an adjunct park in Washington would allow scientists to study and observe their habits and characteristics “in a more satisfactory manner than would be possible in a remote wilderness.”²⁶⁴ Once again the Smithsonian had reimagined itself to include not only research functions and taxidermied displays, but also the collection and display of living animals. To achieve this expanded vision and acquire the necessary animals, the Smithsonian would rely more than ever before on its established relationship with Yellowstone National Park.²⁶⁵

²⁶⁴ *Annual Report of the Board of Regents of the Smithsonian for the Year Ending July, 1893* (Washington, DC: Government Printing Office, 1894), 27.

²⁶⁵ At the same time that Hornaday developed his idea for a fenced national zoological garden, Yellowstone pursued increasingly aggressive management of wildlife to keep animals within its unfenced borders. In 1887, for example, Acting Superintendent Moses Harris noted that while large numbers of antelope lived in the Park, in the winter months the herd migrated into an open area between the Yellowstone and Gardiner Rivers. To protect them from hunters, the cavalry occasionally hazed the animals back towards the hills to keep them from moving outside the Park boundaries. *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1887* (Washington, DC: Government Printing Office, 1887), 13. Captain Harris acknowledged, however, that if hunting outside the Park could be restricted to certain seasons and “sportsmanlike methods,” the Park could not and probably should not attempt to restrict the movement of animals, as long as the Park remained a “secure

refuge and breeding place." *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1888* (Washington, DC: Government Printing Office, 1888), 14.

7. A NATIONAL AND ZOOLOGICAL PARK:

“A HOME AND CITY OF REFUGE FOR THE VANISHING RACES
OF THE CONTINENT”

The object of the zoological park for which this Senate amendment provides is declared to be "the advancement of science, and the instruction and recreation of the people." Probably no one will deny that the advancement of science and the instruction of the people are objects for the support of which every enlightened government is in duty bound to provide. Every zoological garden or park is in the strictest sense an educational institution of a high order, the same as is every museum of science, art, or industry, every marine laboratory and aquarium, and every botanic garden; and one may also add without fear of contradiction every public library. Although the United States is to-day perhaps the wealthiest nation on the earth, and the most prosperous, in comparison with all the nations of Europe, almost without exception, we are actually poor in such institutions as those mentioned above.²⁶⁶

-- Senator James Beck, 1888

When William Temple Hornaday first recommended that the Smithsonian or the National Museum (or both) turn its attention to the collection and preservation of bison and other living specimens, he did not envision a series of cages displaying animals from around the world such as in the London or Philadelphia zoos. Rather, Hornaday proposed a wildlife reserve similar to Yellowstone National Park, a sanctuary for small herds of animals from the American West where animals could live unmolested and be protected from

²⁶⁶ Quoted in Rhees, *Smithsonian Institution Documents*, 1152.

extinction. For this vision, he appears to have had the full support of both Secretary Spencer Baird and Assistant Secretary George Brown Goode and several legislators to whom he described his idea.

Astrophysicist Samuel P. Langley replaced Spencer Baird as Secretary of the Smithsonian in 1887 upon Baird's death. An astronomer and aeronautical researcher, like Secretary Joseph Henry, Langley appears to have had a commitment to fundamental research. But Langley seconded Hornaday's vision, at least initially. In a letter of support for Hornaday's idea, the new Smithsonian Secretary described the proposed wildlife reserve as "a home and city of refuge for the vanishing races of the continent ... together with an opportunity for the carrying out an enterprise of national scientific value..." While many viewed the proposed reserve as an extension of the existing national park system, or even as a satellite of Yellowstone National Park, taking it outside the direction of the Smithsonian, Langley argued that the proposal fell under the Institution's greater mission because it would operate like an extension of the National Museum. As such, it would provide yet another "opportunity to carry out [the Smithsonian's] legitimate work, 'the increase and diffusion of knowledge among men.'"²⁶⁷

As noted by Helen L. Horowitz in her brief history of the National Zoo, "no discernable difference [existed] between the collection of living animals in a

²⁶⁷ Samuel P. Langley to Rep. Samuel Dibble, January 18, 1889, reproduced in *The Reports of Committees of the House of Representatives for the Second Session of the Fiftieth Congress, 1888-1889* (Washington, DC: Government Printing Office, 1889), 461-462.

national zoological park and the stuffed dead ones in the National Museum. Goals were the same, the advancement of science; the authority was the same, the Smithsonian; thus the means of support should be the same, Federal sponsorship."²⁶⁸ But many in Congress viewed it more as an opportunity to create a Washington-area national park.²⁶⁹ Indeed, when the discussion for establishing a refuge for bison and other American wildlife first began, Congress vacillated between appropriating funds for a national park, a national zoo, or something that resembled a little of both.

Senator James Beck from Kentucky took Hornaday's argument to heart, writing that "with our quadrupeds and birds both great and small being rapidly swept out of existence, we have as yet taken no steps whatever to preserve a good collection of living specimens for the advancement of science and the instruction of the people." And, he argued, the nation could no longer count on Yellowstone National Park to serve as the nation's primary wildlife refuge, particularly when it came to the fate of the bison. He noted that until the completion of the Union Pacific Railroad [in 1869], the U. S. was home to at least

²⁶⁸ Helen L. Horowitz, "The National Zoological Park: 'City of Refuge' or Zoo?" in R. J. Hoage and William A. Diess, eds., *New Worlds, New Animals: From the Menagerie to Zoological Park in the Nineteenth Century* (Baltimore, MD: The Johns Hopkins University Press, 1996), 130.

²⁶⁹ Hornaday in *Annual Report of the Board of Regents of the Smithsonian Institution for the year ending June 30, 1888, Report of the U. S. National Museum* (Washington, DC: Government Printing Office, 1890), 213-222. Rhees, *Smithsonian Institution Documents*, 1242-1247.

eight to ten million buffalo. By 1888, scientists believed only 125 bison lived “in a wild state,” with fifty or so in northern Texas and the remaining seventy-five in Yellowstone, where they “wander out [of the Park] and are promptly killed by the hunters who eagerly watch for them.”²⁷⁰

Like Hornaday, whose words and ideas Beck seemed to have relied upon to make his case, the Senator believed that “it is the duty of the National Government to secure a herd of American bison, and preserve it under the best conditions, not only for the public of to-day, but for future generations.” While he considered the bison “our most characteristic quadruped,” Beck also argued on behalf of the mountain goat, elk, moose, antelope, caribou, black-tailed deer, grizzly bear, wolf, beaver, otter, wolverine and others “rapidly approaching extermination” as the reach of the railroads extended throughout the American West.²⁷¹ Minnesota Congressman Knute Nelson chimed in, arguing that the time had come “to gather up the remains of our animals and concentrate them here [i.e., in Washington], where they can be properly cared for, and become a scientific link between our past and present. It is now or never.”²⁷²

Some in Congress listened to these arguments but did not see, or perhaps did not agree with, the logical linkage Secretary Langley made between the conservation and display of living and dead specimens, both under the control of

²⁷⁰ Ibid., 1154.

²⁷¹ Ibid.

²⁷² Ibid., 1157.

the Smithsonian. They contemplated an even grander vision: up to one thousand acres along the Rock Creek drainage to establish the second national park. In this case, animals would be secondary, either introduced at the time of its establishment or later, when Congress appropriated additional funds for maintaining wildlife within the park. Vermont Senator George Edmunds initially asked for \$1.3 million to create a national park in Washington, D. C. He later reduced the requested appropriation to \$500,000 and then to \$300,000, but he still envisioned, “the establishment of a national park in the District of Columbia,” with no mention of wildlife or a zoo.²⁷³ As Secretary Langley later explained, supporters of a wildlife refuge believed “the chances of the National Park bill as a whole, were better than those of the Zoological; but that if we get the National Park, the Zoo could afterwards be carved out of it.”²⁷⁴ Proponents routinely pointed to the government’s support of Yellowstone as evidence that Congressional support for a park in Washington was an appropriate use of taxpayers’ funds.²⁷⁵ And it foreshadowed the way Yellowstone itself would carve a zoo-like environment out of a national park.

Others, such as Senator George Vest from Missouri, countered that rather than support a refuge in the District of Columbia, the proposed national wildlife

²⁷³ Ibid., 1106-1107.

²⁷⁴ S. P. Langley, “History of the Zoological Park Measure,” (Confidential), n.d., RU 74, Box 289, f 3.

²⁷⁵ See, for example, Kentucky Senator J. C. S. Blackburn, quoted in Rhees, *Smithsonian Institution Documents*, 1365.

conservation effort be supported on land already set aside outside of Yellowstone.²⁷⁶ Ultimately, Langley believed that the struggle came down to those advocating for a larger appropriation to establish a national park and those who “while not unfriendly to the National Park, thought the time was not ripe for it, and a more moderate appropriation for the Zoo might get through on its own merits.”²⁷⁷

By February 1889, many believed that Congress would establish a second national park in Washington, D.C. that would include animals, “the two being to a large extent, fused into a common interest. [Legislators] are inclined to think that if the bill is passed, the Park had better be described as the National and Zoological Park.”²⁷⁸ But some legislators in the House of Representatives resisted, seeing the proposed zoo not as a scientific or conservation venture, but as a local park that only residents of the District could enjoy. One Congressman argued that if the zoo were to benefit the nation, it should go on the road like a circus -- animals, clowns, and all. Others expressed skepticism that the proposal had any scientific merit at all.

²⁷⁶ Ibid., 1151.

²⁷⁷ Senator Edmunds proposed to add \$300,000 to D. C. appropriations for “the establishment of a national park in the District of Columbia,” with no mention of a zoo. Edmunds also introduced a second bill for a zoological park. As Secretary Langley later explained, supporters of the zoo believed “the chances of the National Park bill as a whole, were better than those of the Zoological; but that if we get the National Park, the Zoo could afterwards be carved out of it.” Langley, “History of the Zoological Park Measure,” RU 74, Box 289, f 3.

²⁷⁸ Ibid.

In many ways, the animals held in captivity and displayed in a menagerie-like environment behind the Smithsonian contributed to these concerns, as legislators pointed to it as proof that Hornaday's idea for a zoological park would result in not much more than a local attraction. Others, including Iowa Representative David Henderson, rejected Hornaday's proposal to purchase land along the Rock Creek drainage because they viewed it as some sort of "real-estate scheme." But as Henderson investigated further, he became convinced of the project's merits, discovering that Washington-area real-estate speculators actually opposed the proposed park.²⁷⁹

In the end, Congress appropriated \$200,000 and established a three-person commission, headed by the Secretary of the Interior along with the President of the D.C. Board of Commissioners and the Secretary of the Smithsonian. Legislators instructed the Commissioners to buy land along Rock Creek outside the city center for a zoological park dedicated to "the advancement of science and the instruction and recreation of the people." Congress put off any other decisions about funding or developing the land until the following year. On March 12, 1889, the three Commissioners, accompanied by Hornaday and John Wesley Powell (then the Director of the Geological Survey who mapped the land

²⁷⁹ Rhees, *Smithsonian Institution Documents*, 1202.

on behalf of the Smithsonian), traveled to Rock Creek to inspect the area and assigned Hornaday to begin negotiating with landowners.²⁸⁰

At the same time, Hornaday continued an on-going conversation with Captain Frazier Boutelle, Acting Superintendent of Yellowstone National Park. Hornaday already had turned to Yellowstone to secure the animals needed to populate the refuge when the time came, and Boutelle offered “the energies of all under my command.” Boutelle agreed to send living specimens of all the Park’s animals, and Hornaday, in turn, pledged to secure the funds needed to cover the costs of traps, food, and transportation.²⁸¹

²⁸⁰ Journal of the Zoological Park Commission, RU 74, Box 289, f 2. In Langley’s history of the zoological park legislation, presumably written after the fact based on his memory and his own journal, Hornaday is not mentioned when describing the first trip to the Rock Creek drainage. Indeed, Langley’s day-to-day overview claims that at the time of his appointment as Secretary (1887) he was the one who proposed to “commence a small collection of living animals ... on the south side of the Smithsonian Institution building, and in an enclosure on the adjacent green.” The collection “was placed in the care of Mr. Goode, Assistant Secretary.” Since Hornaday had been advocating on behalf of a “small collection of living animals” during the tenure of Spencer Baird and had lobbied Congress on behalf of the Rock Creek proposal, it appears that Langley intended to write Hornaday out of the zoo’s history and write himself in as its chief visionary.

²⁸¹ *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1890* (Washington, DC: Government Printing Office, 1890), 8. Reiger has suggested that it was Grinnell’s original idea to ship animals to the National Zoo. See John F. Reiger, “Wildlife, Conservation, and the First Forest Reserve,” in Harold K. Steen, ed., *The Origins of the National Forest: A Centennial Symposium*, available at www.foresthistory.org/Publications/Books/Origins_National_Forests/

Hornaday's conversations with Captain Boutelle resulted in one of the first shipments of animals received by the National Zoological Park once Congress officially approved it: a "fine lot of mountain birds" captured by Boutelle's son. On May 23, 1890, less than a month after Congress passed and President Harrison signed into law legislation establishing the National Zoological Park on April 30, 1890, six Clark's crows (Clark's nutcracker) and two Stellar's jays arrived in Washington from Yellowstone. By that time, however, Hornaday had already given notice that he would be leaving the Smithsonian. "[A]fter June 15," he wrote to Boutelle, acknowledging receipt of the birds, the Smithsonian "will know me no more again forever, nor I it."²⁸²

Some have speculated that Hornaday resigned because of disappointment, at least in part, with Congress's failure to support his expansive vision for a research and captive-breeding program for American wildlife.²⁸³ Indeed, in a letter earlier that spring to Yellowstone Superintendent Boutelle, Hornaday noted that he was "in quite a demoralized condition from having so many irons in the fire on account of the Zoological Park." That said, he still

index.htm. While Grinnell's front-page story on "Cages in Place of Bullets," written in August 1890, surely helped with the acceptance of this idea, Hornaday already had established a special relationship with Yellowstone for shipping animals.

²⁸² William Temple Hornaday to Captain [Frazier Boutelle], May 6, 1890; William Temple Hornaday to Frazier Boutelle, May 23, 1890, Letter Box 2, # 494.

²⁸³ See, for example, Horowitz, "The National Zoological Park: 'City of Refuge' or Zoo?" in *New Worlds, New Animals*, 132-133.

looked forward to preparing the grounds “to receive this year’s crop of young animals [from Yellowstone] by the time they are old enough to travel by rail.”²⁸⁴

Hornaday understandably felt overworked and under appreciated by Langley, who had severely restricted Hornaday’s activities to control him as if he were just another variable in a laboratory setting. But as of May 6, 1890, when he wrote to Boutelle, Hornaday still appears fully engaged with the enterprise and willing to make the best of it. And even though Congressional appropriations limited the scope of his proposed wildlife conservation center, Hornaday viewed the resulting zoological park as similar if not equal to Yellowstone National Park. After resigning, Hornaday wrote to Captain Boutelle that he “had looked forward to relations between the two Parks that would have been advantageous to the public and creditable to their respective Superintendents.”²⁸⁵

It appears that it was not Congressional limits but Secretary Langley’s shortcomings that led to Hornaday’s resignation. After Hornaday’s idea for a national zoological park had been developed and debated, funds had been appropriated, and land successfully negotiated for and purchased, Langley refused to place Hornaday in charge of the zoo. A Washington, D.C. paper reported that it had heard “some rather spicy comments among the scientific

²⁸⁴ William Temple Hornaday to Frazier Boutelle, May 6, 1890, *ibid.* He also noted in a letter to Goode that the taxidermy shop was falling behind in its work on the American large mammal series because of limited staff. It appears that Hornaday attempted to accomplish too much with too little institutional support.

²⁸⁵ William Temple Hornaday to [Frazier Boutelle], May 23, 1890, LB 2, #494.

circles,” about Hornaday’s resignation. Many in Washington expressed “regret that the Government should have allowed so excellent a man to pass out of its service and lose the rewards of years of patient labor.” As the front-page story reported, while Hornaday created the vision for the National Zoo and even collected animals for it often at no expense to the government, Langley “preferred to place at the head of the Park management some older and more celebrated naturalist, if one could be found. Mr. Hornaday was designated to serve as an assistant to this chief, still unnamed. He declined the appointment. He felt that he had fairly earned the first place.” According to the story, Langley did not dispute Hornaday’s critical role in the zoo’s vision and development, but countered that he wanted a “more conspicuous figurehead” to lead it. “They parted on the spot.”²⁸⁶ As both men learned, human animals are more difficult to control than other zoological specimens.

Langley may have hoped to recruit someone he considered more prestigious than the taxidermist who had imagined and brought to fruition the national zoo concept. Or perhaps he wanted someone who could be more easily managed than Hornaday, who clearly thought of the zoo as his idea and his program. Regardless of his motives, Langley appointed Frank Baker, a National

²⁸⁶ *The Daily Critic*, June 23, 1890. Langley also wrote that Hornaday “would not accept a subordinate place” as the reason for his resignation. Langley, “History of the Zoological Park Measure,” RU 74, Box 289, f 3. Hornaday did revisit the site on May 23, 1890 with Langley, Goode, Powell, Olmsted and his son, who worked on the design of the park, and others including Frank Baker.

Museum specialist in comparative anatomy, to manage the zoo's site construction and general start-up on a temporary basis.²⁸⁷ Hornaday, in turn, used his experience with the Rock Creek land purchases to secure a position in real estate development until Theodore Roosevelt and others offered him the chance to realize his vision for a national wildlife refuge and zoological park in New York City in 1896. Hornaday, Roosevelt, and others established the American Bison Society at the zoo in 1905 and, in 1907, shipped its first fifteen bison to stock the Wichita National Forest and Game Preserve in Oklahoma. The Society also helped raise funds for a similar reserve in Montana. Moving from the preservation of life-like animals to living ones, Hornaday quickly became the prestigious national voice for animal conservation that Langley had desired for the National Zoo.

Langley also "severely restricted Baker's ability to act," while focusing his own attention on securing animals.²⁸⁸ For this Langley turned to Yellowstone National Park and the relationship Hornaday had established with Acting Superintendent Frazier Boutelle. Boutelle had visited Washington in the winter of 1889-1890, and had heard the arguments for establishing a national zoo. When Boutelle returned to Yellowstone, he worked to counter the growing concern

²⁸⁷ The "Historical Notes for the National Zoological Park" refers to Baker as "Assistant Superintendent of the Light House Service." Available at <http://siarchives.si.edu/findingsaids/faru0074.htm>. Langley never did find someone more prestigious to head the National Zoo, so Frank Baker served as superintendent until his retirement in 1916.

²⁸⁸ Horowitz, "The National Zoological Park," 133.

about wildlife, writing that “the protection of the wild animals within the Park has been perfect” and that not a single animal had been destroyed in Yellowstone under his watch that year. Boutelle acknowledged the importance of Yellowstone’s national image as the place to view wildlife, noting that visitors often complained when they failed to see key Yellowstone species. He proposed to enclose “a band of elk ... in Swan Lake Basin and of buffalo in Hayden Valley.... so that all may at least see a sample.”²⁸⁹ Like many in Washington, Boutelle believed it was Yellowstone National Park’s duty to protect wildlife. But after visiting Washington, and hearing the benefits of a national zoo, he wanted to display animals in the Park as well.

In Washington, the Smithsonian’s pleas for additional funding of the new zoological garden went unanswered, many in Congress continuing to view it as nothing more than a local attraction. Once the Committee had arranged for the land, Congress only appropriated half the requested amount for funding the zoo’s design, construction, operation, and care of animals, and half of that amount had to come from the District of Columbia. The Smithsonian Board of Regents had agreed to sponsor a National Zoological Park because, like the National Museum, Hornaday and others had envisioned it as a national and scientific enterprise, providing yet another opportunity to increase and disseminate knowledge through the collection, display, and ultimately exchange

²⁸⁹ *Yellowstone National Park Annual Report, 1890, 7.*

of specimens, thereby meeting the Smithsonian's mission. But they had to curtail that vision significantly due to lack of funds. The Institution needed to be realistic about what was possible, and the Smithsonian Board needed to consider its reliance upon the taxpayers of Washington, D.C.

In 1890, after receiving only half their requested appropriation, the National Zoological Park Commission publicized the story of the discovery in Siberia of the frozen skeletal remains of a woolly mammoth to "which large portions of flesh, skin, and hair still clung." Scientists excavated the mammoth in the early 19th century and transported it hundreds of miles across the tundra for display in the Imperial Museum of St. Petersburg, where it was "regarded as the greatest treasure of that magnificent collection. Scientific memoirs, popular books, theological works, poems – in short, a whole literature – has come into existence with this discovery as its text."²⁹⁰ Like the mammoth, large numbers of America's most notable wildlife, including the bison, prong-horned antelope, elk, mountain goat, and others that once roamed freely across the continent, could soon join the list of "vanishing races." And not only large land mammals faced potential extinction. The Pacific walrus, the California sea elephant, the manatee and other marine animals were also at risk, as were many species of birds.²⁹¹ A

²⁹⁰ *Annual Report of the Board of Regents of the Smithsonian Institution, to July 1890* (Washington, DC: Government Printing Office, 1891), 34.

²⁹¹ *Ibid.*, 34-35.

national, centralized collection was the only way to save them from extinction the Commission suggested.

The Commissioners recognized the important contributions made by Yellowstone National Park in protecting American wildlife from this fate, but not all American animals lived in Yellowstone. The Smithsonian continued to argue that it was both desirable and necessary that a zoological reserve be established near the Capitol, where:

... representatives of all these races, not only of the land, but of the water also, may be preserved under the care of those permanently interested in their protection, the charge, that is, of men who not only have special professional knowledge of their habits and needs, but who may be considered as having an unselfish interest in looking to their preservation, and who may act as scientific advisers, whenever such advice is deemed desirable by Congress or by the heads of Departments. Is it realized that nearly all the principal animals indigenous to the United States are either substantially extinct or in danger of becoming so and is it sufficiently realized that, once extinct, no expenditure of treasure can restore what can even to-day be preserved by prompt action of a very simple and definite kind?²⁹²

In November 1890, Smithsonian Secretary Langley contacted John Noble, Secretary of the Interior. He requested that Yellowstone Park personnel trap and ship to Washington up to twenty specimens of every animal available in the Park. These animals, Langley explained, would either be displayed in Washington or used for exchange.²⁹³ Like dead specimens before them, these

²⁹² Ibid., 36.

²⁹³ S. P. Langley to John Noble, November 6, 1890, RU 74, Box 90, f 5.

living animals from Yellowstone could be used as cash equivalents to obtain more animals for display.

The following month Langley assured Secretary Noble that the Zoological Park could “receive buffaloes, elk, and deer at any time, and any other Park animals also with the exception of bears and pumas,” which he could not accommodate until the following May. He added, however, that “a male puma will be exceedingly acceptable at once” as would “[s]everal pairs of the wolverine and badger,” as they were needed for “the early use of the Park.” Like Hornaday before him, Langley promised to cover any expenses incurred by the Park, including crating, transportation, and food.²⁹⁴

Secretary Noble in turn contacted Superintendent Boutelle requesting that he begin trapping and sending animals to Washington “without delay,” since he considered this work “one of the purposes for which Yellowstone Park was established.”²⁹⁵ Boutelle apparently had a prickly relationship with Noble, based in part on the Secretary of the Interior ignoring the Acting Superintendent’s pleas for funds to purchase equipment needed to protect the Park from fire.²⁹⁶ But when it came to making Yellowstone animals freely available to the National

²⁹⁴ S. P. Langley to John Noble, December 8, 1890, LB1, #266.

²⁹⁵ John Noble to Frazier Boutelle, December 12, 1890, LB 1, #265.

²⁹⁶ In his report of 1890, for example, Boutelle repeated his request for fire-fighting supplies such as axes, shovels, and folding rubber buckets, some of which he had purchased with a \$40 donation from a Park visitor. He also asked again for water tanks and draught animals to transport water during fires. *Yellowstone Annual Report for 1890*, 4-5.

Zoological Park, both men appeared to be in agreement. Boutelle responded that he was “very glad” that Secretary Noble had “decided to send specimens of our Park game to the Zoo at Washington, and I shall be a very willing agent in the work.”²⁹⁷

Like his predecessors, however, Boutelle served two masters in Yellowstone National Park: the Department of the Interior and the Department of War. By the time Secretary Noble’s letter reached him, Boutelle and most of his men had been sent to Fort Keogh because of “the Indian disturbance.” Boutelle could not commit with any certainty whether or not he would even return to Yellowstone, having heard rumors that his regiment might exchange with the Sixth Cavalry in the spring. Still, should he return to his post in the Park (it turned out he did not), he promised to assist the Secretary of the Interior in this endeavor. Boutelle also set forth his own personal vision for the Park, hoping that he might remain long enough to “see an abundance of fish, where fish had never been before, the Zoo at Washington filled with animals branded Y.N.P., the hotels commodious and well managed and some law established through which the scoundrels who violate the laws may be punished.”²⁹⁸

²⁹⁷ Frazier Boutelle to John Noble, [December 25], 1890, RU 74, Box 90, f 5.

²⁹⁸ Frazier Boutelle to John Noble, [December 25], 1890, RU 74, Box 90, f 5. On December 19, 1890, Boutelle and his company had been sent to join a large command under A.K. Arnold of the First Cavalry to locate and return fleeing supporters of Sitting Bull, who had been killed on the Standing Rock Agency in South Dakota on December 15. Boutelle and others under Arnold’s command were in the field until early February 1891, at which time they traveled to Fort

The cavalry's presence in Mammoth Hot Springs brought much-needed protection to the Park's wildlife and other natural resources, but because the Department of War could rotate or call out troops at a moment's notice, Yellowstone management suffered from unpredictable turnover. For that reason, Arnold Hague of the U. S. Geological Survey advised Secretary Langley that if he intended to look to Yellowstone National Park to stock his new zoo, he should not rely on the cavalry. Instead he should employ his own "hunter" of live animals to operate on the Smithsonian's behalf. Hague also recommended that the hunter be given an official title to set him apart from others who might claim to be collecting animals in the Park for the Smithsonian. He should also instruct the hunter to deliver "any and all animals captured to the commanding officer at the military headquarters at the Mammoth Hot Springs, who should in turn be instructed to receive, shelter and feed them, and forward them to Washington when required."²⁹⁹

A geologist who had traveled in the Park and who would later write a guide to Yellowstone's geology, Hague recommended that Yellowstone establish a permanent enclosure for captured animals where their own gamekeeper would tend them. Hague went so far as to identify places near Mammoth Hot Springs where a stockade could enclose "brooks, meadows, rocks, hill-slopes, timber and

Custer in Montana. *Report of the Secretary of War, Volume I* (Washington, DC: Government Printing Office, 1892), 243-245.

²⁹⁹ Arnold Hague to S. P. Langley, January 8, 1891, LB 1, #263.

grass lands, meeting all the requirements of an enclosed zoological reservation. Indeed," he added, probably not realizing how close his recommendation came to Hornaday's original vision for a National Zoological Park, "I find I am frequently disposed to speak of the Yellowstone Park as a zoological reservation in distinction from a zoological park or garden."³⁰⁰

Langley seconded Hague's recommendation of Elwood Hofer, who had written occasional pieces for *Forest and Stream*, guided parties in the Park, and even spent one winter attempting to photograph Park bison. Langley also asked that the Park keep "some species on hand" throughout the year in a stockade where tourists could view them but, more importantly, where the Smithsonian could gain access to them as needed or until they had enough animals to ship in bulk, keeping the per specimen costs of transportation down. Finally, Langley requested that along with collecting living animals, Noble grant Hofer permission "to shoot such animals as may be required to complete the Government's collection of natural history specimens." In essence, Hofer would be assigned to fill both the National Museum and the National Zoo with Yellowstone specimens. Langley's wish list included antelope, badgers, black, cinnamon, and grizzly bears, buffalo, cougar, deer, elk, marmots, otter,

³⁰⁰ Ibid.

porcupines, prairie dogs (assuming they were found there), wild cats, wolverine, and any other animals Langley did not know about to request.³⁰¹

After consulting with the government's legal advisers and finding Langley's request to hire an animal hunter "altogether legal, and one of the valuable purposes for which the Park has been established," Noble forwarded both letters – Hague's and Langley's -- to Captain George Anderson, the Park's new Acting Superintendent. Noble also announced Hofer's appointment and his instructions to obtain living specimens for the National Zoological Park, with all expenses for capturing, holding, and shipping animals, along with Hofer's salary, to be the sole responsibility of the Smithsonian.³⁰² Noble did not grant Hofer permission to kill animals for museum specimens, however. While he kept the option open, Noble explained that if Hofer were allowed to kill animals, "poachers will take advantage of it, and the game will be frightened away. [The animals] would not be there now had there been shooting going in the Park."³⁰³

Thus, when Captain George Anderson arrived in Yellowstone on February 14, 1891, he found one of his first directives as Acting Superintendent to assist with the capture of wildlife for the zoo in Washington. Having received permission from the Department of the Interior, Langley also contacted Anderson directly, requesting that all animals obtained by the Smithsonian

³⁰¹ S. P. Langley to John Noble, January 10, 1891, RU 74 Box 90, f 5.

³⁰² John Noble to George Anderson, January 27, 1891, LB 1, #262.

³⁰³ John Noble to S. P. Langley, January 22, 1891, RU 74, Box 90, f 5.

hunter be kept in stockades in the Park “until such time as they are wanted in Washington.”³⁰⁴ As more space and additional funding for the zoo became available, Langley anticipated that the enclosures could be expanded to hold even more specimens awaiting shipment. In essence, he proposed that Yellowstone establish its own temporary zoo and warehousing system with rotating animal displays. Funding did not come as quickly and regularly as Langley had anticipated, however, so his plans for temporary holding pens became quasi-permanent while he and others lobbied Congress for additional support.

Within days of his appointment as Smithsonian hunter, Elwood Hofer also contacted Anderson, anxious to begin collecting.³⁰⁵ Langley first appointed Hofer to work on the Smithsonian’s behalf until April and then extended that appointment until May 1, 1891.³⁰⁶ That spring Hofer brought in two black bear cubs, three young foxes, two elk, and a black-tailed deer (mule deer), which Anderson held for shipment to the zoo. Hofer even continued to collect animals for the Smithsonian after his contract expired, bringing in three elk, two antelope, an unspecified number of young foxes and a grizzly bear cub, followed by a

³⁰⁴ S. P. Langley to George Anderson, January 10, 1891, RU 74, Box 90, f 5.

³⁰⁵ Elwood Hofer to George S. Anderson, February 5, 1891, LB 3, #1046.

³⁰⁶ S. P. Langley to George Anderson, March 21, 1891, LB 3, #493.

young deer, two more bear cubs and another fox.³⁰⁷ But without funding for shipping them, they, too, remained in Yellowstone.³⁰⁸

Anderson eventually received funds for transporting two bears to Washington, but with no additional funding forthcoming, he soon found himself in charge of a menagerie that quickly grew to include two additional bears, two elk, two foxes, and a beaver, a badger, and a porcupine. Two antelope awaiting shipment were killed and eaten in their enclosure before they could be sent, as was one bear cub chained in a pen. Anderson promised to “trap and add to the collection a number of the smaller animals, like wolverines, wolves, lynxes, martins, badgers, porcupines, beavers, etc.,” once the Smithsonian authorized shipment of the growing number of animals already held in and around Mammoth Hot Springs. Indeed, Anderson hoped to “supply specimens of all the animals native to the Park.” In the meantime, however, he did not seem to

³⁰⁷ Elwood Hofer to George Anderson, June 2 and 6, 1891, Letter Box 3, #1042 and #1043.

³⁰⁸ In 1892, Hofer penned a series of often humorous letters to *Forest and Stream*, describing some of his adventures chasing bear cubs up trees, running down fawns, and capturing young elk that would stretch out “as limp as a rag [and] would lie just where it was placed for a long time. I could not make it stand on its feet. It would lay close to the ground and flatten its ears down, so that it was very difficult to distinguish it from surrounding objects.... The dogs both thought it a nice pet, would lick it all over, and when made to leave it alone would lie near by, watching it for hours.” Elwood Hofer, *Forest and Stream* 38, no. 8 (February 25, 1892), 173. His attempt to capture wildlife for the National Zoo had become national entertainment.

worry much about the lack of funding available for shipping the animals since they had “proven very interesting to the tourists.”³⁰⁹



Fig. 10: Captain George Anderson with a bear cub ca. 1891 he kept chained near his home in Mammoth. This may be the same cub Anderson later found dead before it could be shipped to Washington (National Park Service photograph).

³⁰⁹ *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1891* (Washington, DC: Government Printing Office, 1891), 10-11.

By 1891, Langley had accepted the limitations the Smithsonian faced, and recommended that it abandon its original plan to create a “scientific and national park (with subordinate features for recreation)” and fully embrace the idea of creating a “local pleasure ground and menagerie.” As he explained, “the local taxpayer has the moral right to insist primarily upon the feature which chiefly interests him, i.e., recreation...”³¹⁰ Protecting large herds of American animals to keep them from extinction, the idea that had formed “an essential feature of the original plan,” should be abandoned, as should the plan to construct large animal enclosures designed to protect animals from visitors. Instead of setting aside one-half to two-thirds of the 166 acres as an animal reservation as originally proposed, Langley recommended the entire acreage be opened to the public, with construction of carriage roads, foot and bridal paths, protective railings, and multiple entrances to ensure easy access and public safety. In essence, the area would not be a zoological park designed to protect wildlife, but a pleasuring ground and public park that also displayed animals similar to Yellowstone National Park.

Those animals already in the Smithsonian’s possession, ready for shipment from Yellowstone or received by gift, should be housed in temporary structures until additional funding became available for expansion. Langley also recommended that should any funds remain, they be used to purchase

³¹⁰ S. P. Langley to the Executive Committee of the Board of Regents of the Smithsonian Institution, March 4, 1891, RU 74, Box 288, f 4.

additional American animals for the collection, since Langley did not believe it “even safe to rely upon the promised supply from the Yellowstone Park, which will very likely be smaller than anticipated.”³¹¹ By the end of 1891, Acting Superintendent Anderson had sent only the two bears – a three-year old “cinnamon” bear in mid-June and a two-year old grizzly later in the fall. Anderson offered to arrange for the Smithsonian to purchase moose from a third party, but Langley had to decline those for lack of funding. Langley could not even pay for transportation of the animals still held in the Park, so he promised to bring the matter up with Congress when they reconvened in 1892.³¹²

In the summer of 1892, Anderson added two more bear cubs, two elk, and an antelope to his captive animals, all of which continued to be “a source of unending interest to tourists.” Anderson reported his willingness to continue gathering animals for the National Zoo, but to do so he needed funding for both their maintenance while in the Park and their transportation out of it in the fall. As part of his first list of recommendations as Acting Superintendent, Anderson requested a small appropriation for capturing and caring for animals while awaiting shipment to Washington, a request he listed with policing the park, in

³¹¹ Ibid. The report Langley submitted for the end of the fiscal year, however, does not show any expenditures for animal purchases, only for transportation (\$723.20) presumably all from Yellowstone. See S. P. Langley to Executive Committee, June 12, 1891, RU 74, Box 288, f 4.

³¹² S. P. Langley to George Anderson, December 11, 1891, LB 2, #469. The moose Anderson could have purchased for the Smithsonian probably were held by Richard Rock near Henry’s Lake in Idaho.

essence linking the two activities as part of his duties to protect and conserve the Park's wildlife.³¹³ While Yellowstone held a growing assortment of wildlife into the summer of 1892, the Smithsonian still could not send for them.³¹⁴ By September, not wanting to discourage the collection of animals in the future, Frank Baker promised Anderson he would have the financial situation under control soon. He asked that Anderson continue to capture wildlife so that they might all be shipped at the same time.³¹⁵ In October 1892, Langley finally had the funds and facilities needed to ship and house all the animals Anderson held, engaging a boxcar for their transportation as well as the services of an attendant.³¹⁶

Even though Congress had appropriated some funds for the transportation and feeding of animals, the National Zoo, much like the Smithsonian and National Museum before it, did not receive any direct support for the out-right purchase of specimens. As a result, the zoo relied "entirely upon [Yellowstone's] efforts and upon casual gifts for the increase of its collection," thus, strengthening its special relationship with the national park. Building on the long-standing Smithsonian tradition of specimen exchange, Langley suggested again that since he could pay for transportation, "as many as

³¹³ *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1892* (Washington, DC: Government Printing Office, 1892), 11.

³¹⁴ Frank Baker to George Anderson, July 1, 1892, LB 2, #485.

³¹⁵ Frank Baker to George Anderson, September 14, 1892, LB 2, #483.

³¹⁶ S. P. Langley to George Anderson, October 8, 1892, LB 2, #479.

twenty of each kind” of animal should be sent from Yellowstone, “as any excess in numbers can be made use of by exchanging with gardens in other parts of the world.”³¹⁷ By the end of 1892, Anderson held only a few animals for immediate shipment, all of which he sent to Washington, but he promised to “secure enough to quite fill a car” in the spring.³¹⁸ In such a way, the Smithsonian planned to expand its program of specimen exchange, this time to include the exchange of duplicate living animals from Yellowstone.

With new funding in hand, Langley sent another lengthy wish list in the spring of 1893, requesting everything from buffalo and moose to beaver and porcupines. “I am extremely anxious,” he wrote to Anderson, “to do everything I can to increase the collections at the [Zoological] Park as far as the limited means at command will permit, and I need hardly say that the chief dependence must be placed upon your kind co-operation.”³¹⁹ To assist in this effort, he sent several shipments of specially constructed steel cages, large and small traps, and smaller wire cages, along with the padlocks and chains needed to secure them.³²⁰

³¹⁷ S. P. Langley to George Anderson, December 1, 1892, LB2, #473.

³¹⁸ *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1893* (Washington, DC: Government Printing Office, 1893), 14.

³¹⁹ S. P. Langley to George Anderson, April 19, 1893, LB 2, #466.

³²⁰ Like Boutelle before him, Anderson was not satisfied with capturing animals only for Washington, however. He had noted how much tourists enjoyed seeing the animals kept in captivity awaiting shipment, and proposed that the Park construct for its own benefit an enclosure to hold native game animals such as elk, deer and buffalo, which he believed would be easy to catch, along with antelope, moose, and mountain sheep. Capturing and holding wildlife would

Langley continued to regard Yellowstone National Park as “an important preserve, from which supplies could be drawn for the National Zoological Park.” He expanded his vision of how many animals should be captured and held, hoping to construct a corral, “into which wild animals can be driven, inclosed [sic], fed, and, at the proper time, secured for shipment.”³²¹ To capture bison, Anderson recommended building a paddock to enclose an area of Hayden Valley where bison often congregated, and secured a bid of approximately \$4,000 for constructing an 8-foot high fence.

To investigate this idea and others, Langley sent W. H. Blackburne, the National Zoo’s head animal keeper, to work with Anderson on the identification of suitable locations for capturing buffalo, elk, antelope, and other wildlife for transport to Washington. After visiting some of the Park’s beaver habitat, Blackburne suggested a trapping system to ensure that beaver would not drown or be amputated or mutilated when caught, leaving them unfit for public display. For their transport he suggested the construction of an 8 x 3.5 x 3-foot tank with a platform at one end, into which fresh water could be added each day en route to Washington. For bears, Blackburne recommended two 15 x 8-foot cages, large enough to hold up to four adult bears each – one for grizzlies and

require feeding the animals in the winter, but he assumed the expense would be minimal. If Americans traveled all the way to Yellowstone, they, too, should have the benefit of viewing America’s native animals. *Report of the Superintendent of the Yellowstone National Park, 1893*, 14.

³²¹ *Annual Report of the Board of Regents of the Smithsonian Institution to July 1894* (Washington, DC: Government Printing Office, 1896), 37.

one for black bears. Young elk, antelope, and bison captured in the spring should be kept near Anderson's quarters in a wire paddock until they could eat independently and gained enough strength to make the trip east in the fall. In essence, Blackburne recommended Mammoth Hot Springs become an animal warehouse, where Park wildlife awaited like any other commodity for shipment east.

With the assistance of Captain Anderson who secured the necessary bids, Blackburn estimated the total cost of the entire animal holding operation at a little over \$5,000 (this included approximately \$175 for fifty tons of hay). Using this system of trapping and keeping animals in the Park would result in "one to three car loads of animals each Fall."³²² But this plan, too, designed to lower the costs associated with capturing, holding and shipping animals, also had to be put on hold for lack of funding.

As Yellowstone personnel responded to Smithsonian requests for more animals to display in Washington, facilitating their capture and holding them for shipment, Park visitors benefited from what became, in essence, a wildlife zoo in Yellowstone. These informal animal displays became a routine part of a visitor's experience of the Park in the 1890s. As significantly, the more visitors became familiar with the elk, antelope, bears, and other animals captured and displayed

³²² W. H. Blackburne to [Frank Baker], September 1, 1894, RU 74, Box 90, f 5.

in both Yellowstone and Washington DC, the more these animals generated interest from others who desired Yellowstone animals of their own for display.

PART III:



ANIMALS AND ARTIFACTS

8. AN ALMOST CERTAIN FATE:

THE CONTEST FOR YELLOWSTONE RESOURCES

[T]he extermination of the Yellowstone herd seems rapidly approaching, something should at once be done, that this may not mean the extinction of the Government control of the species, with the death of a few specimens now in captivity. Only one course suggests itself as completely efficient – transference of the great part of the now few remaining animals to a region where they can be effectively protected and increase normally under natural conditions, in which case the bison need not vanish from the face of the earth.³²³

-- S. P. Langley, 1895

In July 1895, Richard (Dick) Rock, better known as Rocky Mountain Dick, rode into Bozeman, Montana, from the Henry's Lake area of Idaho to deliver two elk and two deer to Charles Backus who intended to raise a herd of both animals on his ranch near Belgrade. The six-foot-tall Rock, with the flair of the showman, sported a star-studded sombrero and "a mustache and goatee of the Buffalo Bill type."³²⁴ His arrival in Bozeman with living animals in tow created such a spectacle that the news reached all the way to Spokane, Washington.

³²³ *Annual Report of the Board of Regents of the Smithsonian Institution to July, 1895* (Washington, DC: Government Printing Office, 1896), 30.

³²⁴ "Guide and Hunter: Dick Rock has Spent his Life Hunting and Trapping Game," *The Spokesman-Review*, July 26, 1895.



Fig. 11: Dick Rock on his horse, Lightning, ca. 1900 (Library of Congress photograph)

Rock and his business partner, buffalo hunter Vic Smith, made a good living catching and selling everything from elk and moose to bear cubs and mountain lions, corralling them on their ranch for shipment upon demand.³²⁵ While Rock maintained the living-specimen side of the business, Smith, who also had worked as a scout for the cavalry in the West, guided hunters into the region and occasionally sent dead specimens to the Smithsonian. After purchasing a ranch located west of the Park near Henry's Lake in Idaho, Rock and two

³²⁵ Ibid.

workers enclosed 140 acres with a game-proof, 10-foot high fence. Wearing cross-country skis, Rock and his assistants lassoed their prey in deep, crusted-over snow when the animals had difficulty escaping, strapped them down two at a time to dog-pulled sleds, and moved them into this enclosure. The men also captured at least three young bison that Rock raised as if they were pets.

One writer later remembered both men as “fine exponents of that hardy race of pioneers who pushed across the mountains a half century ago and delved into a region of game, the like of which will never be seen again on this continent.”³²⁶ Yellowstone National Park and other government agencies viewed Smith, Rock, and others setting up competing animal exchange businesses on the Park’s borderlands more as interlopers at best.

Just as scientists and others at the Smithsonian routinely looked first to Yellowstone for their supply of American wildlife, living and dead, individuals and private hunting clubs looked to men like Rock to supply their reserves. Zoological parks also grew in popularity during this period, with nine major zoos established in the U. S. between 1873 and 1899 from Atlanta to Pittsburgh and they, too, needed animals.³²⁷ Men like Dick Rock, with the rare ability to capture and transport full-grown elk and even bison, found a booming market into which they could sell their living specimens. Hunters and conservationists

³²⁶ Henry Bannon, “Dick Rock’s Zoo at Henry’s Lake,” *Forest and Stream* 89, no. 9 (September 1919), 461.

³²⁷ R. J. Hoage, Anne Roskell, and Jane Mansour, “Menageries and Zoos to 1900,” in Hoage and Deiss, eds., *New Worlds, New Animals*, 17-18.

alike willingly paid \$85 for a live elk, \$200 for moose, and \$20 to \$50 for bears.³²⁸

Others looked to men like Vic Smith to help them experience the thrill of the hunt before the last of the great wildlife herds in the American West disappeared or to provide fine specimens for the nation's leading museums while the animals still could be found. In the late 1880s, for example, when William Temple Hornaday wanted more large-animal specimens for the National Museum, he corresponded with Smith, who offered to guide the taxidermist just outside the Park's western border to collect them.

As an honorary member of the Boone and Crocket Club, Acting Superintendent George Anderson did not object to guides and hunters stalking game outside the Park's boundary. He considered Yellowstone a wildlife "reservoir," providing a safe breeding ground for large mammals that might later be captured or killed in adjoining states.³²⁹ Indeed, hunting enthusiasts and conservationists alike saw the potential of national parks as serving just this useful function. Anderson took exception, however, to hunters and trappers

³²⁸ Smith, *The Champion Buffalo Hunter*, 156. According to Smith, they sold 157 elk to Austin Corbin, a New Hampshire man, who was later killed when one of the elk startled the horses pulling the carriage in which he rode. Both Corbin and his driver died in the accident. Ibid. Corbin's obituary in the *New York Times* stated that his New Hampshire property "consisted of 25,000 acres ... the greatest and best-stocked game preserve on the continent." *New York Times*, June 5, 1896. Many if not most of those animals no doubt came from Yellowstone and environs. In 1895, \$85 for a live elk and \$200 for a moose equals approximately \$2,280 and \$5,360 in 2010 dollars, making the capture of living specimens a lucrative trade, indeed.

³²⁹ *Report of the Superintendent of the Yellowstone National Park, 1892*, 9.

entering the Park and helping themselves. Unfortunately, while Yellowstone had rules against killing animals in the Park, no legal penalties existed for those caught doing so. Anderson and others could detain violators and expel them from the Park, but they could not legally charge them with a crime. This made the potential financial gain, particularly when capturing or killing bison in the Park, well worth the risk.

In 1892, for example, the cavalry apprehended one specimen collector attempting to remove from the Park two bison calves, both of which later died. Anderson considered this case to be particularly egregious because the man never faced any penalty due to a lack of laws to protect animals inside the Park. In the case of bison, Anderson had made a personal commitment to their protection, promising to devote his “best energies to it. Their perpetuity within the park is thoroughly assured,” he had reported, “and a steady and gradual increase may be looked for.”³³⁰ He therefore viewed the capture and death of these two young animals as a particular blow to his administration.

The loss of the two bison calves seemed a minor infraction, however, when compared to the acts of Edgar Howell, whose name soon became synonymous with poaching in Yellowstone. His capture also proved to be a real milestone for protecting wildlife in the Park. In March 1894, a small patrol caught Howell skinning five bison in the field. They also found the heads of six

³³⁰ Ibid., 9-10.

other animals cached in the trees. The men marched Howell into Mammoth, where they briefly held him but, like others before him, Howell could not be prosecuted and he eventually had to be released. *A Forest and Stream* correspondent in the Park at the time telegraphed George Bird Grinnell, who immediately published the news about Howell's arrest and began lobbying for tougher protection of Park wildlife.³³¹



Fig. 12: U. S. Cavalry troops with the heads of bison killed in Yellowstone, 1894 (National Park Service photograph).

³³¹ For a good overview of how quickly legislation moved to protect wildlife, see Hampton, *How the U. S. Cavalry Saved Our National Parks*. Hampton views the resulting Lacey Act of May 7, 1894, “as a great landmark in Park legislation,” surpassed only by the Act that established the Yellowstone Park. *Ibid.*, 125.

In 1893, Grinnell, wildlife advocate and founding member with Theodore Roosevelt of the Boone and Crockett Club, wrote almost longingly about his own experiences hunting bison in Montana in the 1870s. But those days on the frontier of the American West had passed, and the animals' fate now rested, he wrote, in the hands of the cavalry, which "protected from destruction" the last of the wild bison living in the United States.³³² Unlike Hornaday and many of the Park's acting superintendents who championed fencing the Park's perimeter as if it were a zoo or nature preserve, however, Grinnell believed in implementing stricter game laws in the Park and adjoining states, improved management and patrols of Yellowstone's borders, and the expansion of Park boundaries to protect the free movement of more animals. Grinnell viewed the Howell case as a flagrant example of why the Park needed this kind of protection, writing that it was "evident that unless something is done at once to make poaching a crime, the Yellowstone Park buffalo will very soon be wholly exterminated."³³³ Grinnell lobbied Congress for laws to allow the prosecution of poachers in the Park and urged readers of *Forest and Stream* to do the same.

Anderson estimated that even with the number of animals killed by Howell, the Park's bison population stood at about 200. Yellowstone could ill afford to lose bison to head hunters like Howell, but Anderson still considered

³³² George Bird Grinnell, "In Buffalo Days," in Theodore Roosevelt and George Bird Grinnell, eds., *American Big-Game Hunting: The Book of the Boone and Crockett Club* (New York, NY: The De Vinne Press, 1893), 202-210.

³³³ "The Capture of Howell," *Forest and Stream* 42, no. 13 (March 31, 1894), 270.

this event to be “the most fortunate thing that ever happened to the Park, for it was surely the means of securing a law so long striven for.”³³⁴ The resulting Lacey Act of 1894 placed Yellowstone National Park under the exclusive jurisdiction of the United States, and prohibited “all hunting, or the killing or wounding, or capturing at any time of any bird or wild animal, except dangerous animals, when it is necessary to prevent them from destroying human life or inflicting an injury.” Those seeking American wildlife would have to look elsewhere, or face stiff penalties and some real time in the Fort Yellowstone jail, built later that year for that specific purpose.

It certainly discouraged activities of men like Dick Rock who would need to be more cautious when running down game. Coupled with the financial crash of 1893, which dampened demand western wildlife and private animal displays, Rock lost his “ready market for elk and deer,” leaving him to consider taking up cattle ranching, crossing Galloway cattle with some of the bison he still held.³³⁵

The legislation had an unintended consequence for the Smithsonian as well. Capturing animals for the Smithsonian put even Yellowstone administrators in the position of potentially breaking the law. Frank Baker reminded Superintendent Anderson that Yellowstone specimens “are at once so important and valuable, and so difficult to obtain elsewhere, that we naturally

³³⁴ *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1894* (Washington, DC: Government Printing Office, 1894), 10.

³³⁵ “Guide and Hunter,” *The Spokesman-Review*, July 26, 1895.

look in that direction for them.”³³⁶ Plus, Baker understood that any animals he did not need or want for display easily could be entered into exchange with other zoos. But Anderson immediately stopped collecting and shipping Park wildlife until he could receive clarification from Washington. Once the Department of the Interior assured him that the legislation did not apply to Park administrators or the Smithsonian, it was too late to capture many of the animals requested by the National Zoo that year. Anderson only had time to crate up and ship one bear, ten beaver, and a handful of birds to Washington.³³⁷

³³⁶ Frank Baker to George Anderson, July 3, 1894, LB 2, #461.

³³⁷ *Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1895* (Washington, DC: Government Printing Office, 1895), 13-14. Anderson collected his own specimens, however. In one instance, recalled by George Bird Grinnell, Anderson came across a black bear with two cubs. “The cubs hastily scrambled up a small tree, and the mother disappeared in the bushes. Gen. Anderson stopped the ambulance, and while the driver tied up the mules, felt about in the bottom of the vehicle and brought forth an empty sack which had held grain for the animals. He told the driver to climb the tree and throw down the bear cubs. As they came down one after another, Gen. Anderson seized each cub and thrust it into the sack, which he tied up. Meantime the mother bear had made her appearance, and was advancing threateningly with fierce growlings and gnashings of teeth. As she drew nearer she made a charge on Captain [sic] Anderson, who, picking up from the ground a small dead branch, rushed to meet her. The bear—her hair erect—snapped her teeth together and chattered in fury, as she came on, but long before the two came together, her heart failed her and she turned tail in hurried flight. She watched the wagon for some time, but did not again approach it. These cubs Gen. Anderson reared, and long had in a small enclosure near his quarters at what is now Ft. Yellowstone.” [Grinnell], “Death of General Anderson, His Work Largely Responsible for the Yellowstone Park of Today,” *Forest and Stream* 84, no. 4 (April 1915), 234-235.

In the case of bison, however, the Smithsonian's desire went beyond obtaining animals simply for display in the National Zoo or for exchange. On February 28, 1895, one year before Theodore Roosevelt appointed William Temple Hornaday director of the New York Zoological Garden where he would establish his own small bison herd, Secretary Langley requested up to five bison from the National Park, offering to hire Elwood Hofer to construct a small "stockade in which to 'gentle' the animals a little before sending them on." As Langley wrote, "it is very desirable in the interests of the Zoological Park that it should have these, if it can have them, this spring..."³³⁸ Langley later upped the number of bison desired to twenty or twenty-five animals.

Langley and Anderson discussed the best methods to capture about one-quarter of the herd Anderson believed still lived in the Park. Anderson agreed to fence in "some hundreds of acres" in the Hayden Valley that summer and to supervise a contract for constructing a fence, not to exceed \$3,000. The proposed corral would be built in such a way as to allow for expansion at a later date. Anderson also thought he would be able to get permission to post a military detachment to guard the enclosure through the winter months.³³⁹

Anderson knew that without protection, even animals confined within the Park would be at risk. Men like Dick Rock not only went after bison calves in the spring, but knew how to run down and capture adults if the conditions were

³³⁸ S. P. Langley to George Anderson, February 28, 1895, LB 4, #1651.

³³⁹ S. P. Langley to Frank Baker, April 10, 1895, LB 4, #1643.

right, using a combination of tracking, lassoing, and getting the animal onto its back, at which point it became more easily handled, according to Rock. By the spring of 1901, he had created a herd of fifty-two bison. Of the 130 animals Rock kept corralled on his land, he viewed the valuable bison as “the pride” of his collection. Positioning himself as an early conservationist and wildlife advocate, he chided the federal government for “having permitted the indiscriminate slaughter of the vast herds of buaffaloes [sic] that once roamed the Western plains in countless thousands” and hoped to sell “Uncle Sam” the animals needed to put “a portion of its millions of idle acres” to work cultivating the animals before they became extinct. Otherwise, Rock warned, “the buffalo will be a curiosity known only to zoological gardens, museums, and circuses.” He even noted how difficult it had become for even the Smithsonian to secure a herd for the national collection, in spite of “almost fabulous prices offered for fine specimens.”³⁴⁰ Indeed, Rock memorialized one of his captive bison by having his photograph taken with it.

³⁴⁰ Anonymous [By One Who Has Visited It], “Rocky Mountain Dick, and his Wild Beast Farm,” *World Wide Magazine* 6, no. 36 (March 1901), 595.



Fig. 13: Richard Rock ("Rocky Mountain Dick") on his pet bison "Lindsay." The bison later gored Rock to death.

Most market collectors of Yellowstone bison showed little interest in capturing the animals alive. Unlike the Indians who took the skin and meat of the bison Hornaday killed in Montana, even cracking the animal's bones for its marrow but leaving behind its head, hunters living on the borderlands of Yellowstone rarely took anything *but* the head, seldom taking the time or risk associated with butchering the animal even for its meat.³⁴¹ Bison heads were the body part of choice in the marketplace, ironically pitting taxidermists like Hornaday against those who wished to protect the last of the species.

³⁴¹ Jacoby, *Crimes Against Nature*, 131.

As the number of available bison decreased, the value of the animals' heads, particularly those of mature bulls, increased dramatically. Since the Smithsonian and others often paid for wildlife, they provided another potential market. With the region still reeling from the economic crash of 1893, and with opportunities to work for the military in the American West in decline, the price paid for bison heads and other animal parts provided a powerful economic incentive to those who had made their living as hunters, trappers, and guides. In addition, hunters from the East or even as far away as Europe, sought guides in the region, putting additional pressure on animals in and around Yellowstone. This growing outfitter market attracted even more men into the area. Just as the Smithsonian preserved taxidermied specimens in a centralized location so, too, did Yellowstone concentrate living specimens of wildlife within its boundaries. But neither hunters nor wildlife recognized the borders outlining Yellowstone.

In the summer of 1895, Anderson solicited bids and oversaw construction of an enclosure to trap the few remaining bison still living in the Park per the Smithsonian's specifications. At the same time, he received a letter from Oliver McClintock of Pittsburgh that confirmed Anderson's own personal sense of urgency. While in Salt Lake City, McClintock had seen three unmounted bison heads in a back room at a taxidermy shop in Salt Lake City. While the taxidermist "jealously guarded the secret of their history," McClintock believed all three, one of which was the largest McClintock had ever seen, had been taken

in Yellowstone that previous winter by men living in the Henry's Lake region in Idaho. McClintock also had heard of a fourth freshly mounted bison head in the window of another taxidermy shop, but that one he did not personally see.³⁴²

McClintock's explanation of why at least four fresh bison heads had been sold to taxidermists in Salt Lake City documents how many living outside the Park's borders viewed Yellowstone's military administration and how some even viewed the Smithsonian as direct competitors for the Park's resources:

The communistic view which the people about Lake Henry took of the question was this [McClintock wrote] that if the government was so parsimonious as to refuse to spend \$5000 or \$7000 (or whatever the recent offer was) for building a corral for their safe keeping, which would have given a job to some working men, it was all right to make money by appropriating the animals for which the government takes such small trouble to save them from extinction.³⁴³

In this view, the U. S. government in all its manifestations (i.e., military, scientific, and administrative) sought to keep wildlife away from those who needed access to the animals to survive. If the government refused to hire locally, then these men needed to find other sources of income to feed themselves and their families.³⁴⁴ However, those hunting Park wildlife were not

³⁴² Oliver McClintock to George Anderson, August 13, 1895, LB 3, #1131

³⁴³ Ibid.

³⁴⁴ At least one historian has argued that these limits not only tested local survival skills but also challenged local residents' masculinity, providing bragging rights in saloons if they circumvented the power of the government and the U. S. military. See Jacoby, *Crimes Against Nature*, 128.

looking for food. While some killed elk in or near the Park's borders to feed near-by mining camps, most hunters of Yellowstone animals only took the animals' heads, skins, or teeth, all of which brought high prices in urban areas.³⁴⁵ With the great bison herds gone and most American Indians in the American West confined to reservations, these hunters, skinners, and former guides for the U. S. Cavalry needed new opportunities. They looked to Yellowstone for wildlife specimens and body parts to turn into cash.

William McDermott, the U. S. Marshall in Montana, took a particular interest in protecting bison from those living on the Park's borderlands. On September 14, 1895, he telegraphed George Anderson in Yellowstone to warn that a man named [James] Courtenay in the Henry's Lake country had "two buffalo corralled somewhere in the mountains in or near the park and intends to kill them as soon as sales for heads can be arranged."³⁴⁶ McDermott followed up

³⁴⁵ Even Karl Jacoby admits that when poachers killed elk in the Yellowstone region, they took "only the best cut of meat (the 'saddle')," selling it in nearby mining camps such as Virginia City, or they removed the animals' teeth, particularly the "tusks" or canine teeth, to sell to members of the Benevolent and Protective Order of Elk for their "watch fobs, rings, cuff links, and hat pins." One human Elk complained that he could once purchase a pair of elk teeth for 50 cents in Idaho, but that now a pair of "'fine teeth'" cost five to fifty dollars a pair. Like the bison, the body parts of "mature [elk] bulls [brought] the best money." While elk teeth could be collected in the spring from dead animals with nothing more than a pair of pliers, many chose to kill elk for their two teeth, leaving the rest of the animals' remains behind. In 1916, for example, 257 elk were killed near Gardiner solely for their teeth. *Ibid.*, 131, 134.

³⁴⁶ William McDermott to George Anderson, September 14, [1895], LB 3, #1142.

with news that “one of the Park scouts has resigned, being afraid to serve any longer, and that now everything is clear for them (the buffalo killers).”

McDermott promised to alert Anderson once the heads arrived in Butte, and to turn the case over to the local sheriff, but he feared that “they will prove that the animals were killed in Idaho.”³⁴⁷

McDermott understood how these men worked, for Courtenay did indeed argue that. After being arrested delivering four bison heads to a taxidermist in Butte, Courtenay testified that he had killed the animals near Island Park in Idaho; a jury acquitted Courtenay in December 1895.³⁴⁸ In the same issue of *Forest and Stream* that reported on the results of the trial, George Bird Grinnell admitted that prosecutors had a weak case against Courtenay, even though the bison probably had been killed or captured in Yellowstone. To strengthen the protection of the bison and the penalties against those who killed wildlife as it wandered across Park boundaries in the future, Grinnell argued for stronger game laws in Idaho. Otherwise, “anyone who wished to do so [is] free to kill these animals in Idaho.”³⁴⁹

With so few bison left in the Park, and news filtering back to the Smithsonian about “alleged slaughtering of buffaloes said to have occurred last October, and ... to be still going on,” Smithsonian Secretary S. P. Langley again

³⁴⁷ William McDermott to George Anderson, September 26, 1895, LB 3, #1141.

³⁴⁸ [George Bird Grinnell], “The Courtenay Buffalo Case,” *Forest and Stream* 46, no. 3 (February 1, 1896), 95.

³⁴⁹ [George Bird Grinnell], “The National Park Buffalo,” *ibid.*, 89.

began pushing for transfer of Yellowstone bison and other at-risk animals to Washington. He asked Anderson if he would write an "authoritative statement" on "the probable number of bison, and other rare game now in the Park, the prospect of their increase, the practicability of furnishing some of them for the collection here, and the possible utility of the stockade authorized by you as an additional element of security." Acknowledging how closely the activities and missions of the two parks related, Langley added, "I need hardly say that any statement which you may make and which I may use [to present to Congress], will no doubt serve the Interests not only of the Washington Park, but incidentally of the larger one under your care."³⁵⁰ He did not mention whether or not it would serve the interests of the animals as well.

While Anderson tried to stop the activities of men like James Courtenay, he also oversaw the construction of the bison corral, designed to hold animals for shipping East. Completed in the fall of 1895, the enclosure failed to attract many bison. Having heard that eight bison had been seen in or around the Smithsonian's corral, Elwood Hofer rode out to capture them. He found one lone bison near the hay within the enclosure, and attempted to herd three more into the corral, but when the animals neared the fence, they stopped and would not go in. Hofer then looked for four additional bison allegedly sighted on

³⁵⁰ S. P. Langley to George Anderson, December 4, 1895, LB 4, #1634.

Mary's Mountain, but he never found those.³⁵¹ In December 1895, Anderson admitted to Langley that he may have over estimated the number of bison living in Yellowstone National Park. Indeed, he feared there could be as few as fifty animals, not nearly "enough remaining for a source of supply for your [zoological] park."³⁵²

With this alarming news in hand, Langley argued that even if Congress did not support the Smithsonian's original vision for a "city of refuge" for all of America's at-risk wildlife, at minimum it needed to support a proposal to save these last few iconic bison from extinction. Only one course of action suggested itself to Langley as efficient and effective:

...transference of the great part of the now few remaining animals to a region where they can be effectively protected and increase normally under natural conditions.... Two years ago there were supposed to be 200 in the Yellowstone Park. The present estimate is one-quarter of that number. The superintendent reports them as being "constantly pursued," and in another year there may be none left. If these animals, or a majority of them, can during the next few months be transferred to the National Zoological Park at Washington, which affords room and security, they will be safe, and their natural increase in the future can be distributed by exchange with the zoological gardens of the various parts of the United States so that no large city need be without its

³⁵¹ Elwood Hofer to Frank Baker, January 11, 1897, LB 7, #3002. While Anderson reported low snowfall in the Park that year, Hofer thought the snow was too deep for animals to break a trail into the enclosure. It could be that both observations were true, one in general and the other true in a more specific area, perhaps due to drifts.

³⁵² George Anderson to S. P. Langley, December 12, 1895, reproduced in *Annual Report of the Smithsonian Institution*, 1895, 30-31.

representatives of the great herds so often referred to in our early history, and now a memory.³⁵³

Most believed the bison population faced extinction and to avoid a potential biological disaster required immediate action. Langley proposed that, at least for bison, the National Zoological Garden become much like the Smithsonian itself, a repository of valuable specimens for display and distribution through exchange to other institutions. The Smithsonian needed to step in and take this action even if the proposed solution – corralling, shipping, and redistributing specimens to American zoos -- might on the surface appear rash. Rash is how it appeared to George Bird Grinnell. In the same editorial calling for better protection of bison that wandered into Idaho, Grinnell vociferously opposed transferring the last of the Park's animals to the National Zoological Park. Without mentioning him by name, he predicted that Secretary Langley's idea would result in "the lawful extinction of the wild buffalo in the United States," something Grinnell considered, "most extraordinary, and could have been made only by people who are ill-informed respecting the animal in question and of the regions which this herd inhabits."³⁵⁴

In general, Grinnell did not question the shipping of animals from the National Park to the National Zoo, as an earlier editorial about so-called problem bears suggested. But just as Grinnell opposed Hornaday's idea of fencing the

³⁵³ Ibid., 30.

³⁵⁴ "The National Park Buffalo," *ibid.*

periphery of the Park, restricting the movement of animals, so, too, did he oppose creating a similar captive-breeding ground in Washington. Although Dick Rock would have disagreed with him, Grinnell believed that “no adult buffalo captured and closely confined has ever lived more than a few hours.” Grinnell warned against the capture and confinement of any adult bison that would result in its death “as certain as the bullet of the poacher could bring.”³⁵⁵

Even though he did not think it possible to locate much less corral all the bison in Yellowstone given the “rough, broken and wooded character” of the Park, Grinnell still felt compelled to speak out against capturing, restraining, and transporting the few animals left. “A few animals may be captured in Captain Anderson’s buffalo trap, and in course of time may be so gentled that it may be possible to ship them, but even this cannot be done without great risk,” he warned. “The Yellowstone Park buffalo should be protected and allowed to increase. It will not be time to try fool experiments with them until after they have become more numerous than they are at present.”³⁵⁶

Grinnell’s strongly worded opposition appears to have motivated Langley to re-contact Captain Anderson and clarify his intentions. He had “not proposed to Congress to transfer the entire herd” to Washington, he wrote, “but only a portion of it ... which I believe has, in a general sense, your consent.” Langley had requested from Congress “a specific appropriation which will enable the

³⁵⁵ Ibid.

³⁵⁶ Ibid.

bison to be properly cared for in the Park, including the 'gentling' for some months of those it is proposed to transfer, and the proper means for their transport." To counter any doubts Anderson still might have about the critical importance of removing bison from Yellowstone for their own protection, Langley added that a member of the Smithsonian Board of Regents had seen "a number of fine buffalo skins, which he recognized as being nearly new, and for which \$600 apiece was asked by the dealer (!)." ³⁵⁷

Even though he tried to smooth over any misunderstandings resulting from Grinnell's editorial, in April 1896 Langley pressed Anderson again about the corral and whether or not it could be "used for holding a portion of the Yellowstone herd until the animals become sufficiently quiet to permit shipping some of them here." ³⁵⁸ He also hoped to find a way to herd the few remaining animals into the stockade "with the view of being 'gentled', and possibly sent on later to the Park here." ³⁵⁹

While Langley worked on securing the last of Yellowstone's bison, Elwood Hofer continued capturing other Park animals for shipment to the National Zoological Park in the fall. ³⁶⁰ Frank Baker requested another grizzly

³⁵⁷ S. P. Langley to George Anderson, February 15, 1896, LB 7, #3015. That would be the equivalent of approximately \$16,100 in 2010 dollars.

³⁵⁸ S. P. Langley to George Anderson, April 1, 1896, LB 7, #3014.

³⁵⁹ S. P. Langley to George Anderson, April 7, 1896, LB 7, #3013.

³⁶⁰ Frank Baker to Capt. Scott, April 9, 1896, LB 7, #3012. Follow-up letters from Hofer reported that he soon had several elk and young antelope, and that he could catch more but only if he could get more milk to feed them. The use of the

and a cinnamon bear, since Baker recently had exchanged his first Yellowstone grizzly for some deer and otter from the Detroit Zoo.³⁶¹ The next month, Baker asked Anderson again about a “few bears,” adding that it was “a pity that you can’t include buffalo in the list of especially numerous animals!”³⁶²

In the summer of 1896, Anderson received a copy of another letter about the fate of Yellowstone bison. C. J. “Buffalo” Jones had made an unusual proposal to the Secretary of the Interior, offering to travel from Oklahoma to Yellowstone National Park to round up the last remaining bison, or at least a portion of them, “with a view of preserving them from a speedy extermination.” Jones had already become known for his work in breeding bison and cattle, but more recently had fallen on hard times after making some poor investments. His offer to the Secretary of the Interior appears to be another gamble to bring back his good fortunes. Assuming he could corral the few remaining bison, Jones wanted a salary of \$200 a month, plus expenses; he apparently wanted to set up a ranching operation in the Park. Should Jones fail to capture them, then he wanted \$500 to write a report about what he believed necessary to preserve the few remaining bison. If the government neglected to pay him within a year for his services, Jones would return half of any bison he had captured to Park officials, keeping the other half for himself. Jones would maintain “the privilege

word “raising” animals for the Park suggests that Baker saw the process as one of domestication as much as keeping them alive.

³⁶¹ Frank Baker to George Anderson, June 11, 1896, LB 7, #3010.

³⁶² Frank Baker to George Anderson, July 8, 1896, LB 7, #3009.

of keeping [the bison] corralled in the Park or removing them at any time to any part of the world as my own property....”³⁶³ The Department of the Interior thanked Jones for his interest but declined his offer. Apparently unaware of the Smithsonian’s efforts, the Acting Secretary asked Anderson if indeed it might be possible to corral the bison as suggested by Jones.³⁶⁴

In addition to Department of Interior support of Yellowstone, in 1896 the Secretary of War authorized \$2,000 for Park administration. Superintendent Anderson regarded the amount as “available for the protection of the game from the vandalism of poachers” and organized three small parties of cavalymen and scouts to patrol the area along the Park’s western border, where they soon found evidence of ten recent bison kills. They did not catch any poachers in the act, however.

That fall, Secretary Langley again pressed Anderson on the viability of the Smithsonian corral for “entrapping and confining animals,” wondering if any animals had entered the existing corral or if that even seemed a possibility. If not, he looked to Anderson for “future guidance” on how to capture the last of the bison on behalf of the Institution.³⁶⁵ Preservation of Yellowstone bison had become a Smithsonian-wide commitment and goal. The Smithsonian kept Elwood Hofer in its employ for capturing and caring for animals still hoping he

³⁶³ C. J. Jones to Secretary of the Interior, June 9, 1896 (copy), LB 4, #1874.

³⁶⁴ Sims to George Anderson, June 18, 1896, LB 4, #1876.

³⁶⁵ S. P. Langley to George Anderson, November 21, 1896, LB 7, #3007.

could use the bison corral to “affect the interests of the Institution.”³⁶⁶ Even Frank Baker, who planned to visit the Park in the summer of 1897, wanted to “see all the wonders of the Park including our corral.”³⁶⁷

Anderson maintained the cavalry’s presence on all the Park boundaries, sending men to investigate the killing of game near Gardiner. Their inquiry resulted in four arrests, but the prisoners argued successfully that they had killed the animals outside the Park. Even though these hunters had to be freed, Anderson expressed confidence that the “effect of these trials and convictions has been most salutary, and depredations will hereafter be less numerous.” Pledging to “do all in my power to prevent the promiscuous slaughter which has come to near extinguishing the American big game,” Anderson saluted Montana and Wyoming authorities for their help monitoring the Park borderlands. And he called out Idaho, where “the authorities seem inclined to encourage this form of lawlessness rather than to aid in its repression.”³⁶⁸

Idaho authorities certainly had no complaint about the game ranch, hunting camp, and wild animal show operated by Vic Smith and Dick Rock. Smith sold his share of the ranch sometime in the early 1890s, perhaps in response to increased federal regulations and penalties, but Rock continued to

³⁶⁶ S. P. Langley to George Anderson, February 8, 1897, LB 7, #2999.

³⁶⁷ Frank Baker to George Anderson, January 19, 1897, LB 7, #3001.

³⁶⁸ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1896* (Washington, DC: Government Printing Office, 1896), 12.

collect wildlife, even attempting to domesticate a few animals. One photo shows Rock in a carriage pulled by a moose he called “Nelly Bly.”³⁶⁹ Another shows the moose, instead of his usual dog team, pulling the sled Rock used for carting live elk and other animals back to the ranch. Many considered Rock a born animal trainer, who could “hold any animal with his eye.” But his “mesmeric glance” failed him in 1902 when his pet bison, Lindsay, gored him to death.³⁷⁰

Since Yellowstone did not allow private entities to acquire animals from the Park, wealthy individuals wishing to stock their game farms and hunting reserves turned to private collectors. The name Smith and Rock gave their ranch clearly illustrates how they viewed their animal trapping and shipping enterprise, and with whom they saw themselves in competition. They called their ranch the Smithrocksian.³⁷¹

³⁶⁹ In another odd twist of animals on display, Rock exhibited Nelly in harness at the World’s Fair in Chicago in 1893.

³⁷⁰ Victor Grant Smith, *The Champion Buffalo Hunter: The Frontier Memoirs of Yellowstone Vic Smith*, Jeanette Producers, ed. (Guilford, CT: Globe Pequot Press, 1997, 2009), 238.

³⁷¹ “Dick Rock, the Trapper, and his Odd Career,” *Anaconda Standard*, April 13, 1902, reproduced in Smith, *Champion Buffalo Hunter*, 202.



Fig. 14: Dick Rock and his moose, Nellie Bly, hauling a live elk back to the Smithrocksian ranch on a sled, 1901 (*World Wide Magazine* photograph).

With increased patrols to keep animals in and hunters and collectors like Rock out, most of the larger mammals thrived within the Park's boundaries. Bison, on the other hand, continued to decline. With another mild winter, the Smithsonian's enclosure, stocked with hay, only attracted eight bison and a few elk in the first two months of 1896. Anderson waited to secure the corral, hoping that other bison would eventually return to what he believed to be their traditional wintering grounds. When more animals never appeared and those in the corral wandered back out again, Anderson sent out scouts to see if they could find the remaining bison. The scouts found three animals in one place, twelve in another, three more in a distant valley, and the tracks of eight or nine (but these bison were never actually seen). With such a dismal showing, Anderson

estimated there might be twenty-five or thirty animals left in the Park or, at most, fifty.

In spite of all their good intentions of its acting superintendents and the full force of the U. S. Cavalry, it appeared that Yellowstone National Park might fail in one of its primary missions: to protect against the wanton destruction of the wildlife living within the Park, and against their capture or destruction for the purposes of merchandise or profit. Since the mid-1870s, Americans had looked to Yellowstone to provide the last refuge for the large game animals of the American West, believing that the National Park could help ensure that the last of the great herds of animals would not be hunted into extinction. But this experiment in wildlife conservation on behalf of all Americans appeared to have failed. Even the Smithsonian could not postpone what appeared to be inevitable. For the first time Superintendent Anderson had to admit that even the U. S. Cavalry might not be able to save the bison in Yellowstone National Park. "The forces of nature and the hands of man are alike against them," Anderson wrote, "and they seem to be struggling against an almost certain fate."³⁷²

³⁷² *Yellowstone Annual Report, 1896*, 13. By 1897, Yellowstone Superintendent Young estimated that only 24 bison remained in the Park, a number that could not be considered sustainable, particularly if the animals faced any stress. While Young and Frank Baker agreed that confining and domesticating young animals in the corral might meet with some success in bringing the bison numbers back up again, they feared adult animals might die in confinement, as George Bird Grinnell predicted. In addition, the few remaining animals left in the Park had moved into even more remote areas, making it difficult if not impossible to



Fig. 15: Advertisement from the Montana Historical Company in Butte, Montana, 1896: "Nothing finer could be found in the world for decorating a clubroom, an assembly hall, a banquet hall, the rotunda of a hotel or the saloon of a steamship than a pair of these great heads. The race from which they come is practically extinct. Secure these magnificent specimens before they are all gone." (*Recreation* magazine display advertisement, December 1896.)

capture and transport them to a centralized location. The end of the bison herd in Yellowstone now seemed certain and it appeared that neither the Smithsonian nor the U. S. Cavalry could do anything to prevent it.

9. THE GREATEST GAME PRESERVE IN THE COUNTRY:

CITY OF REFUGE OR A NATIONAL ZOO

When the Yellowstone Park was organized it was believed that a permanent place of refuge for the buffalo had been secured and that out of the natural increase of the hundreds then remaining representative herds would be preserved for future generations. It seems now evident that the conditions in the Yellowstone region are such that the extermination of the Government herd of buffalo may be anticipated and that it may be accomplished within a very short space of time.³⁷³

-- Samuel P. Langley, 1895

While Acting Superintendent George Anderson focused on saving bison and other Yellowstone wildlife, he continued to capture and hold animals awaiting shipment to Washington. These animals held in and around the Mammoth Hot Springs area became so popular with visitors that Anderson mused about establishing Yellowstone National Park's own version of the Smithsonian's little tryout zoo (or Dick Rock's wild beast farm), capturing and displaying elk, deer, and buffalo and possibly antelope, moose, and mountain sheep. "It would be a matter of great interest to tourists if I had the funds with which to erect an inclosure [sic] and put into it some specimens of the game animals here native," he wrote. "Some provision would have to be made for feeding them in the winter, but that would be small."³⁷⁴

³⁷³ *Smithsonian Annual Report*, 1895, 30.

³⁷⁴ *Yellowstone Annual Report*, 1893, 14.

Anderson does not appear to have received financial support for his idea, but he continued to display Yellowstone animals. In 1896, for example, Anderson held six elk, six antelope, four beaver, and two black bear cubs in a makeshift combination of pens, cages, and corrals, and planned to collect enough animals by November to “fill a car, and thus reduce the relative cost of transportation.”³⁷⁵ The National Zoo sent for the bears and a few of the other animals, but asked that the remainder be shipped at a later date.³⁷⁶ As a result, five bull elk remained penned and on display in Yellowstone “as an attraction to visitors” for three more years. The Smithsonian did not send for them until the fall of 1899.

The Department of War transferred George Anderson and his men to Fort Robinson, Nebraska in 1897, after which Yellowstone experienced a series of acting superintendents, all of whom pursued their own form of wildlife management, conservation, and display. Anderson’s successor, Colonel S. B. M. Young, went right to work on the protection of Park wildlife. Concerned about the fate of the Park’s antelope herd, he requested authorization to reduce the

³⁷⁵ *Yellowstone Annual Report, 1896*, 12. According to the Smithsonian, Anderson sent three bald eagles, two red tailed hawks, ten magpies, and three Clarke’s nutcrackers. *Smithsonian Annual Report, 1896*, 67.

³⁷⁶ *Annual Report of the Board of Regents of the Smithsonian Institution to July, 1897* (Washington, DC: Government Printing Office, 1898), 65.

number of coyotes since he considered them a serious threat to the animals.³⁷⁷

While Anderson had targeted some coyotes in the Park, relying on an authorized scout to shoot them as needed, Young appears to have been given permission to use poisoned carcasses to reduce coyote numbers significantly.

In 1896, Park personnel estimated the antelope population to be one thousand animals, but because they lacked suitable winter range except for areas “infested with coyotes” near the town of Gardiner, only half that many returned the following year. Lieutenant Elmer Lindsley, who had been charged with patrolling the Park border, believed that if the Park did not kill coyotes, the animals would drive surviving antelope outside the Yellowstone borders where they would not survive.³⁷⁸ Lindsley, too, viewed Yellowstone National Park as a reserve in which animals could and should be confined.

Acting Superintendent Oscar Brown, who assumed his post in Yellowstone in the summer of 1899, took the additional step of permanently posting civilian scouts and two soldiers to patrol the northern boundary to keep antelope from escaping. But the animals often passed over the Park’s border at night. Brown’s proposed solution was similar to Hornaday’s: construct a fence

³⁷⁷ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1897* (Washington, DC: Government Printing Office, 1897), 9.

³⁷⁸ *Yellowstone Annual Report, 1897*, 26.

along the Park's northern border to restrict the animals' movement.³⁷⁹ The next Acting Superintendent, George W. Goode, who arrived in Yellowstone in the summer of 1900, seconded Brown's recommendation, writing that because of a "scarcity of feed the antelope will almost certainly wander in large numbers across the northern boundary into the Yellowstone Valley, where their chances of getting back into the park again are very few." He, too, wanted the Department of the Interior to fence the entire perimeter of the Park.³⁸⁰ While superintendents continued to request funds to keep the animals from wandering outside the Park, they also held representatives of Yellowstone species in pens for public display. In the process, Yellowstone began assuming the mantle of the nation's real city of refuge and zoological park for western American wildlife.

At the same time, these new superintendents faced a different kind of wildlife challenge with the Yellowstone bruin population. Bears broke into cavalry storehouses for food and fed on garbage left near the hotels. While Park visitors enjoyed watching their antics at the garbage piles, bears upset an otherwise orderly military routine and kept troops busy cleaning up their messes. In 1897 Young suggested that at least twelve "very annoying" animals

³⁷⁹ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1899* (Washington, DC: Government Printing Office, 1899), 7.

³⁸⁰ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1900* (Washington, DC: Government Printing Office, 1900), 6-8. He also noted that in addition to keeping wildlife in, a fence would keep domestic animals out, reducing the competition for food.

“be disposed of to responsible zoological gardens” for the expense of capturing them.³⁸¹ This direct challenge to the Smithsonian and the National Zoological Park’s priority over the animals captured or killed in the Park inched Yellowstone National Park even closer to a more centralized repository of specimens awaiting distribution or exchange.³⁸² Captain James B. Erwin, Young’s successor, also argued in 1898 for addressing the perceived increases of the bear population.³⁸³

At the same time as he recommended decreasing the number of bears, Acting Superintendent Erwin implemented a comprehensive plan to increase the number of Park bison, which he estimated in 1898 to be “probably 50.” He assigned Lieutenant Elmer Lindsley to keep watch on those men either found guilty or believed to be guilty of poaching in the past. Erwin also sent out several patrols, particularly in the winter, to watch for signs of poachers and to disrupt their camps. Since Erwin believed that he and his immediate predecessors had taken all reasonable measures to protect Yellowstone bison, he

³⁸¹ *Yellowstone Annual Report*, 1897, 9.

³⁸² Young also may have read George Bird Grinnell’s suggestion that problem bears and predators such as “lynxes, wildcats, and other wild animals” be sent to the National Zoo. His argument was simple: “If the Superintendent of the Park has authority to kill these animals, no doubt he is at liberty to trap them; and if the zoological Park authorities would send out to him some crates and a little money with which to hire men for the work, he could no doubt, at the proper season, supply a fine series of living bears.” “Cages in Place of Bullets,” *Forest and Stream* 35, no. 5 (August 21, 1890), 85.

³⁸³ *Yellowstone Annual Report*, 1898, 11.

speculated that inbreeding must be the last possible cause of their declining numbers. He therefore recommended the introduction of “a few good bulls.”³⁸⁴

Like William Temple Hornaday and the other original proponents of centralized wildlife conservation activities, Erwin sought funding to create a safe breeding ground in Yellowstone, and the authorization to import enough fine specimens to ensure a sustainable population. Erwin described Yellowstone National Park in language that closely resembled that used by National Zoological Park supporters. In Yellowstone, however, Erwin envisioned the growth of wildlife populations as a way of restocking neighboring states rather than other zoos and game reserves:

[T]he park as a game and fish preserve has not its equal in the world; the variety is great, and it is eminently fitted to sustain this variety under the protection of the Government. An increase in appropriation means an increase in the means and facilities of protection, and as a national game preserve, which not only holds

³⁸⁴ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1898* (Washington, DC: Government Printing Office, 1898), 11. Even before Erwin’s suggestion to import bison into the Park, four bison, mountain sheep, and elk had been purchased outside the Park to stock a small zoo on Dot Island. See *Yellowstone Annual Report for 1896*, 10. E.C. Waters purchased two bulls and two cow bison from Charles Goodnight Ranch in Texas, and had them transported north, with one of the bulls exchanged for a cow en route in Wisconsin. From there, the animals were shipped to Cinnabar, hauled through the park in wagons, and moved across the lake to Dot Island on a barge. See Haines, vol. 2, 71. Waters, a constant thorn in the side of the Park management if the extant correspondence is to be believed, operated a boat on Yellowstone Lake and hoped to increase his passenger numbers by offering them a chance to see Yellowstone wildlife, particularly what many believed then might prove to be the very last specimens of the American bison.

secure the remaining wild animals and game birds of this country, but enables them to breed and multiply, thus supplying the needs of neighboring States....³⁸⁵

Neighboring states and the food and trophy hunters living in them might benefit from the overflow of excess animals across the Park's boundary, but the Smithsonian considered any animals captured within Yellowstone's borders to be its property. Thus, Frank Baker and others at the Smithsonian must have been alarmed to learn in 1900 that, after transferring the last of the animals held for shipment to the National Zoo, the Park had captured its own animals for display, including antelope, deer, a beaver, and a "very fine grizzly [sic] cub," kept near the hotel. Elwood Hofer believed that the bear, if not all of the animals, would be turned loose at the end of the tourist season, so if the zoo wanted any of them, it should "go to the Secretary of the Interior and secure them for this fall."³⁸⁶

Frank Baker dutifully contacted the latest Park superintendent, Captain George Goode, asserting the Smithsonian's claim to all Park animals and informing him that it was "customary ... to send such animals to the National Zoological Park at the close of the season." He also reminded Goode that Yellowstone continued to be "an important source of supply, the animals received being of especial interest to the public."³⁸⁷

³⁸⁵ *Yellowstone Annual Report*, 1898, 13.

³⁸⁶ Elwood Hofer to [Frank Baker?], August 22, 1900, RU 74, Box 70, f 6.

³⁸⁷ Frank Baker to George Brown Goode, September 15, 1900, RU 74, Box 70, f 6.

The successful capture and display of animals in both Washington and in the Park inevitably led to requests for Yellowstone animals from those outside the Smithsonian network. In the summer of 1901, Hofer notified Frank Baker again of more animals being held in Mammoth Hot Springs and warned this time that the current superintendent, Captain John Pitcher, might ship “anything he wants” to a businessman in Baltimore.³⁸⁸ B. N. Baker had visited Yellowstone, guided by Hofer, and had talked to Pitcher about obtaining some of the animals to be placed “for the present” in the Baltimore Zoo in Druid Hill Park.³⁸⁹ While Hofer did not state Baker’s ultimate goal for the animals, his use of the words “for the present” suggests that he may have intended the animals for a game reserve or even a private hunting grounds.³⁹⁰

Acting Superintendent Pitcher, aware of B. N. Baker’s formal request, sought clarification from the Secretary of the Interior, listing the animals he had on display in the Park and requesting guidance for what should be done with them in the fall. Pitcher understood that it had been “customary to keep animals here until the close of the tourist season, and then send them to some place

³⁸⁸ Elwood Hofer to Frank Baker, June 19, 1901, RU 74, Box 70, f 6.

³⁸⁹ B. N. Baker to Frank Baker, September 25, 1901, RU 74, Box 70, f 6.

³⁹⁰ Hofer intimated something similar in a note to B. N. Baker in which he advised that if the animals Baker picked out did not have some kind of an enclosure to receive them in Baltimore, “they had better go to the Zoo [until] such time you could care for them. I think the Mule Deer (Black Tail) would be best for your place.” Elwood Hofer to B. N. Baker, September 19, 1901, RU 74, Box 70, f 6.

where a collection of animals is being made.” He also wondered whether or not “the Smithsonian Institution desires these animals – or what disposition to make of them.”³⁹¹

Frank Baker responded to Pitcher’s letter “at once,” insisting that “all of the animals mentioned could be used here” and that Pitcher had been authorized by the Secretary of the Interior to “turn them over to the National Zoological Park.”³⁹² The Acting Secretary of the Smithsonian also reminded the Department of the Interior of “the provision of the Act of Congress which authorizes the heads of the Executive Departments ‘to cause to be rendered all necessary and practicable aid ... in the acquisition of collections for the National Zoological park.’”³⁹³

Experiencing the first serious challenge to their perceived proprietary rights to all Yellowstone wildlife, the National Zoo quickly moved to secure these animals, even those they did not particularly want. Only after the “disposition of these animals” had been settled in their favor did Frank Baker admit that the elk and mule deer had comparatively little value to the zoo. The “cost of transportation will amount to nearly as much as they will be worth

³⁹¹ John Pitcher to [Ethan Hitchcock] Secretary, Department of the Interior, September 13, 1901, RU 74, Box 70, f 6.

³⁹² Frank Baker to John Pitcher, September 28, 1901, RU 74, Box 70, f 6.

³⁹³ Richard Rathbun to [Ethan Hitchcock] Secretary, Department of the Interior, September 25, 1901, RU 74, Box 70, f 6.

here.” He expressed a willingness, therefore, to negotiate an advantageous exchange with the Baltimore businessman.

By the 1890s, the Baltimore Zoo in Druid Hill Park included a large collection of exotic animals, so perhaps Frank Baker had these in mind when he proposed that “some way will suggest itself to you by which the matter could be arranged....”³⁹⁴ When B. N. Baker wrote again, offering to cover the shipping costs of any elk or mule deer that the National Zoo did not want or plan to keep, Frank Baker bluntly responded that “the animals now in captivity in the Yellowstone National Park I beg to say ... have been turned over [by] the Interior Department to the National Zoological Park, and are now government property under the control of this Park...” The animals could, therefore, not be disposed of “except by exchange.”³⁹⁵

Frank Baker may have thought the animals had little or no net value, but he recognized their potential commercial value if entered into a system of exchange with other zoos. Indeed, when he first wrote to Secretary Langley asking permission to have the animals shipped to Washington, Baker, as had become customary in other Smithsonian exchanges, estimated the combined market value of the five elk, six adult mule deer, three young mule deer, four antelope and two bear cubs at “about \$950.” Since Baker estimated the total cost

³⁹⁴ Frank Baker to B. N. Baker, September 30, 1901, RU 74, Box 70, f 6.

³⁹⁵ Frank Baker to B. N. Baker, October 3, 1901, RU 74, Box 70, f 6.

of shipping the animals to Washington to be \$400, even animals they did not want or need could be of some financial advantage if used for exchange.³⁹⁶

In addition to those animals already held at Fort Yellowstone in the fall of 1901, Frank Baker asked Hofer to continue trapping Park wildlife on the zoo's behalf, expressing a particular interest in three or four more grizzly bears for shipment with the other animals. The zoo only had two males and Baker wanted a female to add to the collection for breeding and display. Again, any additional grizzly bears could be held "to good advantage" for exchange with other zoos.³⁹⁷

Thus, by the turn of the century, the Smithsonian had asserted its jurisdiction over all animals within Yellowstone and the U.S. Cavalry had established some measure of enforceable control over Park wildlife. But should animals leave the Park in search of food at lower elevations, they faced an uncertain fate. In 1901, Montana joined the effort to protect Yellowstone's antelope herd, amending its game laws to prohibit the killing of antelope, along with moose, bison, caribou, mountain sheep, beaver, quail, and pheasant.³⁹⁸ The

³⁹⁶ Frank Baker to S. P. Langley, October 26, 1901, *ibid.* As it turned out two deer died when they attempted to load them, and three more died soon thereafter. Elwood Hofer to Frank Baker, November 15, 1901, RU 74, Box 70, f 9. An additional fawn "had been badly knocked about in the car," and was left in St. Paul to recover and be forwarded later. Frank Baker to John Pitcher, November 30, 1901, RU 74, Box 70, f 6.

³⁹⁷ Frank Baker to Elwood Hofer, September 23, 1901, RU 74, Box 70, f 6.

³⁹⁸ Charles Bingham Reynolds, *Game Laws in Brief* (New York, NY: Forest and Stream Publishing Company, 1906), 9. Outlawing the collection or killing of game created another potential roadblock for the National Zoo, which hoped to

following year, believing the region's wildlife would only survive through cooperation across state lines, Montana's game warden W. F. Scott invited other wardens in the Northwestern states to meet in Yellowstone to discuss wildlife preservation and to coordinate efforts. On July 21, 1902, wardens from Montana, Wyoming, Utah, Oregon, Minnesota, Colorado, and Washington – but not Idaho – traveled to Mammoth Hot Springs to present papers and form an association that they hoped would grow to include fish and game wardens not just in the West, but throughout the country.³⁹⁹ By forming a national association to coordinate activities and practices, wildlife protection was becoming institutionalized and standardized across states. The wardens looked to Yellowstone as the nation's most important center of wildlife conservation or, in their words, "the greatest game preserve" in the country.⁴⁰⁰

At the opening of the 20th century, Yellowstone National Park found itself at a difficult crossroads with often conflicting goals and expectations. On one hand, the Department of the Interior expected the military administration in

contract with hunters in the state to obtain mountain sheep and goats. Frank Baker to Elwood Hofer, June 26, 1901, RU 74, Box 70, f 6.

³⁹⁹ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1902* (Washington, DC: Government Printing Office, 1902), 9.

⁴⁰⁰ The group, which organized as the National Association of Game and Fish Wardens and Commissioners, met again in 1904 in Columbus, Ohio, and 1906 in St. Paul, Minnesota, before returning to Yellowstone again in 1907. *Forest and Stream* 49, no. 5 (August 3, 1907), 174. Idaho, the state where the Park encountered the most problems with poachers, does not appear to have been represented at the meeting.

Yellowstone to protect wildlife from exploitation, and to ensure the long-term survival of all species found in the Park. Adjoining states looked to Yellowstone as a wildlife reservoir and game reserve, from which animals would migrate out to meet the sporting and food needs of local hunters, as well as the expectations of a new breed of western tourists. On the other hand, Acting Superintendents had to respond to specific requests from the Smithsonian for providing specimens of most animals living in the Park, while visitors pressured Park administrators to improve their experiences by ensuring their ability to see everything from birds to bears while in Yellowstone, complaining if they were not successful.

While Yellowstone superintendents met most of the Smithsonian's expectations, satisfying the public and other constituents required reassessing and reconfiguring the way everyone from Congress to tourists viewed the National Park. That identity focused as much on Yellowstone's wildlife as it did the Park's geological wonders. And it required a reimagining of what a national park could and should be.

10. THE DOMESTICATION OF WILDLANDS AND WILDLIFE:

“THAT NATIONAL PLEASURE GROUND”

The loss of Major Pitcher's services to the National Park—though inevitable since he could not stay there forever—is keenly regretted by the citizens of Montana ... by the public which goes there to visit it, and by everyone interested in that national pleasure ground.... The services of Major Pitcher to the National Park will not soon be forgotten, and his name will stand out as one of those who has done the most to build up the Yellowstone National Park and to make it more than ever a place for the enjoyment and instruction of the American people.⁴⁰¹

-- George Bird Grinnell, 1907

The arrival of Major John Pitcher in May 1901 marked a major shift in wildlife management in Yellowstone National Park, as well as the Park's perceived role as a national zoological resource and pleasuring ground. Major Pitcher, an 1876 graduate of West Point and Associate Member of the Boone and Crockett Club, had spent his earlier career fighting Apaches on the borderlands and Filipinos in the Spanish American War. As a member of the First Cavalry, he had also served in Yellowstone under George Anderson in 1891. While serving under Anderson, Pitcher met Theodore Roosevelt who had been hunting elk south of Yellowstone with a small party that included Elwood Hofer. This chance encounter with Roosevelt may have helped ensure Pitcher's associate membership in the Boone and Crockett Club and even his assignment as Acting

⁴⁰¹ *Forest and Stream* 49, no. 5 (August 3, 1907), 167.

Superintendent of Yellowstone, since the McKinley-Roosevelt administration had been sworn in just two months before his appointment.⁴⁰²

Like many of his predecessors, Superintendent Pitcher worked to protect Yellowstone animals against human and other predation both inside and outside the Park. However, Pitcher took an even more proactive approach to wildlife. With a sympathetic administration in the White House and the Department of the Interior, he implemented a series of changes that not only transformed the Yellowstone's management but also altered the way the Park looked. Indeed, during Pitcher's six-year administration, Yellowstone National Park came to more closely resemble how William Temple Hornaday and others originally envisioned the National Zoological Park in Washington: a national zoological

⁴⁰² Acting Superintendents George Anderson and Moses Harris were also Boone and Crockett associate members, in essence linking the preservation of animals in Yellowstone to the trophy hunters who wanted to preserve a supply for their sport. Associate members are listed in Theodore Roosevelt and George Bird Grinnell, eds., *American Big-Game Hunting, The Book of the Boone and Crockett Club* (New York, NY: Forest and Stream Publishing Co., 1901), 344-345. Theodore Roosevelt's ascendancy to the presidency after the assassination of William McKinley in the fall of 1901 cemented Pitcher's relationship with Washington, with Roosevelt considering Pitcher an "old friend," a friendship at least in part based on a mutual interest in hunting and protecting Yellowstone as the "great national game preserve." Theodore Roosevelt, *The Wilderness Hunter: An Account of Big Game of the United States and its Chase with Horse, Hound, and Rifle* (New York, NY: G.P. Putnam's Sons, 1893), 14. Roosevelt's encounter with then Lieutenant Pitcher who was serving in Yellowstone in 1891 is recounted in *ibid*, 435 ff.

refuge and pleasuring ground under the administrative umbrella of a national park.

For example, many of Pitcher's predecessors had argued for a fence along the Park's northern boundary to keep antelope from leaving the Park. Pitcher pushed through its construction. This four-mile fence kept wildlife in, protecting animals from hunters, and kept livestock out, preserving the Park's grasses for wildlife. With a fence in place containing the movement of animals out of the Park in search of food, Pitcher introduced a program of feeding bighorn sheep, deer, and antelope in the spring, rendering the animals "exceedingly tame and [causing] them to recognize man as their friend instead of an enemy."

Pitcher believed both antelope and bighorn sheep populations to be at risk throughout the West so feeding them helped them survive Yellowstone's often harsh spring weather when the animals gave birth. But, as significantly, putting out hay and other feed concentrated these charismatic animals in areas where visitors easily could see them and created herds of animals that seemed almost tame.⁴⁰³ George Bird Grinnell viewed this as one of Pitcher's greatest accomplishments. "This great work, begun and carried through by Major Pitcher, has had the result of making all the wild game very tame," Grinnell enthused. "The antelope come running from all directions to meet the hay wagon when

⁴⁰³ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1905* (Washington, DC: Government Printing Office, 1905), 6-7.

they see it starting from the stacks, and crowd about it so that sometimes the hay thrown off falls on their backs.”⁴⁰⁴ A wonderland indeed!

Pitcher also instituted a public outreach program that “so changed [public sentiment] that the people of Gardiner enjoy watching the game in front of their town, and instead of wishing to kill it are grateful to Major Pitcher for his forethought and his effort in establishing this hay field for the game.”⁴⁰⁵ Part of Pitcher’s strategy appears to have been to manage the Park more fully for visitors in relation to wildlife, believing game to be “one of the most interesting features of the park to visitors....” In his first year, for example, Pitcher strictly enforced

⁴⁰⁴ *Forest and Stream* 49, no. 5, (August 3, 1907), 167.

⁴⁰⁵ *Ibid.* Elwood Hofer described what it looked like at one of the feeding grounds in 1903: “Major Pitcher established the present feeding place close to the wagon road with the object in view for only mountain sheep, and to keep any possible elk away a scare crow, or, rather a ‘scare elk,’ was put up. This is an old suit of clothes stuffed with hay, with extended arms, a red bandana handkerchief at one hand and a white rag at the other. There is an old white hat on the end of this stuffed object. Close by there is a portable engine, a rock crusher, conveyor, platform and shoots. The engine and boiler are covered with flapping canvas. The mountain sheep have found the hay, also two domestic goats that have run wild ever since they were kids a few weeks old.... When I first saw this scare crow I could not make out the object of its being placed there, for it was evident that none of the animals were afraid of it, even when the wind blows its rags and flags in rather a wild and threatening manner. The deer and sheep will pass close enough to be brushed by the scare crow. Sheep get up on the platform and crusher and lie there, using it as a desirable outlook.... I have lived more or less with wild creatures about me for the past thirty years, yet I am filled with wonder and surprise at the remarkable changes in the habits of the wild (?) [sic] game around here. True, the change has been going on for a number of years, but the result at the present time is a constant surprise to me.” E. Hofer, “In the Yellowstone Park,” *Forest and Stream* 60, no. 12 (March 21, 1903), 222.

the regulation prohibiting dogs from running loose, not only to keep them from disturbing or potentially killing wildlife, but, as significantly, to keep even small dogs from driving animals “so far back from the roads that none will be seen by the average tourist.”⁴⁰⁶

While contemplating ways to improve the protection and breeding of both birds and mammals, Pitcher concurrently instituted a program to more aggressively remove “unruly or troublesome” animals like bears. In the summer of 1902, he had three bears killed and posted a circular at all the hotels and campgrounds “absolutely prohibiting the interference with or molestation of bear or any other wild game in the park” and forbidding “anyone to feed them except at the regular garbage pile.” Pitcher believed that “strict compliance with the requirements of this circular is all that is needed to render the bear in the park perfectly harmless” since in most cases visitors caused confrontations, not

⁴⁰⁶ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1901* (Washington, DC: Government Printing Office, 1901), 6. Pitcher did not just focus on improving opportunities to view Yellowstone mega fauna. Tourists often commented about the lack of birds in the Park, so Pitcher recommended importing two species of large game birds from northern Europe: the capercailzie, a large grouse from Norway and Sweden, and the blackcock. While no records of their introduction have been found, he clearly hoped to create a true sportsmen’s paradise, in which both animals and imported birds “would spread into the neighboring country and soon afford fine bird shooting where there is little or none at present.” *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1902* (Washington, DC: Government Printing Office, 1902), 7. In 1908, it was also suggested that ptarmigan be introduced into the Park.

bears.⁴⁰⁷ Still, he felt obligated to send a scout to investigate reported incidents and, when found guilty, Pitcher authorized the offender to be “quietly executed” (i.e., the bear, not the visitor).⁴⁰⁸



Fig. 16: Feeding bears from garbage cart, n.d. (Yellowstone National Park photograph).

Most significantly, Pitcher oversaw the establishment of the Yellowstone buffalo captive-breeding operation and show herd. In 1901, Theodore Roosevelt

⁴⁰⁷ *Yellowstone Annual Report*, 1902, 7.

⁴⁰⁸ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior*, 1903 (Washington, DC: Government Printing Office, 1903), 7.

assumed the presidency upon President McKinley's death. In 1902, Congress called upon Pitcher to submit an estimate for building an enclosure and purchasing thirty to sixty buffalo, "with a view to starting a new herd of these animals in the park." Pitcher estimated he would need \$30,000 but, much as it had for the National Zoo, Congress appropriated only half that amount, leaving it up to Pitcher to get the job done. The Secretary of the Interior assisted by hiring C. J. "Buffalo" Jones, who arrived in the Park on July 16, 1902, as Yellowstone's new game warden and buffalo keeper. Pitcher and Jones agreed on a suitable location for a corral, a mile from Mammoth Hot Springs and then, to keep costs down, Pitcher assumed the role of general contractor, purchasing Page woven-wire fencing and hiring local day laborers from surrounding areas to construct the enclosure. Pitcher also sent letters to "all of the owners of pure-bred buffalo in the United States ... to [ascertain] at what price per head they could be secured and delivered in sound condition in the corral to be constructed."⁴⁰⁹ Thus did Yellowstone National Park whole-heartedly embrace a genuine program of captive breeding and animal display.

The Park arranged to purchase "15 cows from the Allard herd, located on the Flathead Agency in Montana, and three bulls from the Goodnight herd in Texas."⁴¹⁰ Through cows giving birth, they ended up with eighteen cows from

⁴⁰⁹ *Yellowstone Annual Report*, 1902, 10.

⁴¹⁰ *Ibid.*, 9-10. In 1904, the Park reported eighteen cows and three bulls purchased for a total of twenty-one animals, plus two wild calves and five born

Montana and three bulls from Texas. To this mix, Pitcher added two young calves captured from the Park's "wild" herd that he estimated to be down to twenty-two known animals, and possibly a few more. Pitcher believed that the bison raised "under fence" would become very tame, and once their numbers increased he planned to "gradually turn them loose in the park and they will become so accustomed to seeing people about them that when turned loose they will not be frightened out of the country or driven into the high mountains by the appearance of the summer tourist."⁴¹¹ Over time, he believed, even the bison would learn to recognize that the park functioned as a zoo.

Assuming Pitcher estimated correctly, the number of semi-domesticated bison captured or purchased for breeding and display approximately equaled the number of bison thought to still be roaming free in the Park.⁴¹² By 1904, Pitcher also feared that the "wild herd ... may become extinct in the course of time" unless animals could be captured or moved to a more hospitable area. In the summer of 1903, Pitcher arranged for hay to be cut and stacked for the few

in captivity in the spring of 1903, for a total of twenty-eight bison in October 1903. *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1904* (Washington, DC: Government Printing Office, 1904), 6.

⁴¹¹ *Yellowstone Annual Report, 1902*, 10. By 1903, the Mammoth "tame" herd numbered 27 or 28 animals. *Yellowstone Annual Report, 1903*.

⁴¹² Because of the difficulty of counting bison in the field, Margaret Mary Meagher estimates there could have been forty to fifty animals. Meagher, *The Bison of Yellowstone National Park* ([Washington, DC: Government Printing Office], National Park Service, 1973), 17.

remaining wild bison in the Park, but snow covered it during the winter so the animals never found it. In 1904, scouts brought in another calf to be raised by a domestic cow until old enough to be introduced into the captive herd.

Pitcher's handling of bison suggests an overarching goal of transforming Yellowstone into a public pleasuring ground with wildlife displays. Bison not corralled for public viewing would roam free but only within the partially fenced confines of the Park. Pitcher planned to counter the species' wildness and proclivity to wander out of view by raising the imported herd in corrals "in the same manner that domestic cattle are handled in this country." To this end, he branded the animals on their left hips with "'U. S.' in such a way that they can always be identified as United States property," using the same irons designed for branding government horses. He also had the animals branded on the horns, no doubt to discourage headhunters. A mounted bison head with "U. S." emblazoned on its horn might not have the same attraction for those who liked to display such things, although this would have made these animals less attractive to the Smithsonian as well.

Pitcher also worked to protect elk and other wildlife, particularly in the winter, by lobbying against domestic sheep grazing on the surrounding timber reserves. He wanted to ensure that "as soon as practicable the grazing of sheep on the reserves may be absolutely prohibited." And he introduced regular

feeding of the wildlife that congregated near the Park's northern boundary.⁴¹³ To this end, Pitcher called for a field of alfalfa to be planted in a 50-acre stretch on Park land adjoining the town of Gardiner.⁴¹⁴

At the same time, to protect "young game of all kinds" in the spring, Pitcher used "every means" to rid the Park of coyotes, including traps, poison, and scouts who were "good shots." And while strictly enforcing the Park ban on free-running dogs, Pitcher introduced packs of hunting dogs to track mountain lions that he believed threatened the mountain sheep population. In 1904, Pitcher reported that the game warden ("Buffalo" Jones) and scouts shot and killed fifteen lions in the Park using dogs to track and tree them. In one instance a lion took refuge in an abandoned mineshaft. The scouts set a trap for the animal right outside the shaft's entrance, trapped the lion when it tried to escape that night, and killed it the next day. Pitcher did not send the mountain lion to the National Zoo as his predecessors routinely did with a trapped animal.⁴¹⁵

While the National Zoo may have received its temporary fill of Yellowstone animals, other zoos began to look to the Park for living specimens as

⁴¹³ *Yellowstone Annual Report, 1903*, 5-6.

⁴¹⁴ *Yellowstone Annual Report, 1904*, ff 6.

⁴¹⁵ *Yellowstone Annual Report, 1904*, 7-8. At least one young mountain lion was allegedly sent to Washington in 1905, caught by Buffalo Jones to train his dogs and carried "miles in my arms through a blinding snow storm" ... "but the major took it from me before I was done with it." Jones then caught a full-grown female lion, but this too was taken from him. C.J. Jones to Frank Baker, April 10, 1905, RU 74, Box 90, f 9. Both animals may have been killed, since they do not show up in reports for the National Zoo.

well. In March 1903, for example, Pitcher corresponded with Webb Hayes in Cleveland about receiving “as large a grizzly as can be secured” for the city’s Wade Park zoo.⁴¹⁶ When such an arrangement seemed possible, Hayes asked that a trap suitable for shipping be “made by the Zoological people in Washington.” In exchange, Hayes offered to make a contribution to Fort Yellowstone’s library “to help the soldier boys out.”⁴¹⁷ Hayes also asked if, after Cleveland received theirs, it might be possible to obtain another grizzly for the Toledo Zoo.

Both the Cincinnati and New York zoos requested use of the National Zoo’s trap so that they, too, could obtain fine specimens of Yellowstone grizzlies. Henry Osborne, chairman of the New York Zoological Society, offered to “make some exchange with the Washington Park ... [if] it were necessary for you to give permission.”⁴¹⁸ He, too, believed that any animals trapped in Yellowstone technically still belonged to the Smithsonian. Since the National Zoo recently had received a fine specimen of its own for display, Frank Baker granted permission to both zoos for use of the trap.⁴¹⁹ This opened the door a little wider for other zoos to capture and transport animals out of the Park, and began to

⁴¹⁶ Webb C. Hayes to John Pitcher, March 9, 1903, LB 9, #4069.

⁴¹⁷ Webb C. Hayes to John Pitcher, May 6, 1903, LB 9, #4067.

⁴¹⁸ Henry Osborne to S. P. Langley, January 27, 1903, RU 74, Box 90, f 8.

⁴¹⁹ *Report of the Board of Regents of the Smithsonian Institution for the Year Ending June 30, 1903* (Washington, DC: Government Printing Office, 1904) 65, 69, 27-29.

weaken the “special relationship” the National Zoo had established with Yellowstone.

In addition to sending animals to other zoos, Pitcher suggested that Park wildlife could be shipped to repopulate other animal reserves. For example, beaver had been eliminated from much of its original habitat and many believed them still to be at risk throughout the West. With illegal trapping of beaver mostly under control in the Park, Pitcher reported the beaver population had increased significantly and could be used to “restock” any area in the country, assuming the Interior Department granted permission.⁴²⁰ In essence, these duplicate specimens could be distributed like any others the U. S. government held.

Pitcher extended the zoo-like qualities of Yellowstone beyond just protecting, capturing, displaying, and shipping the large animals under his care. He also focused attention on improving the overall appearance of the Park, creating a manicured landscape that would appeal to visitors as they arrived. In 1901, for example, Pitcher’s first year as acting superintendent, he oversaw the construction of a reservoir to hold approximately two million gallons of water to

⁴²⁰ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1905* (Washington, DC: Government Printing Office, 1905), 9. This idea would be picked up in earnest under the watch of Acting Superintendent Lloyd Brett.

supply the Fort and the Mammoth Hot Springs Hotel, as well as provide irrigation for “beautifying” the plateau.⁴²¹

With the extension of the Northern Pacific Railway into Gardiner in 1903, and the construction of a “handsome and comfortable depot” there, Pitcher initiated construction of a large stone archway, providing a formal entrance through which tourists would pass upon departing the train. Theodore Roosevelt, visiting the Park with naturalist John Burroughs that spring, laid the cornerstone for what became known as the Roosevelt Arch.⁴²² Even the field of alfalfa grown to feed antelope improved the appearance of the Park’s entrance, turning “a barren and unsightly waste,” into “a beautiful green field and presents a very pleasing picture to the tourists as they enter the park.” Workers planted trees transplanted from Sequoia National Park along both sides of the road for about a half a mile from the arch, again adding “to the attractiveness of this entrance to the park.”⁴²³

In a move reminiscent of the artificial environment created by Martha Maxwell’s exhibit in Philadelphia, Hiram M. Chittenden of the Corps of Engineers constructed a small pond with running water near the arch by digging

⁴²¹ *Yellowstone Annual Report, 1901*, 3-4. The following year, Pitcher used the water to fuel a small hydro-electric plant to electrify the fort and, with a 12-inch culvert, irrigate the lawn and gardens on the plateau.

⁴²² *Yellowstone Annual Report, 1903*, 3.

⁴²³ *Ibid.* In another interesting variation of national park exchanges, the twelve sequoia trees sent from Sequoia National Park did not survive the Yellowstone winter.

a ditch from the Gardner River. He also widened, re-graded, and resurfaced the five-mile road from Gardiner to Mammoth Hot Springs. The Park purchased ten new sprinkling wagons to keep the dust down on the road between Gardiner, Mammoth, and Norris. In addition to improving a visitor's first impression of the Park, Chittenden also wanted to enhance the "comfort of the traveling public."⁴²⁴

In addition to ensuring positive first impressions of the Park, John Pitcher worked to improve the quality of visitor experiences once they entered the area around Mammoth Hot Springs and the adjacent Fort Yellowstone. For example, he planted what he hoped would become a "handsome lawn" of grass and clover to counter the blowing dust that plagued the area by the fort, constructed cement sidewalks, and even moved photographer F. Jay Hayne's house and barn away from the center of the Mammoth plateau. Moving the two buildings significantly improved the overall appearance of the area, according to Pitcher.⁴²⁵

To ensure that visitors had an opportunity to see wildlife even while staying in a hotel, he distributed hay near the Hot Springs Hotel. This resulted in deer increasing "more rapidly than any other animal in the park" and becoming "tamer and more fearless than any other species" as they learned to graze in the

⁴²⁴ Ibid., 7-8. No longer focused on solely the protection of animals, Chittenden and Pitcher, in their individual ways, seemed to view meeting the needs of Yellowstone visitors as the ultimate engineering challenge.

⁴²⁵ Ibid., 3.

area near Fort Yellowstone.⁴²⁶ When John Burroughs visited the Park with Roosevelt in 1903, he later recalled a “novel spectacle” near sundown “when the deer came down from the hills into the streets and ate hay ... as unconcernedly as so many domesticated sheep.... When the sundown gun was fired a couple of hundred yards away, they gave a nervous start, but kept on with their feeding.”⁴²⁷ By 1904, just one year after introducing hay in and around the area below Mammoth Hot Springs, Pitcher reported 120 black tail (mule) deer grazing on the cavalry’s parade grounds, “considerably more than have ever been seen at any time in the past.”⁴²⁸

⁴²⁶ *Yellowstone Annual Report*, 1903, 6.

⁴²⁷ John Burroughs, *Camping & Tramping with Roosevelt* (Cambridge Massachusetts: The Riverside Press, 1907, 1923), 28-29. Burroughs reported that “the only game the President killed in the Park” was a mouse he scooped up with his hat and skinned for C. Hart Merriam of the Biological Survey. Roosevelt believed the mouse represented a new species (it did not), so even Roosevelt entered Yellowstone specimens into the Smithsonian collection. *Ibid.*, 66.

⁴²⁸ *Yellowstone Annual Report*, 1904, 6.



Fig. 17: Acting Superintendent John Pitcher fed hay to mule deer to make them more visible for tourists (National Park Service photograph).

In one more effort to control what visitors saw, and how they perceived and experienced the Park, Pitcher discouraged the common practice of using elk antlers as fences to protect the lawns and other areas in Mammoth Hot Springs. He worried that visitors would see the antlers and think a “terrible slaughter of elk in the park” had occurred. Many tourists, Pitcher feared, didn’t know that elk shed their antlers each year.⁴²⁹

In just a few short years, Pitcher transformed the wild and “barren” entrance to the Park into something more manicured and familiar, featuring an elegant stone archway, a pond, rows of trees, and a green field. He not only smoothed out the initial trip into Mammoth Hot Springs, but also arranged for visitors to see “tame” wildlife along the roadsides and near the hotels. He also sent out crews to clear fallen timber and pick up trash at campsites and along

⁴²⁹ *Yellowstone Annual Report, 1905, 7.*

roadways. Pitcher helped ensure that visitors experienced Yellowstone in ways that would complement if not duplicate similar experiences in the National Zoological Park. Indeed, photographs from the period suggest that visitors enjoyed the amenities of both parks and pleasuring grounds in a strikingly similar fashion.



Fig. 18: Visitors to the National Zoological Park, Washington, DC, 1891 (Smithsonian Institution Archives photograph).



Fig. 19: Visitors to Yellowstone National Park, 1908 (National Park Service photograph).



Fig. 20: School children at the National Zoo, 1899 (Smithsonian Archives photograph by Frances Benjamin Johnson).



Fig. 21: Tourists watching bears feed in Yellowstone, 1910 (National Park Service photograph).

With his pilot program of feeding deer, antelope, and mountain sheep deemed successful by “the marked improvement in the condition and increase in the number of these animals,” in 1904 Pitcher proposed growing hay for all the large game in the Park. While he did not advise feeding game all winter long, Park wildlife “should be treated in about the same way that the cattlemen handle their range stock,” he believed, scattering haystacks about the winter range where game could get to it even in deep or crusted-over snow. Although winters had been mild during Pitcher’s first years, and only a small number of animals had “died of starvation at any time,” he feared that “in the near future we are liable to lose a large amount of game if the precaution suggested above is not taken.”⁴³⁰

Pitcher effectively had already stopped large animals from migrating out of the Park by constructing a six-mile barrier along the northern border. He had eliminated or reduced most animals’ natural predators and had even reintroduced a breeding herd of bison. Only one animal appeared to be still at risk in Yellowstone: the Park’s original wild bison. In 1905, Pitcher estimated that only thirty wild bison survived in the Park. Rather than herd them into a more accessible area where they could be fed, potentially killing some or all of them, Pitcher sent men out in the spring to capture their calves. They confined

⁴³⁰ *Yellowstone Annual Report, 1904*, 8.

these bison calves with a domestic milk cow until they grew large enough to be released into the enclosure with the tame bison herd.⁴³¹

By removing the young each year, Pitcher risked slowly killing off the last wild bison herd in the Park, in favor of a semi-domesticated one.⁴³² He tried to counter this by adding “new blood.” In 1905, he released one of the captive bulls near Pelican Creek, hoping he would attract members of the wild herd, but the animal wandered off and died on the edge of Yellowstone Lake. Signs of pawing in the snow suggest the animal starved to death.⁴³³ The captive herd, on the other hand, had grown from the original twenty-one purchased animals to a total of forty-four in 1905, “more than double the number with which [the Park] started.”⁴³⁴ By 1906, the tame herd included fifty-seven animals. The Park now corralled so many bison that Pitcher needed to find a new way to manage them.

In the summer of 1906, Pitcher oversaw the construction of a log cabin for the use of the buffalo keeper. And he enclosed a square mile of pasture near the confluence of the Lamar River and Rose Creek, an area he believed well suited for raising and irrigating hay. Pitcher then arranged for the young bison in the

⁴³¹ *Yellowstone Annual Report, 1905*, 8-9,

⁴³² In 1973, Mary Meagher wrote that original Park bison may be mountain bison, a different sub-species than the plains bison imported into Yellowstone, in which case the imported bison would have only distantly related to native populations, with which they were interbred. See *The Bison of Yellowstone*, 14-17.

⁴³³ Mary Ann Franke, *To Save the Wild Bison: Life on the Edge in Yellowstone* (Norman, OK: University of Oklahoma Press, 2005), 58.

⁴³⁴ *Ibid.*, 9.

tame herd to be moved, leaving the older animals behind in the Mammoth Hot Springs corral. Pitcher intended to hold the young animals in this new enclosure until they became thoroughly “at home,” at which point they would be released, with a new crop of young moved again from Mammoth. Pitcher assumed that freed animals would not “wander far from the haystack which will at all times be kept on hand ready to be fed out to them.” He hoped that by segregating the young from the rest of the herd he could help prevent the spread of potentially deadly disease.⁴³⁵ This arrangement also conveniently allowed Park visitors to continue viewing mature bison in the corral not far from the hotel.⁴³⁶

⁴³⁵ *Report of the Acting Superintendent of Yellowstone National Park to the Secretary of the Interior, 1906* (Washington, DC: Government Printing Office, 1906), 8-9.

⁴³⁶ Not all Americans viewed John Pitcher’s management of Yellowstone in such a favorable light. James Fullerton, who traveled to Yellowstone to investigate the killing of elk for their teeth, soon initiated a national campaign against Major Pitcher and Theodore Roosevelt for allowing the Park to openly serve alcohol in the hotels, linking wildlife protection with other social and moral crusades. Indeed, if his autobiography reflects his priorities, Fullerton quickly lost interest in the elk and focused his attack on the drunkenness he and others witnessed in Park hotels, which he blamed on Pitcher and Roosevelt. See Fullerton, *Autobiography or Roosevelt’s Adversary* (Boston, MA: Roxburgh Publishing Company, Inc., 1912).



Fig. 22: Bison enclosure near Mammoth Hot Springs, n.d. [ca. 1905] (National Park Service photograph).

Pitcher's successor, General Samuel B. M. Young, who returned to Yellowstone in the summer of 1907, saw first hand the results of Pitcher's aggressive management practices, wildlife feedings, and bison ranching in the Park. Young, who had served briefly as acting superintendent in the summer and fall of 1897, pointed to his first annual report in which he had estimated the antelope herd to consist of about five hundred animals. By 1906, Pitcher estimated that number to be about 1,500. Young believed that number could reach 2,000 in 1907. To ensure that they continued to increase under his watch,

Young posted guards and hazed any antelope back into the Park if they managed to escape at night by crawling under the fence.⁴³⁷

Countering the Smithsonian's idea of transporting most if not all bison out of Yellowstone for the animals' protection, Young suggested importing additional species into the Park for their protection. Pitcher's administration had used patrols, supplemental feeding, and other management techniques to improve wildlife populations. Young felt confident that with "intelligent management and comparatively little expense a greater variety of birds and animals could be successfully added and propagated within the park..."⁴³⁸ Yellowstone so successfully had transformed itself into a large captive-breeding program of semi-tamed animals that it should be used to protect and display other animals as well.

Young also fully embraced the idea of shipping animals to other zoos and public game reserves, even those in other countries. For example, Park personnel captured and bottle fed three young antelope, weaned them on rolled oats, and shipped them to the zoological garden in London. A pair of young elk, also

⁴³⁷ *Report of the Superintendent of Yellowstone National Park to the Secretary of the Interior, 1908* (Washington, DC: Government Printing Office, 1908), 8.

⁴³⁸ *Annual Report of the Superintendent of Yellowstone National Park to the Secretary of the Interior, 1907* (Washington, DC: Government Printing Office, 1907), 12.

bottle-fed before being switched to oats, found themselves shipped to a park in Vancouver, British Columbia.⁴³⁹

Theodore Roosevelt's national push to protect birds led to a new focus on the protection of birds in Yellowstone as well, particularly near Park hotels. Young estimated that more than seventy species of birds raised their young in the Park. He asked Theodore Palmer of the Biological Survey to report on the birds found in the Park, and how to enhance their presence. Palmer identified two preventable causes of bird mortality in the Park: caves, which trapped and killed hundreds if not thousands of birds each year, and cats, "kept at nearly every hotel, permanent camp, and soldier station." Placing netting over caves would prevent birds from entering them. Prohibiting cats in the Park, a regulation Young enacted immediately, would protect birds near "hotels and permanent camps where it is especially desirable to increase the number of birds as much as possible." Palmer also suggested birdhouses and sources of water (i.e., birdbaths) near the hotels to increase the visibility of bluebirds and wrens.⁴⁴⁰

While many of his predecessors had complained about E. C. Waters, Young oversaw the closing down of the private zoo Waters operated on Dot Island. Waters owned and operated a private boating company on Lake

⁴³⁹ Ibid., 14. The antelope were shipped December 30, 1907 to the New York Zoological Gardens, in care of W.T. Hornaday, who kept the animals at the zoo until a caretaker arrived from London to transport them across the ocean. "They were reported as having arrived at their destination in good condition." *Yellowstone Annual Report, 1908*, 8.

⁴⁴⁰ *Yellowstone Annual Report, 1907*, 16.

Yellowstone that transported summer visitors to Dot Island where he kept poorly maintained and often badly treated bison, elk, and bighorn sheep as living representatives of Park wildlife (Waters had purchased the animals outside of Yellowstone and had them transported to the island). From the beginning, visitors complained about the animals' treatment. One photograph from his island displays shows visitors viewing an emaciated bighorn sheep in its pen.

When he arrived in Yellowstone, Superintendent Young found the conditions in which the Dot Island animals had been held over the winter of 1906-1907 to be "filthy, inhumane, and disgusting." He advised Waters that at the end of the season he would no longer be permitted to keep wildlife in captivity, and in August Young directed Waters to remove all of his animals from the Park. In October 1907, when Waters failed to comply, Young ordered the surviving eight buffalo and seven elk to be released into the Park.⁴⁴¹

When Acting Superintendent Young shut down the private zoo on Dot Island and released the captive animals, it signaled that a new era of animal displays had taken its place in Yellowstone. Tourists no longer needed to travel to an

⁴⁴¹ Ibid., 5-6. Haines reported that these animals descended from the Goodnight herd, with one animal exchanged in Wisconsin. Lincoln Park Zoo maintains that Waters purchased one bull and six cows from the zoo. Most likely the animals released into the Park in 1907 came from both sources arranged through exchange.

island in Yellowstone Lake for a chance to view living specimens of Park wildlife.

Yellowstone personnel now maintained corrals and other enclosures near the hotels for both public display and as holding pens before shipping the animals out of the Park. They also distributed hay in the winter and spring to keep animals from drifting out of the Park in search of food, hazed them back into the Park when they did escape, and eliminated predators, including domestic dogs, to ensure that they did not disturb animals that might otherwise seek refuge away from the roads and hotels. They even maintained open garbage dumps where bears and other animals could come to feed and be viewed by visitors. By 1907, General Young could shut down the private zoo on Dot Island without complaints from visitors because Yellowstone fully functioned as a public zoo and pleasuring ground from the minute tourists entered its spacious and well-manicured grounds. But as did administrators of any other museum or captive breeding program, Yellowstone National Park's superintendents would soon have to face the inevitable problem of how to rid themselves of duplicate specimens.

11. YELLOWSTONE AND WILD ANIMAL DISPLAYS:

“THE MOST WONDERFUL AND BEST KNOWN OF THE GREAT
GOVERNMENT RESERVATIONS”

Although fine specimens of our native wild animals may be seen in confinement in many city parks throughout our country, the sight is not nearly so interesting and instructive as to see these beautiful wild animals in their natural habitat, where they have practically become tame and fearless as the flocks and herds of domestic animals, no doubt because of an instinctive conviction that in this particular nook of the mountains man is their friend and not their enemy. There is a value in mental uplifting in this sight of the wild animals in their natural home, practically fearless of man, as well as in the natural scenic beauties of this wonderland.⁴⁴²

-- S. B. M. Young, 1908

In 1907, the National Zoo received six animals through exchange, purchased or collected 179 more animals, including two bison, and added two more bison born that year in captivity.⁴⁴³ But the zoo received no animals from Yellowstone. In the spring of 1908, Frank Baker tried again to enlist the assistance of the latest Acting Superintendent Samuel B. M. Young, reminding him of all the animals, from antelope to wolverines, that Yellowstone National Park had sent over the years, “some of which are still among our finest specimens....” Baker hoped to continue that special relationship with the Park and sent another wish list, adding that living specimens originating in Yellowstone, “the most wonderful and best known of the great Government

⁴⁴² *Yellowstone Annual Report*, 1908, 8-9.

⁴⁴³ *Smithsonian Annual Report*, 1907, 72.

reservations," gave the animals added value or caché when displayed in the National Zoo. When he did not hear from Young, Baker wrote again reminding the Acting Superintendent of the animals the zoo hoped to receive from Yellowstone that year.⁴⁴⁴

Young recently had trapped a grizzly bear so he shipped it to Washington, with the following notice attached:

Live Grizzly Bear ...
 For NATIONAL ZOOLOGICAL PARK, WASHINGTON, D.C. ...
DIRECTIONS FOR FEEDING
 A PAN FOR WATER AND TWELVE LOAVES OF BREAD
 ACCOMPANY BEAR.
 FEED ONE LOAF OF BREAD THREE TIMES A DAY.
 WATER SEVERAL TIMES A DAY, WHEN CARS ARE STANDING.
 PREVENT WATER FROM SLOPPING IF POSSIBLE.
 TAKE PAN OUT OF CAGE WHEN THROUGH DRINKING. KEEP IT
 CLEAN.
 A PAIL OF WATER THROWN OVER THE BEAR, OR HOSE TURNED
 ON HIM OCCASIONALLY, WOULD BE BENEFICIAL, ESPECIALLY IF
 WEATHER IS HOT....
 NOTICE!
 THIS IS A FOUR-YEAR-OLD MALE GRIZZLY BEAR JUST CAPTURED
 IN YELLOWSTONE PARK. HE IS PARTICULARLY CROSS AND
 DANGEROUS. KEEP OUT OF HIS REACH AND DO NOT, UNDER
 ANY CIRCUMSTANCES, ALLOW HIM TO BE TEASED.
 S. B. M. YOUNG, Superintendent, Yell. Nat'l Park.⁴⁴⁵

Even though the train carrying the bear to Washington derailed and overturned, demonstrating one of the many risks associated with these kinds of

⁴⁴⁴ Frank Baker to S. B. Young, April 8, 1908 and July 7, 1908, RU 74, Box 90, f 9.

⁴⁴⁵ Shipping label, RU 74, Box 90, f 9.

animal shipments, the grizzly arrived safely on July 29, 1908. Baker soon asked for one or two more bears, particularly a female, since all of the grizzlies received by the Park had been males. Young promised to do what he could, admitting that he “would like to rid the park of a number of fierce grizzlies.” Baker also expressed interest in the antelope, mule deer and mountain sheep that Young thought he could trap once the animals congregated by the hay put out for their benefit in the winter. Feeding and concentrating animals had the added benefit of making them easy to trap for shipment out of the Park.

That year, Young shipped a total of fourteen animals to Washington: the large grizzly bear, plus a female black bear with two cubs, and ten beaver. He also sent the skin and skull of a grizzly bear to the National Museum. Major H. C. Benson, who succeeded General Young in the winter of 1908, sent the two mule deer and two pronghorn antelopes Frank Baker requested earlier, but he appears to be one of the few to actually question what had happened to all the other animals Yellowstone had shipped. Could it be that Park animals did not survive in Washington?⁴⁴⁶ Baker admitted that female deer seemed unfavorably affected by the change of climate, some surviving less than a year. Antelope either died shortly upon arrival or lived from one to five years in captivity, but generally did not do well either. It appeared that some Park specimens only lived temporarily in Washington before moving to the National Museum for

⁴⁴⁶ Harry Benson to Frank Baker, March 30 1908, LB 48, f 25.

permanent display. That said, however, Baker would “be very glad to have more antelope this fall and give them another trial.”⁴⁴⁷

Benson failed to alert the Department of Interior when he shipped requested animals, and received a prompt reprimand that served to clarify the exact relationship the National Zoo still maintained with the National Park. The National Zoo had priority over any and all specimens in Yellowstone, but they must be accounted for in all instances. And Benson must keep the Department of the Interior informed: “[N]o game is to be caught up and shipped from the Park without the consent of the Department except in the case of game intended for the National Zoological Park in this City, and in the latter instance a report should be submitted to the department whenever game is collected in the Reservation for shipment to such Park.”⁴⁴⁸

At the same time the Department of Interior instructed him to conduct a detailed accounting and reporting system of animals shipped out of the Park, Benson was also expected to receive animals shipped into Yellowstone. Again the acting superintendent pushed back, questioning the specialized care introduced animals would require. In early 1909, Frank Pierce, the First Assistant Secretary of the Department of the Interior, informed Major Benson of a long-awaited shipment of chamois, an official gift of the Swiss government. The animals had been sent to the animal dealer Carl Hagenbeck in Hamburg,

⁴⁴⁷ Frank Baker to Harry Benson, July 23, 1909, *ibid.*

⁴⁴⁸ Frank Pierce to Harry Benson, April 7, 1909, *ibid.*

Germany. William Temple Hornaday, now director of the New York Zoological Park, agreed to receive them next before shipping them on to Yellowstone National Park.⁴⁴⁹ To ensure their survival, Hornaday forwarded instructions to Benson on how to keep and care for the chamois. He basically advised that Yellowstone not care for the chamois the way the New York Zoological Park treated theirs. Rather, Hornaday recommended an enclosure of about an acre of protected land with good southern exposure free from wind. In addition, two or three small yards should be set aside for the males.⁴⁵⁰

Preparing for the animals' arrival, Major Benson reviewed Hornaday's advice and assured the Secretary of the Interior he would do "the best that we can." However, he admitted, the "care of these animals will be quite a tax...." He clearly resented that some considered Yellowstone "a park in the nature of a

⁴⁴⁹ Frank Pierce to Harry Benson, March 13, 1909, LB 48, f 23. Most records of the chamois indicate that they came as a gift from the Swiss Government, but it appears that these animals were sought out initially by the Department of Interior. For example, one letter refers to "the proposition to procure chamois for the Yellowstone National Park from Switzerland." Frank Pierce to Major Allen, February 29, 1908, LB 48, f 23. It appears that this transaction, too, was based on specimen exchange, with the U. S. government sending 50,000 Namaycush trout eggs (i.e., lake trout) to Switzerland in exchange for the Swiss animals. See Heinz K. Meier, *Friendship under Stress: U. S. Swiss Relations 1900-1950* (Bern, Switzerland: Peter Lang, 1970) 28-30.

⁴⁵⁰ William Temple Hornaday to S. B. Young, January 28, 1908, LB 48, f 23. Describing the conditions under which they kept a chamois in New York, Hornaday wrote "we have had one chamois in a ridiculous wire pen no larger than a hotel dining-room for six years... [with] a contrivance very much like a tall dog-kennel, with a nearly flat roof, into which it retires from rain and other storms."

zoological garden, where animals are kept more or less in confinement and are regularly cared for by keepers.” Better, he advised, to send the chamois to a real zoological park in Washington, where they could be better cared for and the climate would be more suitable. “It is ... quite evident that the conditions here are not those which are likely to conduce to a long life for the chamois,” he added.⁴⁵¹ The Department of Interior acquiesced and, after discussing the gift with the Secretary of the Smithsonian, the National Zoological Park added five Swiss chamois to its collection.

Benson resisted the idea of Yellowstone being viewed as a zoological garden, with exotic species confined and cared for by keepers. But his opposition likely resulted from the amount of work and specialized feed required by an animal like the chamois. He willingly managed the containment and display of animals considered native to Yellowstone. For example, in addition to maintaining the fence that kept antelope within the Park and seeing to the animals’ regular feeding, Benson continued active management of the bison population. He moved the entire tame herd to the Lamar Valley enclosure where the animals could be fed hay each winter.

By 1908, this actively managed herd had increased to seventy-seven animals, stressing those kept within a confined space. The bison keeper killed some unruly bison (i.e., bulls that did not do well in containment), and shipped

⁴⁵¹ Harry Benson to [Richard Ballinger] Secretary of the Interior, March 20, 1909, LB 48, f 23.

their remains to the Smithsonian. But in contrast to a long-standing policy, the Park also received permission to sell some living animals, forwarding the proceeds to the Department of the Interior. They separated “problem” animals, and the resulting “show herd” of bulls became an added public attraction in Mammoth Hot Springs.⁴⁵² In 1909, for example, an estimated 10,000 tourists visited the buffalo corral in one season, making the animals “the main feature of the stop at Mammoth Springs.”⁴⁵³ The following summer, the game keeper moved sixteen bulls to the Mammoth corral, where they again proved extremely popular, surpassing even the dramatic hot springs and terraces in the same area.

Even with an increasing number of animals removed each summer, the Buffalo Ranch still struggled to manage a growing number of bulls in a confined space, where they often fought and put younger animals at risk. In early 1909, one bull became so dangerous that B. P. Wells, the Park’s buffalo keeper, castrated it. He believed this to be only a temporary fix, however, and recommended that something be done to “protect ourselves and the herd against his viciousness and lawles[s]ness.” The keeper could cut off its horns but, keeping in mind the animal’s inherent value for display, noted that “this would render him worthless for anything.” Wells recommended instead that Superintendent Benson give him authority to kill the animal and to “realize as much as possible from his carcass” by selling its head and hide to a

⁴⁵² *Yellowstone Annual Report, 1908*, 9.

⁴⁵³ *Yellowstone Annual Report, 1909*, 11.

taxidermist.⁴⁵⁴ Superintendent Benson received permission from the Department of Interior to kill the animal, but instructed the gamekeeper to prepare and ship the animal's skin, head, and skeleton to the National Museum, since the Smithsonian still had priority over all specimens in the Park.⁴⁵⁵

Initially, the Park planned to release one or two of the captive bulls if the wild herd ever came near the corral. "It is believed that these bulls will induce the herd to remain near the corrals, and if they are then fed they will become less wild, and may eventually be incorporated with the present herd."⁴⁵⁶ But as bison became more aggressive and difficult to manage within confined spaces, the managers began considering ways to "dispose of" a number of older bulls, with only the "finest ones being retained each year for breeding purposes."⁴⁵⁷

The two shipments to the National Museum of bison remains, or "trophies" as many still referred to them, were followed in August by another skin, head and skeleton of another bull killed after becoming entangled in some

⁴⁵⁴ B. P. Wells to Harry Benson, January 26, 1909, LB 14, #7368.

⁴⁵⁵ Harry Benson to B. P. Wells, February 11, 1909, LB 14, #7367. The Smithsonian also received another bison cow head, sent to a taxidermist in Tacoma, Washington, for the cost of mounting and shipping the specimen. It is unclear how the bison head ended up at a Tacoma taxidermist's shop. Since the head was considered "government property," Wells personally paid for the mounting in advance. Wells resigned at around the same time, suggesting he may have sent it to the taxidermist without authorization (i.e., hoping to keep it for himself). Harry Benson to Sheard, April 12, 1909, LB 36, f 462.

⁴⁵⁶ *Yellowstone National Report*, 1909, 11.

⁴⁵⁷ *Report of the Acting Superintendent of the Yellowstone National Park to the Secretary of the Interior, 1910* (Washington, DC: 1910), 10

wire. Documenting the success of its captive breeding program, the Park sent the Smithsonian information on the animal's provenance: the bull had been born in the spring of 1905 as part of the Park's tame herd, its father "a tame animal from the Goodnight herd of Texas; his mother from the tame herd of Allard of the Flathead country, Montana."⁴⁵⁸

In addition to shipping bison body parts for display, Benson also offered a set of "freak elk horns" to the Smithsonian, now headed by Charles Walcott. Walcott in turn asked for other elk skulls having normal antlers.⁴⁵⁹ Perhaps hearing of these shipments, or making assumptions of his own about the nature of Yellowstone as still also functioning as a source of specimens, C. Hart Merriam, Chief of the Biological Survey, contacted Major Benson requesting "as many skulls as possible of the larger carnivorous mammals, particularly bears, wolves, coyotes, mountain lions, lynxes and wolverine." Like the collections of living specimens made in the Park on behalf of the Smithsonian, Merriam offered to pay for "any of your men ... willing to collect such material for us from specimens killed in the park region," as well as cover the cost of shipping.⁴⁶⁰

⁴⁵⁸ Harry Benson to [Charles D. Walcott] Secretary of the Smithsonian Institution, August 19, 1909, LB 36, f 462.

⁴⁵⁹ Charles D. Walcott to Harry Benson, January 30, 1909, LB 36, f 461. The following winter, a four-year-old bull and a calf were killed, and the head of the bull and the skin and bones of the calf were salvaged for the National Museum. Benson also had the robe, head and skeleton of a large ram (*Ovis cervina*) and some additional elk horns and skulls to send.

⁴⁶⁰ C. Hart Merriam to Harry Benson, February 19, 1909, LB 36, f 461.

In the spring and summer of 1909, the Park sent the skulls of fourteen poisoned coyotes and one fox to Merriam for the National Museum collection.⁴⁶¹ In 1910, the Park sent eleven more coyote skulls and one red fox. Acknowledging the shipments of coyote and fox skulls, Chief Field Naturalist, E. W. Nelson asked if the Park might also send “the skulls of some of the large silver-tipped bears of your region” for a scientific paper Merriam was writing. “Large skulls of old males are particularly valuable,” Nelson added.⁴⁶²

In 1910, Benson offered to send grizzly skulls and as many living grizzlies as the National Zoo wanted. In the summer of 1910, he sent the zoo a bear that “gave endless trouble and did much damage in camp, tearing up several tents and destroying several dollars worth of government rations.” As the Acting Secretary of the Department of the Interior explained, the bear had become “so tame that she could not be driven away and it was necessary to kill or capture her.” To manage that bear, they sent the animal to Washington.⁴⁶³ Another grizzly gave “considerable trouble at some of our stations in the park,” so if the zoo wanted this animal, Park officials would attempt to trap and send it as

⁴⁶¹ “Skulls of Carnivora Mailed to Biological Survey Spring & Summer 1909,” *ibid.*

⁴⁶² E. W. Nelson to Harry Benson, June 30, 1910, LB 36, f 461. The skull of a female grizzly, shot at Yellowstone Lake, was sent in November 1911, unsigned note, *ibid.*

⁴⁶³ Acting Secretary of the Department of the Interior to Frank Baker, August 4, 1910, RU 74, Box 90, f 9.

well.⁴⁶⁴ Acting Superintendent Benson estimated that on at least one hundred occasions he had been called on to shoot bears, “as they are disturbing every camp in the park – Government and others,” leaving one man seriously injured and in the hospital.⁴⁶⁵

With so many bears potentially available, Frank Baker informed William Temple Hornaday at the New York Zoological Park of the availability of grizzlies, noting that “this might be a good opportunity to get good specimens, and I should be glad to place our cage-trap at your disposal.”⁴⁶⁶ Hornaday refused to accommodate any bear with a “ferocious disposition” but he hoped to have new facilities available in the spring. Hornaday, who had his own trouble with uncooperative animals in the zoo, thought it “fairly incumbent upon Major Benson to go bear-hunting and shoot up some of the grizzlies that have become a menace to the peace of the National Park.”⁴⁶⁷ Neither national parks nor zoological ones should tolerate aggressive or troublesome animals. Having been told of Hornaday’s interest in Park grizzlies (but not his advice about bear hunting), Benson promised to capture some once the New York zoo had room to receive them.⁴⁶⁸

⁴⁶⁴ Harry Benson to Frank Baker, July 29, 1910, RU 74, Box 90, f 9.

⁴⁶⁵ Harry Benson to Frank Baker, August 24, 1910, RU 74, Box 90, f 9.

⁴⁶⁶ Frank Baker to William Temple Hornaday, August 29, 1910, *ibid.*

⁴⁶⁷ William Temple Hornaday to Frank Baker, August 31, 1910, *ibid.*

⁴⁶⁸ Harry Benson to Frank Baker, September 8, 1910, *ibid.*

While he worked on decreasing the number of troublesome bears, and increasing the bison population, Benson also turned his attention to antelope. After a winter away from the Park, Benson returned in the spring of 1910 and found only twenty or twenty-five antelope near the Park entrance. He took immediate action to “secure the return of the herd by raising the fence for about a mile, scattering alfalfa along this fence for a distance of a half mile or more on the outside, then a detail of soldiers and rangers was sent to make a drive covering some 7 miles in width. In this way some 600 or 700 were returned.”⁴⁶⁹ Benson blamed the antelope’s exodus on one of the civilian scouts placed in charge of keeping the animals within the Park’s borders and asked for the authority to terminate the scout’s appointment.

In March 1910, George Bird Grinnell contacted Major Benson, inquiring whether or not he would be willing to capture and ship some of these same antelope to the relatively new Montana Buffalo Preserve. Benson expressed his willingness, but preferred to wait until the fall when any animals captured as calves would be fully weaned. The Department of War transferred Benson and his troops to Hawaii before he could fulfill this pledge, so Major Lloyd Brett, who arrived in Yellowstone in September 1910, filled Grinnell’s order.

George Bird Grinnell acknowledged the centralized role Yellowstone played in shipping animals to meet the wildlife needs of the rest of the country.

⁴⁶⁹ *Yellowstone Annual Report, 1910, 8-9.*

Convinced like many of his peers that antelope faced possible extinction, Grinnell wrote that the nation required “as many centres as possible where antelope may be absolutely protected and encouraged to increase. Such a centre exists in the Yellowstone National Park....” The Montana Buffalo Preserve, established in 1908 as a captive breeding program for bison, did not have a single antelope, which Grinnell believed should be introduced and given a chance to breed safely. He requested that the Department of the Interior authorize the capture of twenty antelope for this purpose. Stocking the reserve with Yellowstone antelope would be, Grinnell pointed out, “wholly a government matter, the transferring of a certain number of wild animals belonging to the government from one reservation to another reservation.”⁴⁷⁰

With a few exceptions, the network of specimen exchange and display established between the Smithsonian, the National Museum, the National Zoo, and the National Park had called on Yellowstone to ship specimens for research and display in the museum as well as living specimens for display and exchange by the zoo. Shipments to Washington included the salvaged skins, heads, horns, skeletons, and even taxidermied remains of all Yellowstone animals, including the semi-domesticated bison, born and raised under controlled environments in the Park. Yellowstone personnel also sent specimens ranging from beaver to pelicans to grizzly bears for living display. When these animals died in captivity,

⁴⁷⁰ George Bird Grinnell to [John Ballinger] Secretary of the Interior, October 18, 1910, LB 48, file 25.

their remains made their way into the Smithsonian's research and/or public displays of American wildlife as well.

By 1910, however, the Department of the Interior expected acting superintendents to expand that network to meet the wildlife display and captive breeding needs of other government agencies, as "wholly a government matter." Thus, almost from his first days in the Park, Major Lloyd Brett, another West Point graduate and veteran of the Indian wars in Montana, took charge of a well-established and well-defined wildlife-shipping program. This centralized function required Brett to feed, trap and ship Yellowstone wildlife, and maintain an extensive accounting operation with orders for animals received and filled during the season or carried forward into the next year. Payments for capturing and shipping animals had to be received and overpayments refunded. During his six-year tenure, Brett would oversee the shipment of more than one thousand animals from the Park using this detailed accounting system.

12. FINE SPECIMENS:

AMERICA'S EDEN AND THE FATE OF YELLOWSTONE WILDLIFE

The female grizzly and cubs arrived last week at our Zoological Gardens in very good condition. She is the real thing and evidently has not been accustomed to civilization. We are very much indebted to you for the trouble you have taken in capturing this bear for us and we hope that you will be equally successful in securing a male. ⁴⁷¹

-- Charles B. Penrose, 1911

As one of his first assignments as the newest Acting Superintendent of Yellowstone National Park, Major Lloyd M. Brett had to address George Bird Grinnell's outstanding request for antelope. Both Interior Secretary Richard Ballinger and James Wood, the Secretary of Agriculture responsible for the Buffalo Preserve in Montana, agreed with Grinnell's idea of transferring the government's wild animals from one reservation to another. As with all external requests, the party requisitioning the animals needed to pay the costs associated with trapping and shipping them. Thus, the Game Preservation Committee of the Boone and Crockett Club, of which Grinnell was a member, sent a check for \$600. The Committee requested that Brett use this money to ship half the captured animals to Montana, and the other half to the Wichita Game Preserve in Oklahoma.

⁴⁷¹ Charles B. Penrose to Lloyd Brett, June 19, 1911, LB 48, f 25.

From mid-December 1910 to early January 1911, twelve adult antelopes traveled by train to Montana and eleven to Oklahoma resulting in “three widely separated bands of antelope under Government protection.” The Boone and Crockett Committee expressed hope that this successful transfer “of wild animals from the Yellowstone Park to other Government refuges” might serve as a model for continuing these kinds of animal transfers out of the Park, supported by government appropriations.⁴⁷² Once the antelope had been shipped, and the fatalities reported (three animals killed during capture and three more critically injured en route), Brett sent “extra bucks” to replace them. He then advised against any additional trapping for several months because all the activity had left the herd “somewhat disorganized.” Having ceased feeding to help trap and capture the animals, the cavalry resumed feeding antelope near Gardiner and herded those that had fled back within the Park borders. They also repaired the fence where needed to keep the antelope contained.⁴⁷³

George Bird Grinnell continued to communicate with Brett, hoping that Yellowstone might also ship both elk and moose to the new Glacier National Park, established in 1910. Just as William Temple Hornaday had viewed Montana bison as resources to stock museums in the future, Grinnell considered Yellowstone as “a great reservoir of game from which it should be possible to

⁴⁷² “Supplementary Report of the Game Preservation Committee,” Boone and Crockett Club, January 24, 1911, 3. Also see detailed correspondence in LB 48, f 25.

⁴⁷³ Lloyd Brett to T. S. Palmer, January 17, 1911, *ibid.*

stock other reservations; those which now exist and those which may be established in the future." As Grinnell wrote to Brett, "I am very glad to infer from the tone of your letter that you are in sympathy with this idea, and hope that at some date it may be found practicable to carry it out."⁴⁷⁴

Others soon joined Grinnell in viewing the Park as an endless source of living animals. Secretary of the Interior Richard Ballinger received requests from around the country, and even beyond, for Yellowstone wildlife. For example, the Secretary of the Interior asked Brett to estimate the cost of capturing and shipping pairs of grizzly bears to the Philadelphia Zoo, the Scope Park Zoo in Kansas City, and the Riverdale Zoo in Toronto, Canada.⁴⁷⁵ Brett received additional requests the following month for "an elk, bear, deer, and 'any other of the larger animals that might be available,'" for shipment to Roanoke, Virginia; a young male cinnamon bear for the park at Columbus, Indiana; and a pair of brown bears for the Zoological Garden at Kansas City, Missouri. In all cases, Secretary Ballinger asked Brett to estimate the "cost of doing the work and transporting the animal in each instance," leading to an extensive system of accounting.⁴⁷⁶

Brett considered some grizzlies "dangerous to life and destructive to property." In the past, park superintendents had trapped those animals and

⁴⁷⁴ George Bird Grinnell to Lloyd Brett, November 10, 1910, *ibid.*

⁴⁷⁵ Richard Ballinger to Lloyd Brett, February 15, 1911, *ibid.*

⁴⁷⁶ Richard Ballinger to Lloyd Brett, March 7, 1911, *ibid.*

shipped them to the National Zoological Park. However, unlike elk, grizzlies were not particularly plentiful in the Park and Brett, therefore, did not believe it “advisable to capture them, except occasionally when it seems necessary.”

Removing “nuisance” bears might occur two to four times during the summer, for which Brett had estimated a cost: \$158.00 to \$189.80, depending on the bear’s ultimate destination. If the Department of Interior desired to “catch other grizzlies than these,” then it would cost an extra \$20 per animal to go deeper into the Park backcountry to locate and trap them.⁴⁷⁷ In such a way, even bears that avoided all human contact and the trouble that contact brought with it might still end up in a zoo.

In 1911, Charles B. Penrose, President of the Zoological Society of Philadelphia, sent a deposit to secure his two grizzlies, writing, “if the bear in the Park are as numerous as they were when I was last there about ten years ago I should think that you would be very glad to get rid of them.”⁴⁷⁸ As part of the transaction, the zoo’s superintendent expressed a preference for “half grown (but not undersized adult) male and female” grizzlies, and a willingness to pay the extra \$20 each for their capture.⁴⁷⁹ Major Brett agreed to “conform to your wishes as to age and size of the bears” and hoped “to be able to get just what you want.” Early that summer he sent “a fine female grizzly bear, with two nice

⁴⁷⁷ Lloyd Brett to Richard Ballinger, February 21, 1911, *ibid.*

⁴⁷⁸ Charles B. Penrose to Lloyd Brett, January 13, 1911, *ibid.*

⁴⁷⁹ Robert D. Carson to Lloyd Brett, March 12, 1911, *ibid.*

cubs.” Brett promised to send a male grizzly later followed by “a complete statement of account ... when all bills are in.”⁴⁸⁰

True to his word, at the end of August 1911, Brett captured “a very fine specimen of male grizzly bear” for Philadelphia. Brett estimated the bear to be one-and-one-half years old, and, since it already weighed 500 pounds, he assumed it would be “a very large bear when he grows up.” Brett also reported that the animal “seems to be a particularly good-natured bear, and as he is so young I hope he will take kindly to captivity.” Keeping with the strict accounting of these animals, he reported that approximately \$130 of the deposit sent by the zoo had been unspent. Once he learned that “the male bear [had] arrived and is satisfactory,” Brett would issue a refund for the unspent balance.⁴⁸¹ The zoo superintendent, a satisfied customer, let Brett know that “all the bears received through your efforts have been fine specimens and we are much indebted to you for the trouble you have taken to send us what we desired.”⁴⁸²

When Frank Baker at the National Zoo learned of the grizzly and cubs sent to Philadelphia, he expressed interest in a “a similar family.” Brett soon offered a large mother grizzly with two cubs for \$23 plus the cost of shipping, however, Baker had to decline the offer admitting he had no place to keep them.

⁴⁸⁰ Lloyd Brett to Robert D. Carson, March 17, 1911, and Lloyd Brett to Robert D. Carson June 12, 1911, *ibid.*

⁴⁸¹ Lloyd Brett to Robert D. Carson, August 30, 1911, *ibid.*

⁴⁸² Robert D. Carson to Lloyd Brett, September 4, 1911, *ibid.*

He had hoped to free up one of the zoo's bear yards, but had been unsuccessful in disposing of, by exchange, a "fine, large, male polar bear."⁴⁸³ As much as Baker might desire the animals, particularly since Philadelphia had a family of grizzlies on display, he first needed to find another zoo willing to take his polar bear.

Having cleared his books of orders for four grizzlies for the Philadelphia Zoo and eight white pelicans for the National Zoo, Brett went to work on an unusual request initiated by G. O. Shields, publisher and editor of *Shields' Magazine* and "Pioneer in the Sledge Hammer Method of Game Protection." Shields had contacted Henry S. Graves, head of the USDA Forest Service, suggesting that "15 or 20 pairs of [beavers be] trapped and liberated in the various national parks where the conditions are suitable for the existence of this animal." As he explained, these animals "would add greatly to the attractiveness thereof for visitors and especially for nature students.... I find the public deeply interested in learning the life history of the beaver as well as of all the other wild animals."⁴⁸⁴

Brett contacted the superintendents or chief rangers at the relatively new network of eleven national parks, asking if they currently had beaver and, if not, if conditions in their park would support their introduction. Superintendents from Casa Grande Ruin, Hot Springs Reservation, and Mesa Verde National Park

⁴⁸³ Frank Baker to Lloyd Brett, August 4, 1911, *ibid.*

⁴⁸⁴ G. O. Shields to H. S. Graves, November 24, 1911, *ibid.*

all declined, but others responded enthusiastically to Brett's offer. Mount Rainier National Park had once been home to "a great many beaver," but the animals had been trapped out for their skins years ago. The superintendent expressed confidence that "new colonies would thrive in the old beaver swamps."⁴⁸⁵ The Wind Cave National Park area, on the other hand, had never been home to beavers, but the park's superintendent believed they would do well there if introduced.⁴⁸⁶ The ranger in charge at Sequoia and General Grant National Parks agreed that "beaver would add another very great attraction for observation of park visitors, and nature students...."⁴⁸⁷ Yosemite National Park also requested a supply.

Assuming he could capture the large number of Park beaver requested, Brett needed to know how to ship them successfully for distances up to one thousand miles. For that, he turned for advice to Frank Baker at the National Zoo. Baker provided directions on how to construct a crate for shipping beaver, including a rough drawing of how the crate should look. At the same time he took the opportunity to ask for beaver for his own zoo. "We now have only two beavers [from Yellowstone] left," he wrote. "Both are good specimens but I should be glad to get another family when it is convenient for you to secure them

⁴⁸⁵ Superintendent Hall to Lloyd Brett, December 20, 1911, *ibid.*

⁴⁸⁶ A. C. Boland to Lloyd Brett, December 18, 1911, *ibid.*

⁴⁸⁷ Walter Fry to Lloyd Brett, December 18, 1911, *ibid.*

for us.”⁴⁸⁸ The National Zoo, which provided the trap used for capturing bears for other zoos, now transferred its knowledge on how to capture and ship other animals as well. As it turned out, Brett had more difficulty than expected finding someone who could successfully trap live beavers. He assumed that Henry Anderson, who had also captured elk, could do the job, but capturing beaver alive and unharmed posed more problems than anticipated. As he reported to Baker, the National Zoo would receive specimens as soon as they found someone who knew enough about the animals to capture them alive. The national parks also would have to wait.

As more and more zoos received Yellowstone animals, word spread fast, with inquiries about securing Park wildlife arriving from as far away as Texas and London. As the volume of requests for animals grew, Brett found it increasingly difficult to respond to inquiries, process requests, and keep detailed accounts of expenditures and back-ordered animals. Requests also arrived from Congressional offices, asking not just for living animals, but for dead ones as well. For example, the Vice President of Baker University in Kansas requested, through the office of his Senator, a hide from a buffalo to be mounted for a university museum. While no “suitable specimen was available during the summer,” Brett still expressed a willingness to obtain a specimen for the museum. One of the bison bulls had become aggressive and would soon be

⁴⁸⁸ Frank Baker to Lloyd Brett, April 2, 1912, *ibid.*

killed. However, just as Hornaday had complained earlier about bison hides in the summer, this animal's "robe [was] not yet prime." Brett offered to keep the animal alive until its coat filled in before killing it. "This bull is a fine specimen and a valuable one if held until the skin is at its best." He would send the animal's remains to Kansas "just as soon as the robe is fit."⁴⁸⁹ He offered a similar bison specimen, the "largest and finest in the herd," to the National Museum. This animal, too, would not be killed until its coat reached its best condition for display.⁴⁹⁰

Several museums contacted their senators to take advantage of this new source of animals for display. Some requested entire families of animals, assuming the Park would kill animals for this purpose. Indeed, one museum had heard that the government planned "to kill a number of grizzly bears in the Yellowstone Park" and asked for their remains.⁴⁹¹ These requests put them in direct conflict with the Smithsonian, which still had unfilled requests for the remains of black and grizzly bears, particularly skins with skulls, and the skeleton of "an unusually fine grizzly."⁴⁹² While Brett had no objection to preserving and shipping the remains of one or more grizzlies should they be killed, he did not have the manpower to kill and then prepare specimens. He

⁴⁸⁹ Lloyd Brett to Parmenter, November 19, 1912, LB 36, f 462.

⁴⁹⁰ Charles D. Walcott to Lloyd Brett, November 30, 1912, LB 36, f 462.

⁴⁹¹ Ward to Lloyd Brett, January 18, 1913, LB 36, f 461.

⁴⁹² Richard Rathbun to Lloyd Brett, June 6, 1913, *ibid.*

advised all those wanting them to identify someone locally to prepare the remains for shipment.⁴⁹³

Expanding the network of potential recipients of specimens, living and dead, led to increased conflict over who should receive an animal or its remains when it became available. In the summer of 1913, for example, Brett authorized the killing of a large female grizzly bear, and asked the Department of Interior to arbitrate who should receive its remains: the Smithsonian or museums in Denver or Milwaukee.⁴⁹⁴ The Secretary of the Interior authorized Brett to send the animal to Colorado but, because of hot weather and a delay, the bear's remains arrived at the fort in a worthless condition and had to be destroyed. Brett promised to do better next time. "It is very likely that other bears may have to be executed before fall," he wrote to the Denver Museum, "and if so every effort will be made to save the skin and skeleton for your [museum]."⁴⁹⁵ Soon thereafter, a female grizzly had been seen with a tin can attached to her foot. If the animal were unable to rid herself of the can, the bear would have to be killed. Brett advised the Colorado Museum to have someone available at short notice to prepare the animal's remains. "We would of course be glad to do the best we

⁴⁹³ See, for example, Lloyd Brett to [Walter L. Fisher] Secretary of Interior, June 29 1912, LB 36, f 460.

⁴⁹⁴ Lloyd Brett to [Walter L. Fisher] Secretary of Interior, July 2, 1913, *ibid.*

⁴⁹⁵ Lloyd Brett to Figgins, July 9, 1913, LB 36, f 461.

could to have it properly prepared," he wrote, "but without experience and in hot weather am afraid the results may not be very satisfactory."⁴⁹⁶

The Smithsonian, on the other hand, counted on Park personnel to prepare dead specimens for shipment to the National Museum and sent detailed instructions on how the skin and head of an animal should be preserved. When Brett offered the skin and skull of a yearling black bear in the summer of 1913, the museum sent instructions on how to prepare the animal's remains and, because of the hot weather, asked that the specimen be sent express.⁴⁹⁷ The Park in turn contracted the work out for \$5 and sent the bill to the Smithsonian.⁴⁹⁸

The requests for specific specimens for display took an even greater leap when, in October 1913, Brett received a request from A. L. Bolton at the California Academy of Sciences. The Academy needed grizzly bears for the Panama-Pacific Exposition in 1915. Since grizzlies no longer lived in California, the Academy found it necessary "to look elsewhere" for them. They, too, looked to Yellowstone, submitting a request for "six specimens of different ages and sexes, and two cubs." The grizzlies would find a suitable home, Bolton suggested, since the Academy proposed to display large North American mammals mounted on a grand scale: an exhibit 25-feet long and 13-feet deep and high, with "the habitat of the animal reproduced and backed by an oil painting

⁴⁹⁶ Lloyd Brett to P. M. Cooke, July 19, 1913, *ibid.*

⁴⁹⁷ Richard Rathbun to Lloyd Brett, July [31], 1913, *ibid.*

⁴⁹⁸ Lloyd Brett to [Charles D. Walcott] Secretary of Smithsonian, September 3, 1913, *ibid.*

from studies in the field.” The paintings alone would cost \$1000 each. The animals, of course, would be dead.⁴⁹⁹

As with living specimens, Brett only had permission to ship specimens to the Smithsonian so advised Bolton to contact the Secretary of the Interior for authorization. Brett cautioned him, however, that it has “never been customary to have bears killed for the sake of getting the specimens, but it is sometimes necessary to have them killed to save life or property.” He also alerted Bolton that the Park currently had two similar orders from Milwaukee and Denver yet to fill. Since the bears “will soon go into winter quarters there is little likelihood that they will be filled this season.”⁵⁰⁰ In other words, the Academy’s bears would have to be back ordered.

John Rowley, the chief taxidermist and head of exhibits at the California Academy of Sciences, pressed the Academy’s case with the Secretary of the Interior, seeking permission to kill a large group of grizzlies, including four adults and two cubs, but the Secretary’s office denied his request. While the Park often captured and shipped live animals to zoos and other parks “for propagation purposes,” he explained, the “records of the Department ... fail to show of any such permit such as you desire – that of catching up animals live in the park, killing them, and thereafter making the skins suitable for exhibition purposes – has ever been granted....” Indeed, the Department protected these

⁴⁹⁹ A. L. Bolton to Lloyd Brett, October 7, 1913, *ibid.*

⁵⁰⁰ Lloyd Brett to A. L. Bolton, October 13, 1913, *ibid.*

animals. Thus, like all others requesting dead specimens, the Academy would have to wait until a “problem” animal needed to be killed.⁵⁰¹

The Academy and others wishing animals from the Park had to pay for the cost of preparing and shipping animals along with a “nominal price” for each specimen. Brett estimated the value of each dead specimen shipped from Yellowstone to be one dollar, a far cry from the “commercial” value listed by the Smithsonian. Brett again cautioned the Academy that even with permission and enough animals to fill all the pending requests, the Park might still have a difficult time preparing specimens in time to ensure that they could be used for public display. The Park also had difficulty finding qualified men who could be depended upon at a moment’s notice to prepare an animal’s remains for shipping. As Brett explained in 1914, “it is not a very desirable task to clean up the skeleton of a huge bear when the weather is hot and flies are [plentiful]....”⁵⁰²

Rowley sent detailed directions for killing the bears in the early spring when “the fur (hair) is at its best” and how to kill and prepare the specimen (e.g., it “should not be shot in head if possible ... skull should not be damaged”).⁵⁰³ This would mean shooting animals not long after they had emerged from

⁵⁰¹ Adolph C. Miller to John Rowley, October 28, 1913, *ibid.*

⁵⁰² Lloyd Brett to John Rowley, February 13, 1914, *ibid.*

⁵⁰³ John Rowley to Lloyd Brett, February 20, 1914, *ibid.*

hibernation, clearly indicating their hope or assumption that Park personnel would simply kill the fine specimens needed for California's displays.⁵⁰⁴

While most correspondents like the Academy wanted Yellowstone animals for display, a few, such as the Biological Survey's C. Hart Merriam, still looked to Yellowstone for specimens for research. Merriam believed that two different species of grizzly bears might live in the Park, apparently basing his work on the animals' skeletal remains, particularly their skulls. He offered "to pay almost anything in reason to secure" more specimens. Having read Brett's

⁵⁰⁴ In 1919, the California Academy would again request permission from the National Park Service to collect four grizzly bear specimens, still insisting that Yellowstone was the only place the animals could be found. "This permission was granted by the department, and about June 1 [1920] representatives of the academy arrived to secure specimens. The party proceeded to the Grand Canyon [of the Yellowstone], where they established headquarters. Soon three grizzlies were killed, and the party was notified that only one more bear could be killed. As there were difficulties in finding another suitable specimen, permission was requested to kill a large grizzly seen near the Canyon garbage dump. This permission I refused on the ground that I felt that this would spoil the amusement of tourists were then taking in seeing these bears. Nevertheless, the party stationed themselves on the trail used by the grizzlies in going to the garbage, and there killed four more bears. After this killing, no bears either black or grizzly, appeared for nearly 10 days, thus causing disappointment to thousands of tourists. Not only were seven bears killed, but four young cubs were left motherless and one was believed to have been wounded." *Report of the Director the National Park Service to the Secretary of the Interior for the Fiscal Year Ended June 30, 1920 and the Travel Season 1920* (Washington, DC: Government Printing Office, 1920), 224. After the killings, Superintendent Horace Albright recommended that Stephen Mather, the Secretary of the National Park Service, issue no more hunting permits in the Park. Horace Albright and Robert Cahn, *The Birth of the National Park Service: The Founding Years, 1913 - 1933* (Salt Lake City, UT: Howe Bros., 1985), 116.

annual report in which he reported five grizzlies killed the previous summer, Merriam wondered if it might still be possible to salvage the skulls of the animals, offering \$5 to \$10 each to any one willing to retrieve them. Just in case, he added that the “money I would pay for them is not government money, therefore would lead to no embarrassment. The specimens would go to the National Museum for permanent preservation,” he made clear, confirming he was aware of the special relationship the Park had with the Smithsonian.⁵⁰⁵

Brett pledged to have someone search for the skulls when the snow melted and retrieve them if practical, and offered to keep Merriam’s request for more skulls in mind. However, he warned Merriam that the relationship between the Park and the Smithsonian now faced competition. The Secretary of the Interior had approved several other requests from museums “for remains of grizzlies to be used for mounting as specimens, and I presume these will have to be filled from the first bears that are killed.”⁵⁰⁶

Learning of the competition for Yellowstone specimens, Merriam appears to have complained to Smithsonian Secretary Charles D. Walcott, who in turn reminded the Secretary of the Interior of the Smithsonian’s claim to all Yellowstone’s living and dead specimens. Returning to a process similar to that

⁵⁰⁵ C. Hart Merriam to Lloyd Brett, March 23, 1914, LB 48, f 25.

⁵⁰⁶ Lloyd Brett to C. Hart Merriam, March 18, 1914, *ibid.*

managed by the Institution's first Secretary, Walcott proposed to exchange any duplicates with other institutions once researchers completed their study.⁵⁰⁷

Suirus Saylin, Assistant Secretary of the Interior, agreed with Walcott "so far as skins, skulls, etc., are concerned," and suggested that other back-ordered requests from museums be filled within three years. At the same time, however, he offered to consider Brett's ideas.⁵⁰⁸ Thus, for Saylin's benefit, Brett explained the history of the special relationship established over the years with the Smithsonian: "[F]or many years it has been the custom to offer skins and skulls of mammals, and such other specimens as might be available from the park, to the National Museum, and it has also been customary to supply the National Zoological Park with such live animals from the park as might be wanted. In all cases, it is customary for the institutions receiving the specimens to pay the expenses of caring for and shipping them." Moreover, the Park had supplied "all the wild animals, alive," that the zoo requested, with the exception of beaver, and that was only because Yellowstone had no one to capture them. Because of this long-standing tradition, Brett agreed that requests from the National Museum, National Zoological Park, and the Biological Survey "should have their needs satisfied before state or city institutions are considered."⁵⁰⁹

⁵⁰⁷ Charles Walcott to [Franklin K. Lane] Secretary of the Interior, May 16, 1914, LB 36, f 461.

⁵⁰⁸ Suirus Saylin to Lloyd Brett, May 19, 1914, LB 36, f 461.

⁵⁰⁹ Lloyd Brett to [Franklin K. Lane] Secretary of the Interior, May 25, 1914, LB 36, f 461. Seeing a circular about the beaver distribution program, R. S. Scheibel,

If he had only the Smithsonian to satisfy, Brett could probably have met its demands, but he did not have the needed personnel to trap or kill and prepare for shipment the growing number of requests he received. The summer compounded the problem when specimens, living or dead, did not last long in the heat. Recalling Elwood Hofer, Brett told Assistant Secretary Saylin that the Smithsonian had once employed a "'hunter,' who lived in the vicinity of the park and attended to securing such animals and specimens as might be wanted for the National Museum or for the National Zoological Park." Having such a person nearby might be "more satisfactory to all concerned," he argued, since he often had bears killed in the summer when the skins had to be attended to immediately.⁵¹⁰

The Department of the Interior refused the request from the California Academy of Sciences to kill grizzly bears for display at the Panama-Pacific Exposition, and backlogged the Academy's request for any animals that might be killed in the course of the summer. That same year, however, Brett received an order to kill three elk for the Smithsonian's display at the same exposition.

Secretary of the State Conservation Commission of Wisconsin, asked for advice on how to trap beavers without injury. As he explained, the Commission had permission to kill beavers responsible for flooding highways and croplands, but the animals were becoming very scarce in Wisconsin and Scheibel hoped to capture and move them, as opposed to simply eliminating them. Scheibel to Department of Interior, September 17, 1915, LB 48, f 25.

⁵¹⁰ Lloyd Brett to [Franklin K. Lane] Secretary of the Interior, May 25, 1914, LB 36, f 461.

Private institutions would never receive permission to kill game in the park, the Interior Secretary's office informed him. But the elk requested would be part of a government exhibit, and "the Smithsonian being a quasi government institution this request cannot be regarded in same light."⁵¹¹ As suggested by Grinnell earlier, this would be a government-to-government transfer of specimens.

Brett recommended that Park scouts kill the animals, "under the supervision of a representative of the Smithsonian Institution."⁵¹² In other words, the Smithsonian representative, a New York taxidermist hired to prepare the exhibit, could select his own fine specimens, as well as prepare the animals' remains in the field for display. Taxidermist James Clark, carrying a letter of introduction from Brett, met Chief Scout James McBride near Cody, Wyoming, on September 25, 1914. McBride guided Clark and his outfit to a herd of "many fine elk" along Pelican Creek about a mile off the Cody Road. The taxidermist prepared several studies of elk before picking out three specimens for display at the Panama-Pacific Exposition, one large male with antlers, a female, and a yearling calf. Scout McBride killed all three, each with a single shot, and the taxidermist exited the Park five days later with his elk.⁵¹³

The taxidermist had no trouble finding fine specimens for exhibit because, of all the animals in the Park, elk seemed to have experienced the greatest

⁵¹¹ Miller to Lloyd Brett, telegram, May 27, 1914, LB 36, f 461.

⁵¹² Lloyd Brett to [Franklin K. Lane] Secretary of the Interior, May 29, 1914, *ibid.*

⁵¹³ Lloyd Brett to [Franklin K. Lane] Secretary of the Interior, October 15, 1914, *ibid.*

success under aggressive government management. Indeed, the number of elk had nearly doubled in less than ten years. Estimates ranged from 15,000 animals in 1897 to 29,500 in 1916, when the Park conducted the first actual census. Excess elk placed enormous pressure on the Park's natural food sources, as well as taking over the artificial feeding grounds of antelope, deer, and big horn sheep, pushing aside the intended species. While killing them for public display provided one way to decrease their numbers, sending the animals to zoos for public display and other captive breeding programs seemed an even better way to address overcrowding. Small numbers of live elk had been shipped to the National Zoo as early as 1892, to the Omaha City Park in 1900, and Vancouver City Park in British Columbia in 1907. There appeared to be plenty to spare. Park managers estimated the elk population in Yellowstone at approximately 25,000 in 1907.

In 1912 the Department of Interior declared a surplus of elk. Like any other zoological garden or museum faced with excess specimens, it initiated an aggressive program of transporting elk to other states for public display and breeding. That first year, Yellowstone shipped a total of 220 animals to Montana, South Dakota and Washington. In addition, the State of Montana captured and shipped five carloads of elk (105 animals) north of the Park to stock various areas of Montana. In 1913, the Park captured and shipped 455 more elk to states as far away as Virginia, Pennsylvania, and Massachusetts (see Table 1).

Table 1: Live Elk Shipments from Yellowstone National Park

Year	No. Shipped	State or Country	Receiving Agency/ Location
1892	4	Washington, DC	National Zoological Park
1893	4	Washington, DC	National Zoological Park
1896	5	Washington, DC	National Zoological Park
1899	4	Washington, DC	National Zoological Park
1900	5	Nebraska	Omaha City Park
1901	5	Washington, DC	National Zoological Park
1907	2	British Columbia	Vancouver City Park
1912	220	Montana (31) ⁵¹⁴	Glacier National Park
		South Dakota (3)	Aberdeen
		Washington (186)	Skagit County (46)
			Snohomish County (60)
			Kings County (80)
1913	455	Arizona (80)	State of Arizona
		California (50)	Shasta County
		Colorado (25)	Estes Park
		Massachusetts (4)	City of Boston
		Pennsylvania (40)	State of Pennsylvania
		Utah (25)	State of Utah
		Virginia (50)	State of Virginia (25)
			Bath County (25)
		Washington (121)	Yakima County (50)
			City of Spokane (6)
			Walla Walla (25)
			Garfield County (40)
		West Virginia (25)	State of West Virginia
		Wyoming (25)	State of Wyoming
			(Sundance area)

⁵¹⁴ In 1912, the State of Montana also captured five carloads of elk near Gardiner, Montana for shipment to various places throughout the state. With twenty-one animals in each boxcar, that equals 105 additional elk captured and shipped to other sites in Montana that year. In a 1913 letter to the Secretary of the Interior, Brett reported shipping a total of 538 elk in the winter of 1912, but some of the animals shipped may have been from early 1913. See Lloyd Brett to [Franklin K. Lane] Secretary of Interior, December 10, 1913, LB 36, f 461.

Table 1 Continued

1914	99	Colorado (31)	Genesee Park
		Montana (30)	State of Montana (Anaconda area)
		North Dakota (2)	Valley City
		Ohio (3)	City of Toledo
		Oregon (6)	Portland
		South Dakota (2)	Hot Springs
		Washington (25)	Stevens County
1915	375	Colorado (50)	State of Colorado
		Idaho (50)	State of Idaho
		Michigan (25)	State of Michigan
		Minnesota (32)	State of Minnesota (30)
			Little Falls (2)
		Missouri (3)	St. Joseph
		Montana (50)	State of Montana
		New Mexico (50)	State of New Mexico
		New York (8)	Borough of Queens (4)
			NYC Zoo (4)
		South Carolina (2)	Columbia
		Utah (25)	State of Utah
		Wisconsin (30)	State of Wisconsin
1916	591	Alabama (50)	State of Alabama
		Colorado (100)	Colorado Springs (50)
			Pueblo (25)
			Idaho Springs (25)
		Georgia (2)	Atlanta
		Idaho (50)	State of Idaho
		Louisiana (40)	State of Louisiana
		Montana (71) ⁵¹⁵	State of Montana (46)
			Moiese (25)
		North Dakota (3)	Minot City
		New York (50)	State of New York
		Pennsylvania (100)	State of Pennsylvania
		South Dakota (25)	Wind Cave National Park
		Utah (50)	State of Utah
		Washington (50)	Kittelas County

⁵¹⁵ In 1916, the State of Montana captured an additional ninety elk outside of Gardiner for shipment throughout the State.



Fig. 23: Yellowstone elk in Pocatello, Idaho, en route to Colorado, 1912 (Yellowstone Historic Center photograph).

Following the lead of the Smithsonian, which hired Elwood Hofer as its “hunter” in the Park, Brett also contracted with private parties to capture animals, or arranged for contracts to be made separately on behalf of those requesting animals. In the winter of 1912, Brett shipped more than five hundred elk out of Yellowstone, including one hundred captured for the Department of Agriculture for shipment to various points around the country. Of the 538 shipped, more than half -- 298 animals -- had been captured by one man, Henry Anderson. Anderson, who would later go on to become a Park ranger, had built a corral near Gardiner for the purpose of capturing elk that the Department of the Interior had authorized shipping. Another freelancer -- Walter M. Hoppe --

received permission to construct a similar corral, so that he, too, could provide elk for shipment out of the Park.⁵¹⁶ Anderson and Hoppe basically operated as private contractors for Park managers, luring desired animals into corrals with hay, and then transporting them to the railroad for shipment elsewhere.

Even elk antlers could be purchased as part of this new approach. When a request came in from a member of the Elks Club for seventy-five to one hundred elk antlers to make chandeliers for the clubhouse in Minneapolis, Brett referred him to Henry Anderson for an estimate. Assuming Anderson quoted them a price they were willing to pay, and the Elk's Club did not intend to sell them, Brett believed it possible that they would be granted permission from the Secretary of the Interior.⁵¹⁷ Henry Anderson filled at least one order in early 1914 from a game warden in Washington State, sending twenty-six pairs of antlers for use in "decorating the elks home" in Seattle.⁵¹⁸

By 1915, the use of freelance animal collectors in the Park expanded to include children, echoing the work Superintendent Frazier Boutelle's son had done when he collected Yellowstone birds for the National Zoo. That fall, when Smithsonian Secretary Charles Walcott traveled to Yellowstone, he saw two young male wolves that the son of the buffalo keeper had captured as pups. After hearing about the animals from Walcott, Baker forwarded a voucher for \$5

⁵¹⁶ Lloyd Brett to [Franklin K. Lane] Secretary of Interior, December 10, 1913, *ibid.*

⁵¹⁷ Lloyd Brett to Regan, March 7, 1913, LB 36, f 460.

⁵¹⁸ Lloyd Brett to Henry Anderson, January 2, 1914, *ibid.*

for the boy and asked that they be sent to the National Zoo. These “fine specimens” were shipped on November 16, 1915, and arrived in Washington in good condition a week later.⁵¹⁹

By the end of 1915, Brett had established a well-organized and well-documented program of animal shipments from Yellowstone, one that complemented if not mirrored the system of specimen exchange established by the Smithsonian. In response to an inquiry coming from an Alabama zoo, with relative certainty Brett could calculate, much as Hornaday had done with dead specimens and Dick Rock had done with living ones, the costs and timing associated with capturing and shipping the most popular Park wildlife. For example, elk could only be captured from December to February, at a cost of approximately \$15 per head. A pair of young elk with crate weighed from 800 to 1,200 pounds, an amount needed to estimate the cost of shipping from Gardiner to their ultimate destination. Black bears cost about \$50 a pair to capture and crate, and weighed 500 to 800 pounds. Grizzly bears cost \$60 to \$65 a pair if small enough to catch together, weighing a combined 500 to 800 pounds, or \$50 per head if a larger specimen was desired. Unlike elk, bears hibernated and therefore had to be trapped in the summer months.⁵²⁰

⁵¹⁹ Frank Baker to Lloyd Brett, October 21, 1915, LB 48, f 25. Lloyd Brett to Frank Baker, October 28, 1915, *ibid.* Frank Baker to Lloyd Brett, November 24, 1915, *ibid.*

⁵²⁰ Lloyd Brett to C. S. Leonard, November 1, 1915, *ibid.*

Acting Superintendent Brett oversaw the transfer of Yellowstone National Park to the civilian National Park Service in 1916. He also managed the final transformation of Yellowstone from the first national park into a zoo-like warehouse of animals that came to represent “one of the purposes for which Yellowstone Park was established.” The Park had initiated this well-established “centre of calculation” for the distribution of specimens, living and dead, through its special relationship with the Smithsonian. But the culture of specimen display and exchange developed throughout the Park’s military administration, and expanded considerably under Brett’s exacting management.

On August 25, 1916, President Woodrow Wilson signed a bill creating the National Park Service. This legislation required the Park Service “to conserve the scenery and the natural and historic objects [of all national parks] and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” Thus, the Park Service inherited the management of all the national parks, including Yellowstone and its wildlife programs. Displays, shipments, and even killing of wildlife in and out of the Park boundaries continued through much of the 20th century and, it could be argued, continue even now.

13. WHEN ANIMALS BECOME ARTIFACTS

The buffalo doesn't know where the line is when it leaves the park.
We end up taking care of the oversupply of bison because they
aren't managing their population within the park.⁵²¹

-- Montana Governor Brian Schweitzer, 2011

On January 3, 1872, the *New York Times* announced that Congress would soon consider legislation to create a park in the Yellowstone region similar to the one already set aside in Yosemite. The writer found it "difficult to discover what more profitable use [Yellowstone] can be put to than set apart as a natural curiosity for the entertainment of the whole world."⁵²² Yellowstone National Park did indeed grow into a source of entertainment for the nation and the world, but through its association with the Smithsonian, the Park proved to be more than a mere curiosity. From its earliest years, Yellowstone served as the type specimen of a national park, defining how these new reserves should look and function, both as centers of conservation of wildlife and scenery of the American West, as well as national pleasuring grounds. But Yellowstone became more, as the Smithsonian drew the Park into its network of specimen exchange. And just as the Smithsonian saw its emphasis shift from knowledge creation to specimen collection and display, so, too, did Yellowstone reimagine itself as a government center of animal displays.

⁵²¹ Brian Schweitzer quoted in "Officials Seek New Way to Cull Bison," *New York Times*, November 20, 2011.

⁵²² "Washington News," *New York Times*, January 3, 1872.

The Smithsonian Institution initially opened its doors as a centralized resource for knowledge creation and the diffusion of that knowledge. By building on a network of publication exchange, the Smithsonian soon grew to include animal and other displays, with taxidermied specimens as life-like representations of the nation's rich natural history. These early collections served a very real research function for those interested in the diversity of life and the nation's biogeography. As the sheer volume and popularity of these displays grew with the general public, however, these animal and other displays soon diminished the other research and knowledge creation functions for which the Smithsonian had been established.⁵²³ National Park superintendents and others exploring the Yellowstone region sent boxes of specimens to add to the Smithsonian's growing collection and to help scientists better understand the human and natural history of the relatively young nation, particularly in the American West.

⁵²³ Joseph Henry would have been appalled. During the late 19th century, natural history museums generally relinquished their research and knowledge creation functions to colleges and universities, following an alternative path of informal education and even entertainment through their public displays, the exact path the first Smithsonian Secretary tried to avoid. Ironically, however, through their life-like representations of animals at risk, these same museums have become "newly relevant." As Steven Conn points out, museums have preserved animals for display, allowing visitors to "confront all that remains of extinction," yet another form of wildlife conservation and display. Conn, *Museums and American Intellectual Life, 1876-1926* (Chicago, IL: University of Chicago Press, 1998). Even the Barbary lions displayed as part of "Arab Courier Attacked by Lions," now are extinct in the wild.

The emphasis on preserving specimens *from* the Park for research and display in Washington, as opposed to protecting living animals solely *in* the Park, evolved from the earliest Yellowstone superintendents risking their lives, or so they said, to collect the rare, the curious, or even the bizarre to help flesh out Smithsonian research collections of animals and artifacts of the American West. Men like Nathaniel P. Langford, Philetus Norris, and Ferdinand Hayden shipped skins, skeletons, and skulls as representatives of the diversity and geographical range of Yellowstone animals. Taxidermists in Washington transformed these specimens into life-like representatives of their species, believing that, through the art of taxidermy, they could give these fine specimens “perpetual memory,” and advance scientific understanding of the nation’s new park as well as the nation’s new lands.

Indeed, representatives of American mammals did find a kind of immortality behind glass in the National Museum. As the Smithsonian museum collection grew, scientists and taxidermists alike increasingly looked to the Yellowstone region in general and the National Park in particular to flesh out the museum’s displays. Smithsonian administrators cemented this special relationship with the Park when Congress authorized the National Zoological Park in 1889, drawing Yellowstone into a well-established culture of living animal exchange and display.

By the end of the 1880s, the Smithsonian, with its two centers of animal display, had expanded its mission beyond a “centre of calculation,” to include centers of conservation of animals, living and dead. Both the National Museum and the National Zoo served as repositories of the nation’s natural history donations and exchange, and preserved specimens into the future for science and public display. Living specimens that died in captivity simply moved from one exhibit venue to the other or they, too, were offered into the Smithsonian’s network of exchange.

From the beginning, Yellowstone served a similar conservation function, protecting wildlife from wanton destruction and providing a last refuge for many of the large iconic mammals of the American West. And yet through its long-term relationship with the Smithsonian, it, too, was drawn into a system of animal exchanges and displays, functioning as if it were a living museum or zoo. This parallel evolution of two national centers, with the Smithsonian expanding its operations into permanent animal displays and Yellowstone following in its wake, resulted in three outcomes that highlight the defining role wildlife and the Smithsonian and wildlife both played in the development of Yellowstone National Park.

First, the special relationship the Smithsonian forged with Yellowstone as a source of specimens, living and dead, helped define the Park and shaped its management from the beginning. The Smithsonian displays of taxidermied

animals transitioned from preserving and advancing an understanding of the nation's animal resources for science and commerce, to reminding the visiting public of a time when millions of animals once roamed freely throughout the American West. Just as living specimens displayed in zoos today serve as "ambassadors" of their species, taxidermied animals represented the nation's wildlife resources, conserving representatives of those species into the future for both science and display.

After the Department of Interior placed Yellowstone National Park under military control, acting superintendents willingly collected natural-history specimens for these centralized collections at the Smithsonian. Animals in particular contributed to an understanding of the nation's biogeography, and suggested the wonderland that existed in the West. In addition, as Yellowstone Superintendent Norris and others understood, the specimens they shipped east helped pique visitor interest, serving as a form of object-based marketing for the fledgling National Park.

Not all scientists and wildlife advocates, however, supported the conservation of iconic American animals in museums alone. Scientists, wildlife advocates, and elite hunters such as members of the Boone and Crocket Club lobbied to protect American wildlife throughout the country, fearing that many of the nation's iconic mammals, including bison, elk, antelope, and bighorn sheep, faced extinction. Even whitetail deer in the Northeast appeared to be at

risk from over hunting. Although George Bird Grinnell and others expressed resignation that the great wildlife herds of the past would disappear, he and many of his contemporaries looked to Yellowstone to sustain living specimens of these once abundant animals. But in spite of the Department of Interior's willingness to partner with the Department of War to protect Park wildlife, many Americans still feared that Yellowstone was not up to the task. This concern led to a second, significant outcome of the special relationship established between Yellowstone and the Smithsonian, as wildlife became central to the Park's administration and visitor experiences.

Responding in part to requests from the Smithsonian as well as expectations of visitors, Yellowstone integrated wildlife into its day-to-day management as well as its long-term vision of the Park as a center of animal conservation and display. Just as visitors expected to see American wildlife preserved in both museums and zoos, so, too, did tourists to Yellowstone assume they could view living specimens of the wildlife of the American West. Held in pens or corrals, or concentrated with feeding regimes along Yellowstone roadways or near hotels, these specimens, too, became ambassadors of their species. In essence, Yellowstone wildlife, sandwiched somewhere between domesticated and wild and, it could be argued, between living and life-like, served as representatives of their species in Yellowstone National Park just as they would in any other museum or zoo.

At the same time, regular military patrols attempted to block exploitation of Park resources to ensure that Yellowstone remained dedicated to, and preserved for, the enjoyment of the American people for years to come. Part of that commitment helped ensure that all visitors, then and in the future, would have the opportunity to view wildlife as if it were any other constructed roadside attraction. As a result, cavalry administrators found themselves in the often-contradictory position of protecting wildlife along the Yellowstone borderlands and routinely hazing animals to keep them in the Park, while also trapping and shipping thousands of “fine specimens” of the same animals to zoos and other nature reserves around the country. This third outcome of the Park’s relationship with the Smithsonian proved to be the most long lasting.

Just as the Smithsonian evolved from a center of knowledge creation into one emphasizing specimen exchange and display, so, too, did Yellowstone develop into what many referred to as a natural museum with wildlife on display. Like the Smithsonian, Yellowstone National Park worked to preserve and to protect the natural history legacy of the American West. But it, too, soon found itself swept up in the desire to exhibit the Park’s animals and other artifacts. Initially focused on border patrols to discourage poachers and protect Park wildlife, Yellowstone administrators resorted to constructing fences, corrals, holding pens, and cages to centralize Park animals near hotels and the railroad before shipping them elsewhere for public viewing. As more visitors traveled to

Yellowstone, the demand grew for seeing living examples of these legacies of the American past. Indeed, the bison kept corralled one mile outside Mammoth Hot Springs quickly proved to be more popular with tourists than the hot springs that gave their name to the Park's main entrance.

Like other zoological parks in Europe, the western wildlife displayed in Yellowstone National Park served as living representatives of the nation's conquered lands in the American West. When in Yellowstone, tourists could enjoy the benefits of a civilized, park-like environment that came to include hotels, electric lights, running water, artificial ponds, manicured lawns, and well-constructed, dust-free roads. At the same time, they could see the last of the large, free-roaming animals that came to symbolize the West or American "frontier," placidly grazing along the roadsides or on display in cages or large corrals. In this "middle landscape," situated between wilderness and civilization, tourists could safely observe bison, elk, deer, and moose -- what George Bird Grinnell referred to (along with Indians) as the West's "indigenous inhabitants" -- as representatives of both the wildlife and the wildlands subjugated and kept under control by the U. S. Cavalry in the American West.⁵²⁴

In Yellowstone, the Department of the Interior and the Department of War partnered to manipulate and control nature, including the animals living in it. And they did so for the benefit and enjoyment of the American people, as if

⁵²⁴ Some national parks, like Yosemite and Glacier, would take that idea even further, displaying Native people as part of the park experience.

Yellowstone were any other expansive zoological park and pleasuring ground, complete with captive animal displays and shipments of American wildlife into and out of its borders. While some might agree with the Interior Department's Chief Clerk that the animals outside Yellowstone's boundaries were, in essence, fair game, cavalry administrators took the protection of these animals seriously and went to extraordinary measures, from constructing fences and corrals to hazing animals back across the border, to protect wildlife and ensure that the animals never left the safety of the Park.

Through the development of a culture of living animal displays, Yellowstone National Park administrators found themselves caught up in the unintended consequences of these early management practices. Scientists and taxidermists could order and control wildlife behind glass for the benefit of museum visitors, often constructing an American West that existed only in their imagination. Managers of living animals, on the other hand, had to deal with the real world. Some animals continued to look for safe winter-feeding grounds as they always had, forcing the cavalry to herd them back into the Park. Other animal populations grew to the point that superintendents felt the need to kill or ship them to other locales. In essence, the more the U. S. Cavalry tried to manipulate wildlife for the benefit of visitors and the demands from others outside the Park, the more difficult the task of Yellowstone wildlife management became. The U. S. Cavalry could subdue human populations in the West, but

animal populations posed a greater challenge. Since many animals had to be collected in the heat of summer, even requests for dead specimens often taxed their ability to respond.

And the U.S. Cavalry struggled with more than just the wildlife. Hunting guides and specimen collectors living on the Park's borderlands pressed for access to Yellowstone wildlife, as they, too, entered into the animal display business. While some killed elk solely for their teeth, many seasoned hunters targeted the last of the Yellowstone bison since taxidermists, also interested in animal displays, paid a premium for bison heads. Even the Smithsonian turned to men like Richard Rock and Vic Smith when they needed access to more specimens, living and dead, than the Park could supply.

As Yellowstone moved from simply protecting the animals within its borders to full-scale, centralized animal displays and specimen exchange, it entered the world of early 20th century zoos. In so doing, it followed a path well established by the Smithsonian. The National Museum, for example, grew to include living specimens on display in the building and in holding pens and out buildings on the Smithsonian grounds. This little "try-out zoo" in the back of the Smithsonian led to a call for a research-based sanctuary and protected breeding grounds for American wildlife. This, too, soon segued into a national pleasuring ground with captive animal displays. Just as the conservation efforts of the National Museum and the National Zoo changed over time from centres of

calculation and conservation into centers of animal displays, so, too, did Yellowstone increasingly focus on the display of animals rather than the preservation of wildlife as an end in itself.

Unlike Ferdinand Hayden and his party, who rarely saw large mammals in the area that became known as Yellowstone National Park, late 19th and early 20th century visitors to the national pleasuring ground could experience a park-like environment while enjoying the nation's rich wildlife and natural history legacy. Indeed, by the end of John Pitcher's tenure in 1907, visitors almost could be guaranteed to see animals in a variety of settings, from open fields to corrals.

Viewing wildlife of the American West became central to the Yellowstone experience, albeit an artificial, human-constructed one, not unlike the family habitats and other animal displays behind glass in the Smithsonian.⁵²⁵ By the early 20th century in Yellowstone National Park, science, tourism, and wildlife conservation and displays had become inextricably mixed. As artifacts, these living animal displays were as carefully constructed and defined as Hornaday's

⁵²⁵ In the 1920s, with funding in part from the Laura Spelman Rockefeller Foundation, the National Park Service would also create natural history museums with taxidermied animals on display in several national parks including Yellowstone. However, the Park Service never intended these museums to replace the experiences of visitors in the parks. Rather, museums should serve as "windows on the natural history of the park," and inspire visitors to experience for themselves the wonders of nature. Diane M. Smith, "What One Knows, One Loves Best," *A Brief History of Science Education in the National Parks* (Masters thesis, Montana State University, 2004), 81. To this day, visitors can still see wolves and other taxidermied animal displays in the Yellowstone visitor center in Mammoth Hot Springs.

taxidermied groups, or the remains of the bison Indians left behind on the Montana plains.

Managing an expanse of land as if it were a zoo does not come without a price, however. The resulting culture of animal displays and exchanges developed and administered by the U.S. Cavalry presented the National Park Service with a challenge of balancing the inherent conflict between securing a center of conservation and display (i.e., a zoological park) and protecting habitat in and out of which wildlife could freely roam. That animals became viewed like any other Yellowstone specimen or abundant treasure “lost to science and the world,” intensified the pressure to distributed excess specimens while complicating how to control those animals living within the boundaries of the Park. Once the management of Yellowstone wildlife and other natural resources transferred to the National Park Service, the conflict and contradictions of earlier management remained. As the 1916 establishing legislation made clear, Congress expected the National Park Service to conserve wildlife and other natural and historic objects for the public’s enjoyment while still leaving it “unimpaired for the enjoyment of future generations.” Over the years, the National Park Service has struggled mightily to achieve this goal.

As the national park with the highest profile, Yellowstone administrators still find themselves in the middle of contentious and politicized debates, ranging from the advisability of snowmobiles in the Park to the role of wildland

fire. But many of the Park's greatest controversies focus on the fate and treatment of Yellowstone wildlife. Ultimately, it comes down to whether or not Park administrators can preserve the last of the nation's free-ranging herds or must resort to managing a relatively small piece of land in the American West as if it were a zoo. The Smithsonian's legacy of animal displays and exchange haunts Yellowstone National Park to this day.



Fig. 24: Yellowstone National Park bison on its way to slaughter, 2008 (*New York Times* photograph by Anne Sherwood).

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