ELK IN THE GREATER YELLOWSTONE ECOSYSTEM:

CONFLICTS OVER MANAGEMENT AND CONSERVATION PRIOR TO NATURAL REGULATION

by

Wendy Marie Zirngibl

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Wendy Marie Zirngibl

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Robert Campbell

Approved for the Department of History

Robert Rydell

Approved for the Division of Graduate Education

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Wendy Marie Zirngibl

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ABSTRACT

To the residents of Montana and Wyoming, Rocky Mountain elk long have represented an important resource of sustenance and consumptive recreation. The mission of protection and preservation of the elk by the stewards of Yellowstone National Park often opposes the culture of use beyond its boundaries. Since its inception in 1872, Yellowstone has stood at the core of numerous battles fought locally over the elk, revealing the preeminence of this species among the region's wildlife. Conflicting values and the threat of federal infringement become manifest in elk management and use philosophies throughout the jurisdictionally fragmented Greater Yellowstone Ecosystem.

CHAPTER 1

INTRODUCTION

The cultural and economic value of elk in the Yellowstone region has remained largely unchanged since early settlement in the area.[1] To the residents of Montana and Wyoming, the elk long have represented an important resource of sustenance and recreation, to which they have felt uniquely entitled. The pioneer families of the region quickly established elk hunting as a vital tradition that the people of Montana's Yellowstone gateway communities and Jackson Hole jealously protected. The cultural value of the elk to expanding local communities vigorously revealed itself in the twentieth century, when questions of ownership and use provoked intense and prolonged confrontations between the numerous stakeholders in Greater Yellowstone.

The wapiti, deemed "the noblest of the deer tribe," garnered similar favor in Yellowstone National Park, established in 1872 as a protective reserve for its unique geothermal wonders and biota.[2] Yellowstone

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[1] The continued abundance of elk in this region contrasts with its disappearance from most of its former range. Late Holocene fossil sites indicate that elk populations in what is now the United States ranged at least from modern eastern New York to the northwest coast and all points between prior to the arrival of European civilization. Bart W. O'Gara and Robert G. Dundas, "Distribution: Past and Present," in *North American Elk: Ecology and Management*, ed. Dale E. Toweill and Jack Ward Thomas, 66-119 (Washington DC: Smithsonian Institution Press, 2002): 79.

[2] Quote from Walter P. Taylor, "Saving the Yellowstone Elk Herds," *The Conservationist* 3:1 (Jan. 1920): 3.

administrators spent the first century of the Park's existence experimenting with changing cycles in elk management that usually reflected contemporary national trends. The 1916 NPS Organic Act mandate to conserve wildlife for lasting visitor use further guided Park custodians through a patchwork of highly manipulative management protocols, often designed to repair the real or perceived biotic damage sustained by the previous stage of wildlife administration.[3] The notion that the Park existed to act as a reservoir for preserving elk in order that the outlying areas could enjoy a steady overflow of "game" gradually fell out of fashion among Yellowstone staff, but this perceived function of the Park continued to dominate the view of local hunters and adjacent state agencies.

The Greater Yellowstone Ecosystem [GYE] refers to "one of the last relatively intact temperate zone ecosystems in the world," which encompasses a broad expanse of federal, state, and private land measuring around 19 million acres.[4] Yellowstone and Grand Teton National Parks comprise the core of the ecosystem, which sprawls across forests, ranchlands, and state sections in Montana, Wyoming, and Idaho. The amalgamation of ownership that characterizes the GYE often creates discord among the various stakeholders, who sometimes espouse

[3] See National Park Service Organic Act, 16 U.S.C. §1.

[4] Steven L. Yaffee et al., *Ecosystem Management in the United States: An Assessment of Current Experience* (Washington DC: Island Press, 1996): 147-48.

divergent philosophies regarding the administration of its wildlife and other "resources."

The artificial lines drawn across this landscape to delineate federal and state jurisdictional boundaries in the GYE, described as a means of "state simplification" by geographer James C. Scott, did anything but simplify elk management in the region.[5] Conflicting value systems and stewardship goals continually confronted one another at the border, which the mobile ungulates disregarded and freely breached, passing in an instant from one sphere of authority to the next. This problem of fragmented jurisdiction and shared resources was further aggravated by the common public ownership of Yellowstone's features and its geographic overlap with several host states, particularly Montana and Wyoming. But the elk's intermittent position relative to the various boundaries of official guardianship often did little to discharge the concerned managing agencies and stakeholders, whose economic and emotional investment in the herds persisted despite temporary suspensions of authority.

Language often starkly illustrates the competing values at work in the many battles over the Yellowstone elk. Charges of "wanton butchery" and "useless slaughter" at different times underscored the hostility of

[5] See James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998).

Park stewards toward local "recreation," and of hunters toward federal "management." Generally, all parties considered themselves conservationists, but as the following narrative demonstrates, conservationism can assume varied and incongruent agendas.

Following the material production boom of the late-nineteenth-century industrial revolution, progressive conservationists sought ways to achieve a sustained, maximum yield also of desirable (useful) natural resources. Intensified, rationalized environmental manipulation attended the philosophy described by historian Richard White as a belief that "When humans acted on nature they did not defile it, they purified it."[6] In this way, nature was elevated by its usefulness. In Greater Yellowstone, managers improved nature's ability to produce elk by establishing management practices approaching monoculture and effectively deconstructed the ecosystem to enhance its efficiency in this regard. Yellowstone staff received little resistance from local elk hunters, who appreciated their efforts. Sport and subsistence hunting enjoyed preeminent status as the highest use of game animals in this region, where the elk was a most favored species.

The growing recognition of scientific management principles in the 1930s coincided with New Deal efforts to improve the nation's public areas with programs such as the Civilian Conservation Corps. In National

[6] Richard White, *The Organic Machine* (New York: Hill and Wang, 1995): 35.

Parks, road building and facilities improvements led to an increase in environmental research and the presence of biologists to determine the effects of construction and greater human presence on the Parks' biotic communities.[7] Yellowstone's Progressive era wildlife protocols, still favored by hunters, fell by the wayside as newer, more holistic ideas about wildlife conservation supplanted the old.

Over the next three decades, this ethic evolved into intense concern for the environment that led Yellowstone to focus less on species-specific management than on ecological "balance," particularly in the wake of a postwar explosion in Park visitation and non-consumptive outdoor recreation.[8] Yellowstone now sought *optimum* herd populations rather than *maximum* quantities of elk. The animal's unchanged value as a game species in outlying communities, though, placed hunters on the opposite side of a deep chasm that lay between federal officials and this highly vocal and influential special interest group. The region's sport shooters, which comprised the highest proportional concentration of hunters in the nation, challenged the ethical legitimacy of Yellowstone's scientifically deduced "direct reduction" program that involved systematic culling of overpopulous elk herds to bring them in line with limited

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[7] Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997): 100-01.

[8] Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (Cambridge: Cambridge University Press, 1987): 129.

range.[9] Whereas killing the animals for sport or sustenance seemed to hunters a natural—and therefore valid—use of the elk, the Park rangers' non-recreational slaughter by the dozens and thousands constituted an unnatural waste of an economically and culturally valuable resource. The resulting fierce, drawn-out conflicts over wildlife management in the region called into question the assumption that science necessarily should trump vehemently asserted cultural values. Often, the latter prevailed in Greater Yellowstone.

This study aims to provide a historic analysis of the evolving valuation and management of elk within the larger biotic and human communities in the context of the Greater Yellowstone Ecosystem, and how opposing resource use principles, stewardship philosophies, local economies, and changing scientific dogma determined the interactions between various stakeholders and between people and wildlife. As an environmental history, it is more a cultural than wildlife history that often uses points of conflict and resolution to examine the differing value

[9] At 24 percent of the state's legal-age population, Montana hunters constitute the highest concentration in the United States; nationally, less than ten percent of the total population hunts. Next at 17 percent, Wyoming greatly exceeds the national average as well. U.S. Department of the Interior, Fish & Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, *1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Montana* (Washington DC: U.S. Fish and Wildlife Service, March 1998): 8; ibid., *1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Wyoming* (Washington DC: U.S. Fish and Wildlife Service, May 1998): 9; http://www.nssf.org/hunting_idx.cfm?AoI=hunting.

systems at odds in the region, always tightly bound to the elk as a favored species.

The first chapter discusses the origins of official and public response to the finite supply of "game" in Yellowstone in the context of the early Conservation Movement, largely under the assertive guidance of George Bird Grinnell. It also identifies the almost exclusively utilitarian value of elk and other wildlife. Chapter Two focuses on the new era of progressive resource stewardship through "wise use," which was exemplified by Gifford Pinchot's forest management and embraced by Park administrators as an effective method of elk propagation. To achieve a sustained yield of desired species, the Park copied an agricultural model that advocated species-specific management by manipulating the elk's environment, which happened to include bison and wolves.

The value of the elk beyond Yellowstone's boundaries is outlined in Chapter Three. This species fell victim to increasing white settlement and often-irresponsible use in Montana and Wyoming, prompting action on the part of both local residents and Park staff. In the fourth chapter, the elk's importance as a game species in Wyoming brought state and federal agencies in direct confrontation with one another. The arbitrary nature of Yellowstone's original boundaries and their failure to include important

segments of the ecosystem ultimately foiled scientists and Park advocates between the mid-1920s and 1950.

The final two chapters trace the evolution of wildlife management as a discipline that gained authority in the 1930s and began to dictate more scientific, ecology-based management standards in Yellowstone. Resistance from neighboring communities to the resultant wildlife policies adopted by the Park reached a fevered pitch in the 1960s, when environmentalist ideals challenged the more traditional, homocentric, utilitarian philosophy held by elk hunters in the region.

CHAPTER 2

PROTECTIONISM EVOLVES

When the Yellowstone National Park Game Expedition embarked on its journey westward late in the winter of 1894, it left behind a roil in Washington and New York over the meager protection afforded wildlife in the world's first national park. As representatives of sporting publication *Forest and Stream*, the party's mission involved documentation of the wildlife poaching endemic to the Park. Editor George Bird Grinnell, an outspoken conservationist who displayed a keen interest in the big game of the West, had dispatched this delegation to gather information that would supplement his steady supply of indignant editorials alerting the magazine's readers to the needless peril facing the elk and bison of Yellowstone.[10]

Grinnell's anxiety over the situation was based on the lack of enforceable regulations providing for the deterrence of hunting or trapping in the Park existed; indeed, early Yellowstone visitors enjoyed meals prepared from Park animals regularly slain by concessionaires.[11] In an American society that regarded wildlife as an expendable natural

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[10] James B. Trefethen, *Crusade for Wildlife: Highlights in Conservation Progress* (Harrisburg: The Stackpole Co. and New York: Boone and Crockett Club, 1961): 38-39.

[11] Paul Schullery and Lee H. Whittlesey, "Greater Yellowstone Carnivores: A History of Changing Attitudes," in *Carnivores in Ecosystems: The Yellowstone Experience*, ed. Tim W. Clark et al., 11-49 (New Haven: Yale University Press, 1999): 23.

resource, concern for the dwindling supply at first was limited to conservationists like Grinnell. If the scores of market hunters who depleted the vast herds of ungulates that once occupied North America had similar concerns over their attrition, it did nothing to slow them. For hoof rustlers like Edwin Howell of Cooke City, Montana, the sale of hides, tongues, and heads could provide a fair living.

Howell had been camping on Astringent Creek at Yellowstone's interior when he found the herd of bison that had drawn him there in the cold winter of 1894. Having strung up the first half-dozen heads from the herd at base camp, he set out on the morning of March 13th with his dog and a rifle in search of additional prey. Howell found five more of the animals, gunned them down, and busied himself with scalping a fallen cow, secure in the acute senses of his guard dog. The dog, though, lay upwind of Scout Felix Burgess and Sergeant Troike. The two soldiers discovered the remains of the first six victims hanging at the camp on Astringent Creek and followed the poacher's tracks to a fresh crime scene in the Pelican Valley, where they soon spied Ed Howell bent over his quarry a difficult four hundred yards away. Armed only with a revolver, Burgess needed to make up some distance and set out on his skis toward the distracted poacher and his oblivious dog. By the time

Howell looked up, his arrest was secured, for it was too late to grab the rifle that now lay behind the army scout.[12]

For Howell, the risk of discovery and capture provided little discouragement. His contraband likely would have earned him around $2,000, whereas he valued his impounded equipment at a mere $26.50.[13] Chancing only confiscation of supplies and expulsion from the Park, poachers like Howell found in Yellowstone a land of plenty where, even if evicted, faced only re-eviction if caught again. The persistence of this charade is what prompted George Bird Grinnell to send journalist and conservationist Emerson Hough on the long journey west, where he would be escorted by photographer Frank J. Haynes and guide T. E. "Billy" Hofer.[14]

As Felix Burgess and company led Ed Howell to Fort Yellowstone for processing, they fortuitously encountered the Hough party, which immediately set about documenting the crime with interviews and photographs. Hough quickly compiled an account and sent it to his editor; it was exactly what Grinnell needed to buttress his case in Washington. His activism already had impressed Congress, where he enjoyed sympathy from men such as Iowa Representative John F. Lacey

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[12] Aubrey L. Haines, *The Yellowstone Story: A History of Our First National Park*, rev ed., vol. 2 (Niwot: University Press of Colorado, 1996): 62-63; Richard A. Bartlett, *Yellowstone: A Wilderness Besieged* (Tucson: University of Arizona Press, 1985): 319-20; James B. Trefethen, *Crusade for Wildlife*, 38-39.

[13] Trefethen, ibid., 40.

[14] Haines, *The Yellowstone Story*, vol. 2, 60-63.

and Missouri Senator George Graham Vest, both Yellowstone advocates. With the help of the Howell story, Grinnell and his allies in Congress secured the legislation they had sought. When Lacey introduced H.R.6442, a bill "To protect the birds and animals in Yellowstone National Park, and to punish crimes in said park," it sailed through both the House and the Senate "on a wave of public indignation." On May 7th, only eight weeks after Howell's capture, President Grover Cleveland signed the bill that came to be known as the Lacey Act.[15]

The story of Ed Howell's capture is often told. Were it not for the extraordinary coincidence attending his apprehension, Howell's arrest in March 1894 might have ranked among dozens of other such exploits in an early Park history plagued by the large-scale slaughter of ungulates that characterized the nineteenth-century American West.

The famous disappearance of bison, their extermination all but fixed a decade before Howell's arrest, accompanied a similar plight among the nation's elk. For the growing population of Greater Yellowstone, the Rocky Mountain elk represented an important natural commodity—like the rivers and forests, a highly accessible, economically

[15] Richard A. Bartlett, *Yellowstone: A Wilderness Besieged*, 316-19; Trefethen, *Crusade for Wildlife*, 38-39; US Statutes at Large, Vol. 28, Ch. 72: 73-75; Haines, ibid., 63-64. Formally called the National Park Protective Act, this legislation should not be confused with the better-known Lacey Act that passed six years later under the same House sponsorship.

important resource that fell under the contemporary utilitarian ethic advocating dominance and exploitation of wildlife.

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Described as "one of the most steadfast and watchful guardians the Park has ever had," Grinnell provided the highly vocal advocacy needed for the protection of the Yellowstone elk.[16] Granted, the New Yorker's concern—like that of fellow conservationist and cohort Theodore Roosevelt—was homocentric. The chief mission of the early conservation movement, to ensure a healthy supply of game for sport, perhaps seems farcical in the wake of the much later environmental movement and attendant powerful legislation such as the 1964 Wilderness Act and the Endangered Species Act of 1973. These measures, which touted an ostensibly biocentric ethic toward preservation solely for the sake of the biota they endeavored to protect, promised human benefits on the basis of ecological health and wholeness rather than strictly on the basis of economics.[17]

Yellowstone's founders, of course, felt nothing like this altruism toward the local wildlife. Further, the routinely extolled anti-utilitarian act of securing preservation of the Park's geothermal features is less impressive when one considers the fundamentally useless nature of the

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[16] *The Yellowstone National Park* (Cincinnati: Robert Clarke Co., 1895): 105, as quoted in Haines, *The Yellowstone Story*, vol. 1, 204.

[17] See Charles F. Wilkinson, "Toward an Ethic of Place," in *The Eagle Bird: Mapping a New West*, 132-61 (New York: Pantheon Books, 1992).

Park area, as perceived by contemporaries. In Congress, proponents sought support of the reserve's creation by assuring reluctant legislators that "If upon a more minute survey, it shall be found that [Yellowstone] can be made useful for settlers, . . . it will be perfectly proper this bill should [be repealed]."[18] But the elk and other game species, precisely because of their mobility, retained their utility both in and beyond the Park. Conservation within the reserve would ensure replenishment without, just as protection given a river is sought not for the sake of the river itself, but for the benefit afforded downstream users.

When Grinnell condemned the "terrible destruction of large game" in Montana and Wyoming, he in no way meant to indict the activities of polite hunters like himself, but rather "game hogs" like Howell, whose unchecked commercial harvests threatened the sport hunting treasured by his peers.[19] They urged protection of big game expressly to protect big-game hunting and regarded Yellowstone as a *reservoir*, or "breeding ground for big game, which will furnish sport for hundreds of hunters" who would enjoy the overflow.[20] Grinnell's motivations aside, the timing of his decision as editor of *Forest and Stream* to send a party to

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[18] Representative Henry L. Dawes quoted in Alfred Runte, *National Parks: The American Experience*, 3rd ed. (Lincoln: University of Nebraska Press, 1997): 54; see also Charles F. Wilkinson, "The Yellowstone Ecosystem and an Ethic of Place," in *The Eagle Bird*, 163.

[19] John F. Reiger, ed., *The Passing of the Great West: Selected Papers of George Bird Grinnell* (Norman: University of Oklahoma Press, 1985): 118-19.

[20] "Game in the Great West," *Forest and Stream* (8 July 1890).

Yellowstone in late winter 1894 proved remarkably serendipitous, bringing large-scale poaching in the National Park to an end. Howell, incidentally, claimed much of the credit for this landmark legislation and Captain Anderson, superintendent at the time, agreed with him. Anderson regarded Howell's crime as "the most fortunate thing that ever happened to the park"; Howell sardonically replied, "I have done more for the good of the park than you ever have."[21]

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Market hunting accounted for most of the illegal elk slaughter in and around the Park in the last decades of the nineteenth century, and drafters of Yellowstone's Organic Act bore this common malady in mind when addressing the region's wildlife. In instructing the Secretary of the Interior to "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," Congress essentially forbade *only* market hunting and neglected to provide the Park's stewards with any legal or financial means to enforce this protection mandate.[22] As a result, elk and other Yellowstone game species endured heavy poaching.

Reports of this "wanton destruction" by white market hunters regularly filled the pages of *Forest and Stream*. Correspondents

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[21] R. Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana: University of Illinois Press, 1992): 6.

[22] 16 U.S.C. § 22.

lamented the "wanton and useless butchery which threatens the extinction of the noblest animal that roams our broad domain" and blamed weak laws that rendered attempts to prevent it "utterly futile."[23]

The decline of elk populations owed partly to the activities of well-known veteran hide hunters such as the Bottlers,[24] who conducted their hunts from a home base in Paradise Valley. Norris claimed that during spring 1875, Fred Bottler and his brothers Henry and Phillip had slaughtered around two thousand elk near Mammoth Hot Springs. The great tragedy of it, Norris felt, lay in the fact that only the tongue and the hide of each animal had been taken, the "beautiful and valuable" elk killed solely for profit.[25] In truth, only twenty percent of the hides of animals poached during this era ever actually made it to market.[26]

The temptation for those like the Bottlers must have been great. In 1874, hide hunters fetched from twenty to thirty cents per pound for elk skins. Reportedly, 97,609 pounds—worth up to $29,000—headed out of Bozeman toward eastern shipping destinations that year, revealing a booming market capable of ensuring a fine profit, particularly after the

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[23] "Big Game Destruction," *Forest and Stream* 18 (11 May 1882): 289.

[24] Some sources use the spelling "Boettler."

[25] Philetus W. Norris, "Meanderings of a Mountaineer, or The Journals and Musings (or Storys) of a Rambler Over Prairie (or Mountain) and Plain," (unpubl. mss., Huntington Library, c.1885):33, as cited by Aubrey L. Haines, *The Yellowstone Story*, vol. 1, rev. ed. (Niwot: University Press of Colorado, 1996): 205; David Price and Paul Schullery, "The Bison of Yellowstone: The Challenge of Conservation," *Bison World* (Nov./Dec. 1993): 18-23.

[26] Harold D. Picton, "A Brief History of Elk: The Hunt, Research and Management," in *Elk Vulnerability: Proceedings of a Symposium*, comp. Alan G. Christensen, L. Jack Lyon, and Terry N. Lonner, 10-15 (Bozeman: Montana Chapter, The Wildlife Society, 1991): 11.

abrupt decline in the availability of bison pelts.[27] Demands for relief from this mass butchery often took the form of attacks on Washington. "This 'great and glorious government,'" observed *Forest and Stream*,

> has again stultified itself by enacting laws without supplying the means to enforce them. The Park is overrun by skin hunters, who slaughter the game for the hides, and laugh defiance at the government. . . . The curse of politics has entered into the management of the reservation, and the little money appropriated for its maintenance is wasted by incompetent and ignorant officials. . . . I[t] seems impossible to hope for anything in the way of assistance from the Interior Department, that sink of corruption which so disgraces our government . . . .[28]

In 1883, shortly after this criticism, Interior Secretary Henry M. Teller formally imposed a ban on all hunting in Yellowstone. It is likely that this measure resulted from a visit made by General Philip H. Sheridan about six months earlier, whereupon he took special notice of the destruction of thousands of elk in the National Park. When he pointed to the urgency of the situation, even offering military troops to provide protection for the wildlife, Teller responded by issuing the new regulations. Familiarly, though, perhaps insecure in the scope of his authority, the Interior Secretary sanctioned no punishments for lawbreakers.[29]

Meanwhile, the Park's neighbors bickered over which territory could claim superior wildlife protection. In 1875, Wyoming Governor

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[27] "The Big Game and the Park" (letter written by "Angler" in Bozeman), *Forest and Stream* 20 (22 Feb. 1883): 68.

[28] "Their Last Refuge," *Forest and Stream* 19 (14 Dec. 1882): 382-83.

[29] "Game in the Park," reprinted letter from Interior Secretary H. M. Teller to Superintendent, Yellowstone National Park, 15 January 1883, *(Bozeman) Avant Courier*, 22 February 1883; Haines, *The Yellowstone Story*, vol. 2, 59.

John M. Thayer urged the legislature to protect the economically valuable elk, pointing out that

> the killing of this game for the *hides* has become an extensive traffic . . . . These animals will at no distant day in a great measure become extinct, and thus an important and economic element of living be cut off, which will fall heavily on the poor settler.

Montana Territory had declared a closed season on elk in 1872, coincidentally the year of the National Park's establishment. Six years earlier, Wyoming had instituted only seasonal restrictions on the sale of elk, whereas Montana laws imposed a fine of up to $250 for hide hunting at any time.[30]

Not to be trumped, President Harry Oelrichs of the Wyoming Game Protective Association wrote a letter to Senator George Graham Vest, Chairman of the Committee on Territories and outspoken Yellowstone wildlife advocate, in which he lambasted Montana for its alleged leniency toward game hogs. In the rival territory, he asserted, poachers found a haven: "Hide hunters and game murderers in the extreme north have openly defied our association, knowing they could find a market and protection in Montana." Oelrichs also expressed "jealous" alarm at a proposal to incorporate the Park as a Montana county, suggesting instead that Wyoming, "from whom it was taken by the Federal Government," be

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[30] Neal Blair, *The History of Wildlife Management in Wyoming* (Cheyenne: Wyoming Game & Fish Dept., 1987): 18-20; Thomas W. Mussehl and F. W. Howell, *Game Management in Montana* (Helena: Montana Fish & Game Dept., 1971): 9; "The Big Game and the Park," *Forest and Stream* 20 (22 Feb. 1883): 68.

permitted to reclaim jurisdiction.[31] *Forest and Stream*, though, doubted his organization's effectiveness in wildlife protection, seeing "no apparent efforts on the part of the Wyoming Association to stop the butchery."[32]

But the following year, the Territorial Legislature of Wyoming effectively granted itself jurisdiction over the enforcement of game laws in Yellowstone. The presence of four Wyoming appointees in the Park proved at least somewhat effective: one visitor believed that "it would probably be better to commit murder in the state of Connecticut than to be found guilty of killing an elk in the National Park." Yellowstone officials expressed delight at this new governance, but before long, the Wyoming rule had had its day.[33] Although the new justice system proved moderately successful in curbing illegal game killing in the Park, a misguided and baseless charge over an unattended campfire resulted in its embarrassed demise amid accusations of overzealous, incompetent guardianship. The repercussions were twofold: in 1886, Wyoming repealed its act establishing Park jurisdiction, and the incident ultimately led to the transferal of authority from the Interior Department to the War Department, which took effect that summer.[34]

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[31] Harry Oelrichs, reprinted letter to the Hon. George G. Vest, U. S. Senator, 8 Feb. 1883, *Forest and Stream* 20 (22 Feb. 1883): 68.
[32] "Game Slaughter in the West," *Forest and Stream* 20 (21 June 1883): 401.
[33] Haines, *The Yellowstone Story*, vol. 1, 313.
[34] Ibid., 322-35.

The day after military leadership supplanted civilian rule, another attempt to curtail Yellowstone poaching came in the form of Orders No. 5, which prohibited "hunting or trapping and the discharge of firearms within the limits of the Park."[35] Still, the regulations failed to grant the Cavalry authority to convict poachers. As before, only confiscation of supplies and expulsion from the Park threatened would-be hide hunters, although the army took a firmer hand with offenders. If the soldiers found an illegal hunter,

> they confiscated his weapons and horse and escorted him out of the park on foot—always to the most distant boundary. After walking as much as fifty miles the poacher would be interviewed by a tough sergeant, who put on leather gloves beforehand to protect his knuckles.[36]

The army also imposed extended terms of incarceration on prisoners—sometimes weeks or months in the guardhouse—before releasing them.[37] Martial law notwithstanding, the anti-hunting regulation continued to be "violated on an industrial scale" until the unlikely team of Ed Howell and George Bird Grinnell finally effected a near-complete end to poaching in Yellowstone.[38]

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[35] *Report of the Superintendent of Yellowstone National Park to the Secretary of the Interior, 1886* (Washington DC: Government Printing Office, 1886): 11-12, as cited in Haines, *The Yellowstone Story*, vol. 2, 4.

[36] Dale F. Lott, *American Bison: A Natural History* (Berkeley: University of California Press, 2002): 187.

[37] Richard A. Bartlett, *Yellowstone: A Wilderness Besieged* (Tucson: University of Arizona Press, 1985): 318.

[38] Quote from Schullery and Whittlesey, "Greater Yellowstone Carnivores: A History of Changing Attitudes," 23.

Even as Yellowstone gained control of market hunting during its first two decades, Park staff and conservationists dreaded depredations on the region's wildlife by Native Americans as much as they scorned the misdeeds of white poachers. Though possibly modest in number compared to adjacent areas due to the Park's high elevation and hostile climate for much of the year, Native Americans regularly inhabited large portions of Yellowstone.[39] One Shoshonean group, the Sheepeaters, moved into the highlands perhaps two millennia prior to white "discovery" of Yellowstone and ranged in number between 150 and 400; meanwhile, Crow, Bannock, Nez Perce, and several other peoples inhabited the area intermittently.[40] Nevertheless, nineteenth-century managers regarded their "presence in the park as a new and artificial intrusion," and dismissed Indian claims to the land in a manner that perfectly reflected contemporary attitudes.[41]

Yellowstone staff and conservationists at first actually downplayed the prevalence of Native American activity in the region, but gradually moved toward lamenting their presence by stressing their destructive and lawless customs. In 1874, *Forest and Stream* promoted the Yellowstone

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[39] Michael J. Yochim, "Aboriginal Overkill Overstated: Errors in Charles Kay's Hypothesis," *Human Nature* 12:2 (2001): 142; Peter Nabokov and Lawrence Loendorf, *Restoring a Presence: American Indians and Yellowstone National Park* (Norman: University of Oklahoma Press, 2004).

[40] Paul Schullery, *Searching for Yellowstone: Ecology and Wonder in the Last Wilderness* (Boston: Houghton Mifflin, 1997): 24-25; Nabokov and Loendorf, ibid.

[41] Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley: University of California Press, 2001): 88.

valley just north of the federal reserve as a hunters' paradise and perpetuated a pervasive myth, which held that Indians "hav[e] a superstitious reverence for the valley, believing it to be the abode of the Great Spirit" and therefore "never enter it." The writer claimed that only Sheepeaters—"wretched beasts who run from the sight of the white man, or any other tribe of Indians—are said to inhabit the . . . mountains around the lakes" in the Yellowstone area. To remove any doubt as to the safety of a potential sport hunter, he gave assurance that the Sheepeaters were "poorly armed and mounted, obtaining a precarious subsistence, and in a defenseless condition."[42]

But the same conservationists who dismissed the influence of Native American hunting in the area quickly grew alarmed and indignant over the increasingly scrutinized traditional practices of local bands, whose methods of animal harvest departed from their own gentlemanly ways.[43] Some Indians killed elk regardless of season, but mass harvests typically occurred in autumn with the aid of fires that would burn vigorously in this dry season and drive animals to waiting hunters. Harvesting wildlife in this manner for communal subsistence, however, was essential. Just beyond Greater Yellowstone in Idaho, game animals comprised 15 to 25 percent of the diet of Nez Perce and would have

[42] "The Yellowstone Valley: Its Charms for Sportsmen," *Forest and Stream* 2 (14 May 1874): 209.

[43] Chris J. Magoc, *Yellowstone: The Creation and Selling of an American Landscape, 1870-1903* (Albuquerque: University of New Mexico Press, 1999): 140.

sustained Park residents similarly. One Park visitor in 1876 reported that tribal hunters created impoundments along the upper Yellowstone River in order to trap fair numbers of elk and bison, a practice that contributed to the notion among Park managers that Indians overhunted in the extreme.[44]

Native American game depredation troubled Bison Society founder William T. Hornaday of the U.S. National Museum, who in 1889 blamed Indians for the extirpation of bison in North America, accusing the Gros Ventre, Shoshone, and various other tribes of killing three times the number of animals slaughtered by white market hunters in the West prior to 1880. Racial hostility more than substantiated evidence informed his claim: historian Richard White estimated that, on the southern plains alone, Indians killed roughly 1,215,000 bison between 1872 and 1874, whereas white hide hunters killed more than three and a half times that number during the same period.[45]

In opposition to Hornaday's view, *Forest and Stream* in 1881 credited Indians with far more conservative hunting practices than those carried out by white "butchers" in Yellowstone, but there was some

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[44] Richard E. McCabe, "Elk and Indians: Then Again," in *North American Elk: Ecology and Management*, ed. Dale E. Toweill and Jack Ward Thomas, 120-97 (Washington DC: Smithsonian Institution Press, 2002): 146, 132-33; Jacoby, *Crimes Against Nature*, 89.

[45] Nabokov and Loendorf, *American Indians and Yellowstone National Park*, 115; Richard White, "Animals and Enterprise," in *The Oxford History of the American West*, ed. Clyde A. Milner II, Carol A. O'Connor, and Martha A. Sandweiss, 236-73 (New York: Oxford University Press, 1994): 248-49.

crossover between the vilified profit hunters and Native Americans. Recognizing the profitability of killing ungulates for white consumption, some Plains Indians fetched around seven dollars for an elk hide in the 1870s.[46] The combination of market and subsistence hunting that brought about an excessive removal of elk and other ungulates from Yellowstone led staff and conservationists to begin conceiving of Indians and white lawbreakers like Ed Howell as constituting "one uniformly dangerous class."[47]

For Sheepeaters and other Park dwellers, however, an important difference lay in their failure to recognize traditional subsistence activities such as hunting wildlife and setting fires for floral regeneration or game-driving as illegal in any way.[48] Further, their disregard for Yellowstone's boundaries revealed a resistance to comply with white laws and landscape fragmentation in a manner quite different from that of white poachers. Whereas Park managers viewed such open defiance and lawlessness as a sign of deviance, one twenty-first-century commentator countered that the Park "is a geographic square that was grafted over native understanding of the place and region." Because of this arbitrary, culturally exclusive designation, "to expect native stories, memories and

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[46] McCabe, "Elk and Indians: Then Again," 165.

[47] "The Yellowstone Buffalo Slaughter," *Forest and Stream* 16 (2 June 1881): 349; Jacoby, *Crimes Against Nature*, 92.

[48] Jacoby, *Crimes Against Nature*, 89; Magoc, *Yellowstone: The Creation and Selling of an American Landscape*, 146.

actions to precisely distinguish between things and places on either side of current park boundaries is absurd."[49] That white poachers sought their Yellowstone quarry in secret betrayed an understanding—even if not an acceptance—of the illegal classification of their activities; Native Americans, on the other hand, more openly defied the sudden federal censure of long-established uses of the landscape and its fauna.

Even after the relocation of resident tribes to reservations in the 1870s and 1880s, including the removal of the last remaining Sheepeaters to Fort Washakie in 1881, Native visitation to the area still troubled Yellowstone staff and Park advocates. George Bird Grinnell insisted on the restraint of uncooperative Indians, whose harmful customs continued to threaten the idyllic, rationalized nature that conservationists preferred.[50] Similarly, Harry Oelrichs of the Wyoming Game Protective Association suggested that Indians be divested of their hunting passes in the area, "As they have neither use for hides nor meat, being liberally provided with both blankets and beef by the Government, and as their slaughter is invariably wanton . . . ."[51]

Oelrichs displayed an irreverent disregard for Native American agency, but Indians obviously had played a significant role in Yellowstone's ecological dynamics for millennia. Their reliance on elk

[49] Nabokov and Loendorf, *American Indians and Yellowstone National Park*, 3.
[50] Schullery, *Searching for Yellowstone*, 105-06; Magoc, *Yellowstone: The Creation and Selling of an American Landscape*, 141, 147-48.
[51] Oelrichs, reprinted letter, 8 Feb. 1883, *Forest and Stream* 20 (22 Feb. 1883): 68.

and other animals for subsistence, their practice of setting fires for biotic regeneration and animal capture, and their daily use of the landscape and its resources all would have influenced the natural processes occurring around them even more profoundly than did the recent phenomenon of mass wildlife removals by white poachers.

That Native peoples had helped to shape Yellowstone's nature perhaps never occurred to early Park stewards and explorers, who "wrote Indians out of the landscape, erasing Indian claims by reclassifying inhabited territory as wilderness."[52] Their subsequent physical removal completed the process of redefining the landscape as one devoid of human interference. But as it happened, nature in Yellowstone came to be ordered in distinctly human terms.

[52] Jacoby, *Crimes Against Nature*, 85.

CHAPTER 3

ELK RANCHING

Indian removal and the 1894 Lacey Act marked the transition to a new era of fierce protection and highly manipulative management of the Park's elk herds. Prior to the establishment of clear, serviceable punishments for poaching, Yellowstone staff's growing concern regarding the danger of dwindling elk herds had had some foundation. In the ensuing decades, though, even after a rebound in the elk population followed the virtual elimination of market hunting and Native predation, the stewards of this species remained anxious over the herd's safety, continually fearful of the "extermination" of this treasured animal.

A change in conservation philosophy that took hold in the early twentieth century attended the National Park's increasingly manipulative elk program. Previously, Yellowstone stewards had viewed the elk as a natural resource like most others: with restrictions on use, they might perpetuate the stores, but the elk still faced possible depletion. Like other resources, game herds were finite. It was during this early era that states began to institute hunting regulations in order that game might be democratically distributed among residents and its supply stretched to endure longer. Hence the hostility toward so-called "game hogs," whom conservationists condemned for claiming far more than their share, thus

threatening the kind of resource depletion that recent history had demonstrated could and often did result. Further, the restrictions imposed by wildlife managers could only slow a decline in numbers, not arrest or reverse it.[53]

Gradually, the idea of active management emerged from earlier methods of simple restrictions on use. Through direct manipulation and environmental controls, wildlife administrators effectively could *produce* a supply of game. Turn-of-the-century conservationists like Roosevelt advocated science-based management for the full realization of game renewal.[54] "Wise use," or use without waste, the Progressive principle embraced by Gifford Pinchot in his forest management philosophy at this time, found application in wildlife stewardship as well. At the Second National Game Conference in New York, Chief Forester Henry S. Graves announced in 1916 that "we have certainly now reached the point where we can begin to handle the game in an intelligent and constructive way with a view to using them and enjoying the increase, just as in the case of any other natural resource."[55]

In Yellowstone, the new elk management program became manifest in several ways. Direct manipulation of elk included transplantation to other areas, both to restock depleted herds beyond the Park and to

[53] Aldo Leopold, *Game Management* (New York: C. Scribner's Sons, 1933): 16-17.
[54] Ibid., 17-18.
[55] Henry S. Graves, "Game Protection on the National Forests," *Bulletin of the American Game Protective Association* 5:2 (1916): 18-19.

regulate range use within; and winterfeeding during the lean months to prevent starvation, which was viewed as tragic and wasteful. Environmental controls involved two other mammals: bison, a Park attraction of extremely limited use absent its game status and occasionally one that interfered with elk production; and wolves, at that time decidedly not a visitor attraction, and a species that certainly stifled any brand of elk production.

Prior to the 1894 Lacey Act, the stewards of Yellowstone simply removed ungulates' predators by embracing the same method of control practiced outside the Park. Only after Park wolves had been silenced in the 1920a did wildlife professionals begin conceiving of all members of a region's fauna as part of a cohesive biological system. Early wildlife managers instead regarded the relationship between elk and wolves to be purely destructive at the elk's expense, the wolf's role a purely selfish one with no benefit to either the human or wildlife community. It would be a century before reestablished wolf populations enjoyed protection in Yellowstone; for the time, though, federal and state trappers and private bounty hunters killed this elk hunter with enormous success.

Since wolves generally suffered from intense loathing in the late nineteenth century, most early Park managers did not presume the 1872 Organic Act's mandate providing against the "wanton destruction" of animals to include wolves, cougars, and others species that survived by

cropping game herds. Painted as ferocious and cruel, the grey wolf succumbed to management policies described as early as 1939 as having been "greatly influenced by superficial observation, personal bias, exigencies of the occasion, and group pressures."[56] The "pathological" hatred that characterized ranchers' attitudes toward this occasional stock killer translated as hyper-protectiveness of elk and other desirable animals inside the Park. Yellowstone staff set out to minimize natural predation on behalf of the elk, firmly established as a species of tremendous recreational and economic value. Both civilian and army personnel forcefully labored to remove the worthless and harmful canid, using primarily poisons and traps (sometimes with collateral damage to other fauna not targeted for removal).[57]

Ironically, according to Superintendent Norris, some of the early hunting that afflicted the Park's elk occurred at the hands of wolfers, who killed the ungulates for the sole purpose of treating their carcasses with strychnine intended for ingestion by wolves and wolverines.[58] Norris also reported on the success of the wolf eradication program, though,

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[56] 16 U.S.C. §2; Victor H. Cahalane, "The Evolution of Predator Control Policy in the National Parks," *Journal of Wildlife Management* 3:3 (July 1939): 229.

[57] Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997): 20.

[58] Richard A. Bartlett, *Yellowstone: A Wilderness Besieged* (Tucson: University of Arizona Press, 1985): 221. The sacrifice of a few to save many was a method used more efficiently later in the states when ranchers "donated" tired or crippled stock to wolfers for use as bait. Neal Blair, *The History of Wildlife Management in Wyoming* (Cheyenne: Wyoming Game and Fish Dept., 1987): 61.

claiming that by late 1880, the job was nearly complete. Records suggest that Albright's assessment likely was accurate, and that the wolves killed in later years constituted only remnants of a once-sizeable population.[59]

Remarkably for its time, though, the Lacey Act that safeguarded Yellowstone's wildlife provided blanket protection (at least in its language) for "any bird or wild animal," implying the inclusion of carnivora.[60] The generous wording was not lost on critics, often big-game hunters, who still feared for the elk. As William S. Bracket lamented,

> far more terrible and destructive to the big game of the Park . . . than a whole regiment of poachers, or other game hogs, is the constantly increasing army of bears, cougars, lynxes and timber wolves, which now infest the Park, and which, by the most awful of blunders, are equally protected from being molested by man, with the innocent elk, deer and buffaloes.[61]

Indeed, elk constituted an important component of the diets of large carnivores. The wapiti, which still outnumber all other Park ungulates by a ratio of 16 to one, would have functioned both as a primary prey base for wolves and as a critical food source for scavenging bears seeking

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[59] Paul Schullery and Lee H. Whittlesey, "Greater Yellowstone Carnivores: A History of Changing Attitudes," in *Carnivores in Ecosystems: The Yellowstone Experience*, ed. Tim W. Clark et al., 11-49 (New Haven: Yale University Press, 1999): 26; Paul Schullery, *Searching for Yellowstone: Ecology and Wonder in the Last Wilderness* (Boston: Houghton Mifflin, 1997): 81.

[60] US Statutes at Large, Vol. 28, Ch. 72: 73-75.

[61] William S. Bracket, "Predatory Beasts in Yellowstone Park," *Recreation* 12 (June 1900): 449.

winterkilled animals in the spring. As a result, enlargement of elk herds would have had the collateral effect of propagating predators as well.[62] An alarmed Bracket believed that "Unless some remedy is applied to this awful state of affairs we shall soon have no big game left in Yellowstone Park." By no means unaccompanied in his convictions, he suggested that the federal government hire several dozen professional wolfers to "kill off all carnivorous wild beasts" for the purpose of securing the livelihood of outfitters outside the Park and ensuring "excellent hunting" for future generations.[63] In reality, the Lacey Act did not end predator control; for three more decades, an unchanged carnivore program prevailed on both sides of the Yellowstone boundary.[64]

Beyond the borders of the National Park, livestock growers insisted upon predator control. Most deemed the wolf to be uniquely villainous and destructive, and federal and state agencies acquiesced to their concerns with a vigorous, institutionalized wolf extermination program

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[62] Allen Y. Cooperrider, "Elk and Ecosystem Management," in *North American Elk: Ecology and Management*, ed. Dale E. Toweill and Jack Ward Thomas, 514-29 (Washington DC: Smithsonian Institution Press, 2002): 518. Elk share the Park with bighorn sheep, mule deer, mountain goats (an introduced species), pronghorn antelope, and bison.

[63] Bracket, "Predatory Beasts in Yellowstone Park," 449-50.

[64] Bears were an exception to the anti-predator policies inside the Park. Doubtful of the scope of their predation—and therefore harm to desirable ungulate species, Yellowstone managers spared them from the intense removal suffered by other carnivores. As importantly, visitors enjoyed feeding these creatures from their automobiles and the bears quickly became a popular sideshow attraction for people viewing the Park's feeding of the animals at garbage dumps and official feeding sites. This latter activity, incidentally, lasted until around 1970. Schullery, *Searching for Yellowstone*, 144, 241; Robert Sterling Yard, "Wild Animals and the National Parks," *Bulletin of the American Game Protective Association* 6:3 (1917): 21.

that endured almost to the extinction of this ancient member of the Western fauna. In 1905, the Forest Service first employed its own trappers to thin out the wolves inhabiting national forests, but federal support began in earnest in 1915, when Congress appropriated funds for a formal predator and rodent control program.[65] In agricultural areas, the "balance of nature" promoted by later ecologists, of course, had no relevance. No such thing as a "natural" relationship existed between introduced domestic stock and native wild carnivores, and any "balance" would have implied the loss of economically valuable sheep and cattle. As for the region's game, prior to the development of wildlife biology as a science, any benefit that elk might gain from the presence of wolves was not obvious to Park administrators, whose only model for wildlife management at the time was agricultural. As a result, Yellowstone and the fish and game agencies of surrounding states developed distinctly agricultural objectives for the protection of wildlife.

Jackson Hole residents in the late nineteenth century estimated that 25 wolves killed a thousand elk in the valley every year.[66] Their alertness to this problem revealed a concern for the local elk population that

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[65] Thomas R. Dunlap, *Saving America's Wildlife* (Princeton: Princeton University Press, 1988): 38-39.

[66] John Madson, *The Elk* (New Haven: Winchester-Western Press, 1966): 53. Perhaps they either undercounted the predators or overcounted the kills; the reported rate is nearly double that of the current wolf predation on all wild ungulates in Greater Yellowstone. P. J. White et al., "Yellowstone After Wolves: Environmental Impact Statement Predictions and Ten-Year Appraisals," *Yellowstone Science* 13:1 (Winter 2005): 36.

intensified with increased settlement and before long, the state's hunting and fishing agency became involved. When a Wyoming game warden determined in 1915 that wolves were responsible for the loss of sixty elk in the Gros Ventre, the Game and Fish department hired five hunters to take charge of killing these dangerous animals using any means necessary to eliminate all predatory species. Wolves killed wild ungulates even more readily than they preyed upon livestock, and Game and Fish felt just as protective of their charge as did cattle ranchers. Only a decade after the discovery of the wolf-killed elk in the Gros Ventre, the department had twenty-two men employed in its "Predatory Animal Control" division, nineteen of them professional wolf hunters.[67]

In Montana, game managers set out to "eliminate predators for the benefit of wildlife."[68] They failed to see the wolf as a legitimate member of the fauna; rather, the canid's predation only foiled the agency's mission to propagate the state's hoofed species—the ones that comprised their own narrow definition of "wildlife"—for the benefit of hunters. Montana officials even resorted to germ warfare. A law that stood from 1905 to 1916 required state veterinarians to collect captured

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[67] A. A. Sanders, *Biennial Report of the State Game and Fish Commissioner of the State of Wyoming, 1925-26* (Cheyenne: Wyoming Game & Fish Commission, 1926): 12-13; Neal Blair, *The History of Wildlife Management in Wyoming* (Cheyenne: Wyoming Game and Fish Department, 1985): 51.

[68] J. Mitchell and K. Greer, "Predators," in *Game Management in Montana*, Thomas W. Mussehl and F. W. Howell, eds., 207-15 (Helena: Montana Fish and Game Department, 1971): 208.

wolves, infect them with sarcoptic mange, and return them to the wild to infect other pack members. Like the widely used strychnine, a favorite among wolfers even inside the Park, mange affected non-targeted species as well and finally fell out of favor.[69] Yellowstone's neighbors aggressively confronted the predator problem until they succeeded in eliminating this source of competition for elk hunters; a similar program resumed its former intensity in the Park just as a brand new administration settled in.

A year after the Bureau of Biological Survey launched its long-running wolf eradication program in 1915, Congress created the National Park Service [NPS]. First NPS Director Stephen Mather injected public relations into this newly inherited realm. Now at the helm, he endeavored "to cultivate a public image for the parks and realized that public support—particularly from sportsmen's groups, who were essential to retain as local allies—would follow from a policy that protected game animals and minimized predators."[70]

The new Organic Act, too, guided Mather's philosophy during his thirteen-year tenure as director. Legislation thoroughly of its time, the 1916 Act reflected standing federal policy by providing for "the destruction of such animals . . . as may be detrimental to the use of" any

[69] Ibid.; Peter Steinhart, *The Company of Wolves* (New York: Alfred A. Knopf, 1995): 37.

[70] Timothy Rawson, *Changing Tracks: Predators and Politics in Mt. McKinley National Park* (Fairbanks: University of Alaska Press, 2001): 59.

areas now under its jurisdiction.[71] This language reinforced the rationale behind predator control. Because administrators believed that visitors came to see elk and other game animals, an elk-killing wolf acted as a detriment to their use of the Park. Based on this logic, destroying the wolf fell soundly within the mandate put forth by the new guiding legislation.

The Act further directed the Park Service to "promote and regulate the *use* of" areas such as Yellowstone, the purpose of which "is to *conserve* the scenery and natural and historic objects and the wild life therein . . . ."[72] [emphasis added] Park Service administrations are typically described according to which of the so-called dual mandates—use and conservation—they favor. Mather and his superintendents in Yellowstone most decidedly emphasized "use." The popularity of game animals among Park visitors and hunters in outlying areas rendered them highly valuable and inherently useful. Still preoccupied with a utilitarian philosophy regarding nature, Yellowstone's new custodians, like Montana's game managers, rejected the notion of wolves as members of the biotic community worth protecting. On the contrary, as natural enemies of the wildlife that satisfied the type of use that Park visitors

[71] 16 U.S.C. §3.
[72] 16 U.S.C. §1.

sought, they were marked for removal here, just as they were on adjacent lands.

In 1918, Henry S. Graves of the U.S. Forest Service and E. W. Nelson, Chief of the Bureau of Biological Survey, compiled a report on the Yellowstone elk in which they identified the wealth of ailments confronting the animals. The two authors endorsed protecting the wapiti by mandating "The most vigorous campaign possible against predatory animals that destroy elk."[73] Most stakeholders agreed with this policy; both visitors and Yellowstone staff praised the "good work" of rangers in protecting the elk from natural predation. Horace Albright, superintendent from 1919 to 1929, noted a marked increase in game herds in several national parks, crediting carnivore removal for the propitious rise in populations.[74]

A few did mourn the wolf, though. In 1925, Roosevelt Game Naturalist Edmund Heller contended, "Great elk herds are not conducive to a balanced piece of nature without the wolf to add fire and alertness to their lives. Protected like cattle the elk become like cattle." In contrast to the army of hunters who insisted on the canid's extermination to preserve their game, Heller asked naively, "Who would not give a year of

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[73] Henry S. Graves and E. W. Nelson, *Our National Elk Herds: A Program with Special Reference to the Herds on the National Forests Adjacent to the Yellowstone National Park* (Missoula: Missoulian Publishing Co., 1919): 16.

[74] William C. Gregg, "Fading Game Trails," *The Outlook* (31 Oct. 1923): 363; Horace M. Albright, "Game Conservation inParks," *Western Magazine* (May 1925): 165.

his life to see a wild wolf or a whole pack of wolves trailing down an elk or deer?"[75] To hunters, such an image was most objectionable: an elk downed by a wolf amounted to one fewer that a hunter would have the privilege of killing.

After decades of intense management, the Yellowstone wolf finally gained more sympathy from the scientific and conservation communities, but at first, Park officials firmly resisted their appeals for discontinuation of wolf control. In May 1922, a monthly Superintendent's report snapped, "It is evident that the work of controlling these animals must be vigorously prosecuted by the most effective means available whether or not this meets with the approval of certain game conservationists."[76] This insistence on the absolute necessity of wolf removal came at a time when almost no wolves remained in the Greater Yellowstone, and elk herds had increased to an almost unmanageable size, a fact soon to reveal its stark consequences to the herd's caretakers.

Two wolves killed in 1926 proved to be the last taken under Yellowstone's reduction program. Over the next few years, resolutions from numerous wildlife conservation organizations—such as the American Society of Mammalogists and the Boone and Crockett Club—

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[75] Edmund Heller, "The Big Game Animals of Yellowstone National Park," *Roosevelt Wild Life Bulletin* 2:4 (Feb. 1925): 430.

[76] As quoted in Schullery and Whittlesey, "The Documentary Record of Wolves and Related Wildlife Species in the Yellowstone National Park Area Prior to 1882," in *Wolves for Yellowstone?: A Report to the United States Congress*, vol. 4, ed. John D. Varley and Wayne G. Brewster, 1.3-1.173 (Yellowstone National Park: NPS, 1990): 1.44.

continued to condemn the Park's predator policies. Boone and Crockett's objections to the program departed from the position of many other sporting groups, which pressured the Park Service to continue predator removal in the interest of game protection.[77] In the case of the wolf, appeals from either side mattered little. Regarded as "an economic liability and a menace to valuable wild life," the canid had been managed to extinction, leaving Yellowstone's custodians an inheritance that would come to be known as the "elk problem."[78]

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Park stewards judged that thus manipulated, Yellowstone's biota went awry: for the first time, the Park had "too many" elk. The overpopulation that had been identified as early as 1911 was rooted in the long-sought elimination of human and animal predation, which caused the elk herds to expand to an alarming size. Accustomed to fearing the worst for this species, for Park staff the impulse to intensify direct management of the herds proved overwhelming.

The altogether new precarious position of the Park's wapiti, not surprisingly, gained the attention of Theodore Roosevelt in 1912. The conservationist warned of the dangers sure to befall unchecked populations in Yellowstone, predicting mass starvation and advising

[77] Cahalane, "The Evolution of Predator Control Policy in the National Parks," 235; McIntyre, *A Society of Wolves*, 60.

[78] Paul G. Redington, *Report of the Chief of the Bureau of Biological Survey* (Washington DC: U.S. Department of Agriculture, 31 Aug. 1932): 12.

against giving in to the usual inclination of well-meaning custodians to feed wintering ungulates.[79]

In agreement with Roosevelt's early admonishments, wildlife biologists observe that supplemental feeding only compounds situations that seem to call for it. A lack of adequate forage for a herd indicates that too many animals are using a given range; by feeding the ungulates, the survival and subsequent reproduction rates keep the numbers unnaturally high and incommensurate with available forage. The process simply self-perpetuates and disallows the necessary natural culling of weak or aged animals. In addition, long-term, close congregation fosters the spread of disease among the herds and typically results in moderate to severe habitat degradation. Ultimately, the availability of artificially provided hay tends to tame the elk in a way, turning them into "paupers" that are reluctant to forage for themselves.[80]

Despite the drawbacks and against Roosevelt's advice, the overprotective Park began to feed its elk. Although staff occasionally had supplied hay to the Northern herd as early as 1904, the appalling spectacle of an atypically large die-off after heavy snows in the winter of

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[79] Theodore Roosevelt, "Three Capital Books of the Wilderness," *The Outlook* 102 (30 Nov. 1912: 712-15, as cited in Haines, *The Yellowstone Story*, vol. 2, 77.

[80] Wildlife managers continue to identify these effects at the numerous feed grounds still in operation. See Bruce L. Smith, "Winter Feeding of Elk in Western North America," *Journal of Wildlife Management* 65:2 (2001): 173-90, and A. A. Beetle, "Jackson Hole Elk Herd: A Summary after 25 Years of Study," in *North American Elk: Ecology, Behavior, and Management*, Mark S. Boyce and Larry Hayden-Wing, eds., 259-62 (Laramie: University of Wyoming, 1979).

1916/17 prompted the administration to consider feeding as a matter of course. Three years later, when early storms drove members of the herd to a legion of hunters waiting near Gardiner, Montana, Director Mather added his own funds to $8,000 acquired from the Interior Department to purchase hay for the suffering wapiti. Shortly after, the NPS allotment for feeding the Northern herd grew to $30,200.[81]

Graves and Nelson endorsed this solution as firmly as they promoted wolf extirpation as a means of protecting the elk. Noting that "in severe winters the loss by starvation is extreme," the two officials praised existing supplemental feeding programs as the salvation of the "needy herds." Especially impressive was the large-scale operation at the National Elk Refuge south of Yellowstone that cared for part of the Southern herd after it descended from the Park. Further, a range littered with the corpses of thousands of winterkilled ungulates did nothing to spur the confidence of citizens who had entrusted their prized national elk herds to the Park Service. To curry the public's support and to preserve Yellowstone's greatest biological asset, the authors hoped for "constructive upbuilding and intelligent utilization of wild life [to] replace the present imperfect methods" of game management.[82]

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[81] Haines, *The Yellowstone Story*, vol. 2, 79; R Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana: University of Illinois Press, 1992): 70; Walter P. Taylor, "Saving the Yellowstone Elk Herds," *The Conservationist* 3:1 (Jan. 1920): 6.

[82] Graves and Nelson, *Our National Elk Herds*, 4-5.

Aware of the recent Kaibab deer irruption and subsequent crisis in Arizona, one commentator in a forestry journal predicted a "spectacular catastrophe" among herds that had exceeded the carrying capacity of their winter range. A "game problem of the first magnitude" caused by the removal of the elk's natural regulating mechanism could be remedied only by more intensive feeding.[83] Even former Park Naturalist Milton Skinner ignored census numbers to the contrary when he predicted no end to an alleged decline in the elk population, brought about by supposed crashes after hard winters. Another like the legendary winter of 1919/20, which Park managers erroneously had blamed for a die-off of 14,000 elk, could "decimate the present band."[84] By 1929, Yellowstone maintained three ranches specifically to feed elk and supplemented the program by obtaining more hay from outside the Park.[85]

As a management tool, winter-feeding had a far less significant impact than wolf control, which lasted for over a half-century and utterly changed the biotic community in the Park. A highly manipulative program for a refuge that purported to maintain wildlife in its "natural"

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[83] E. A. Goldman, "What To Do with the Yellowstone Elk?," *American Forests* 33 (May 1927): 280-81. See Christian C. Young, *In the Absence of Predators: Conservation and Controversy on the Kaibab Plateau* (Lincoln: University of Nebraska Press, 2002) for an analysis of the management practices that led to and resulted from intense concern for the deer populations in this part of Arizona in the 1920s.

[84] Milton P. Skinner, "The Elk Situation," *Journal of Mammalogy* 9:4 (Nov. 1928): 310. For a thorough clarification of the 1919/20 population crash myth, see Douglas B. Houston, *The Northern Yellowstone Elk: Parts I and II, History and Demography*, Yellowstone National Park, 1974, 13-16, YPL Files.

[85] Sellars, *Preserving Nature in the National Parks*, 76.

state, the artificial feeding program for the wapiti finally lapsed in 1937, by which time other management procedures had taken effect.[86]

Though certainly not due to hay supplements, the predicted extirpation of the elk (again) did not occur. On the contrary, the protected herds of the Park grew. Although early wildlife census efforts proved both difficult and highly subject to error, estimates prompted Park officials to conclude that the wapiti, like the once-imperiled bison, had increased significantly.[87] So impressive were the numbers that Yellowstone saw fit to accelerate their translocation service to stock distant ranges with enough elk to augment depleted populations and reestablish extirpated herds. Also, administrators were beginning to notice the imperfect condition of the Park's summer range, which they believed bore the marks of overgrazing. Relocating some elk to further satisfy their role as a game reservoir might alleviate this problem.

Fittingly, the Fleecer Mountain area near Butte, Montana received one of the earliest shipments of Yellowstone elk in 1910, launching a rigorous restoration program in that state. Over the next decade, they accepted over two hundred more of the game animals for placement on

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[86] Wright, *Wildlife Research and Management in the National Parks*, 70.

[87] See Douglas B. Houston, "The Elk Population: History and Numbers" chapter in *The Northern Yellowstone Elk: Ecology and Management* (New York: Macmillan, 1982): 10-25.

ranges that hide hunters had wiped clean years earlier.[88] Yellowstone stayed well below the maximum 800 animals per year that administrators had established in 1913, averaging just over 350 annual shipments during the first five years after the initial Montana plants.[89] Still, both the Park Service and conservationists embraced the program as the key to salvation for this species, which now could reestablish a foothold in much of its former range.

Chief Publicist Robert Sterling Yard spoke enthusiastically of his agency's invaluable role in this conservation breakthrough.

> The national parks are destined to become the great propagating and distributing centers of game for a nation which has been stripped in less than half a century of its former enormous wealth of wild animals. Their destiny is to become the prime conservators of American sport.[90]

Between 1912 and 1967, Yellowstone sent over 13,500 elk to 38 states and several other countries through a program that remained in place for over a half century.[91] Translocation actually intensified in practice and consequence long after wolf control and feeding fell out of favor in the Park as management tools.

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[88] "Montana Will Take All Elk Trapped in Yellowstone Park," *Montana Wildlife Federation News* 2:1 (Jan. 1962): 4; Dave Books, "Early Awakenings," *Montana Outdoors* (Nov./Dec. 2000): 7; Ibid., "Changing Times," ibid., 8-9.

[89] Haines, *The Yellowstone Story*, vol. 2, 79.

[90] Yard, "Wild Animals and the National Parks," 20.

[91] M. L. Wolfe, J. F. Kimball, Jr., and G. T. M. Schildwachter, "Refuges and Elk Management," in *North American Elk: Ecology and Management*, ed. Dale Toweill and Jack Ward Thomas, 583-615 (Washington DC: Smithsonian Institution Press, 2002): 597.

The elk shared part of their range with the once-imperiled Yellowstone bison herd. The administration of this ungulate following its recovery from the brink of extinction in the nineteenth century illustrated, like wolf control, how valuation of wildlife was species-specific. That the stewards valued the bison is undoubted, but what differentiated it from the elk was its limited function as a useful resource in the Greater Yellowstone. In the 1930's, Superintendent Albright estimated that 50 thousand Park visitors enjoyed the herds every summer, but unlike the wapiti, the bison no longer furnished sport, although as a game animal the unglamorous, lumbering ungulate never had achieved the elk's stature.[92] Many believed—and still assert—that because of its relative lack of challenge, bison hunting is not remotely sporting.

Absent this "game" status, the herds that Park custodians had built up around Mammoth by introducing semi-domestic animals quickly fell under management that borrowed heavily from livestock ranching. Caretakers moved the fenced herds to the Lamar Valley Buffalo Ranch in 1907, and thereafter the Park maintained only as many bison as would ensure survival of this species and provide viewing opportunities for visitors.[93]

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[92] Horace M. Albright, "Yellowstone's 'Thundering Herd'; or, Our Greatest National Bison Herd," 1931(?), YPL Files.

[93] Mary Meagher, "Yellowstone's Bison: A Unique Wild Heritage," *National Parks & Conservation Magazine* (May 1974): 9.

The comparatively free-roaming nature of elk, fundamental to their continued appeal in the region, was a characteristic at once restrained in bison. More iconic than functional, the bison's role in Yellowstone was confined to staged observation by tourists, who could view the "show herds" kept on display close to the main road.[94] On special occasions, Yellowstone staff even took to "stampeding the animals before every notable who visited the Park," in order to provide an Old West experience, and Albright boasted, "Sixteen of our recently donated buffalo have entered the movies in Hollywood."[95] But those who remained on the ranch faced roundup and return to their Lamar corrals, where their caretakers fed them hay, as with any cattle operation. Other stock growing practices included the segregation of bulls except during breeding periods, seasonal rotation of cows, and weaning of calves; eventually, an excess of males prompted the herd's caretakers to castrate bull calves.[96]

Even as the Park labored to grow the elk herds, the administration arranged for the elimination of "surplus" bison. One elk researcher noted

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[94] Heller, "The Big Game Animals of Yellowstone," 463. A free-ranging herd "living aloof in the wildest areas of the Park" had reached about 100 in number by 1922, but by the 1930s, had intermingled with the captive herds sufficiently to remove any distinction as a separate herd. Ibid.; Meagher, ibid.

[95] Daniel B. Beard, "Special Report: Yellowstone National Park," 15 Feb. 1941, YPL Files; Albright, "Yellowstone's 'Thundering Herd.'"

[96] Victor H. Cahalane, "Restoration of Wild Bison," in *Transactions of the Ninth North American Wildlife Conference* (Washington DC: American Wildlife Institute, 1944): 136; Meagher, "Yellowstone's Bison," 9.

in 1932, "There seems to be no good reason why this herd should not be kept to about 1000 head through shipping live animals to zoos, etc., and butchering the remainder of the surplus."[97] But by 1925, the "tame herds" already had mushroomed, causing concern for the managers, who had furnished zoos and other wildlife reserves with as many animals as they could take.[98] Translocation to game ranges outside the Park was out of the question. The bison already had lost its game designation, and it was and remains a dangerous nuisance in agricultural areas, a disadvantage intensified by the identification of Bang's Disease (brucellosis) in the herds in 1917.[99] Elk, too, contracted brucellosis, (which probably occurs in no free-ranging elk herds other than those of Greater Yellowstone), but never have suffered under the severe stigma beyond the Park because of it.[100]

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[97] W. M. Rush, *Northern Yellowstone Elk Study* (Helena: Montana Fish & Game Commission, 1932): 79.

[98] Heller, "The Big Game Animals of Yellowstone," 457.

[99] Meagher, "Yellowstone's Bison," 13. Brucellosis poses a serious risk to domestic cattle, from which the bison likely initially contracted the disease early in the twentieth century. Not only does the *brucella abortus* virus cause spontaneous fetal abortion in cows, but its presence poses a health risk to humans who consume milk and other products from infected animals. Further, infection in domestic cattle could result in a state's loss of brucellosis-free status, as designated by the U.S. Animal and Plant Health Inspection Service. Norman F. Cheville, Dale R. McCullough, and Lee R. Paulson, *Brucellosis in the Greater Yellowstone Area* (Washington DC: National Academy Press, 1998): 12-13; Lee H. Whittlesey, "Cows All Over the Place: the Historic Setting for the Transmission of Brucellosis to Yellowstone Bison by Domestic Cattle," *Wyoming Annals* (Winter 1994/95): 43-57; U.S. Department of the Interior and U.S. Department of Agriculture, *Record of Decision for Final Environmental Impact Statement and Bison Management Plan for the State of Montana and Yellowstone National Park* (Washington DC: U.S. Department of the Interior & U.S. Department of Agriculture, 2000): 3-4.

[100] E. Tom Thorne, Elizabeth S. Williams, William M. Samuel, and T. P. Kistner, "Diseases and Parasites," in *North American Elk: Ecology and Management*, ed. Dale E.

In 1923, special legislation granted the Park authority to remedy its alleged overpopulation problem by disposing of surplus herd members.[101] The hayfields and rangelands could support no more than a thousand bison, managers believed, so before the growing herds could reach capacity, they went to slaughter. Oddly, the killing of the first seventeen bison under this new management program occurred during a 1925 summer festival called Buffalo Plains Week. From there, market slaughter increased and the Park took to donating some of the animals' products—including tongues, meat, hides, and hooves—to Native Americans, seemingly with no protest emanating from within the Service, nor from the general public.[102]

Though not undertaken strictly for the benefit of the elk, bison containment and reduction had this effect. Chief Ranger George F. Baggley noted in 1934 that elk and bison showed a preference for the same rangelands in the Park, causing competition between the two species.[103] Because of their likeness in size, physiology, and habitat preference, elk and bison contended for common resources. With a 75 percent habitat selection overlap and a diet similarity approaching 50

Toweill and Jack Ward Thomas, 350-87 (Washington DC: Smithsonian Institution Press, 2002): 352.

[101] Cahalane, "Restoration of Wild Bison," 137.

[102] Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997): 75-76; Beard, "Special Report: Yellowstone National Park."

[103] George F. Baggley, "A Suggested Plan of Management for the Yellowstone Buffalo Herd," 17 Jan. 1934, YPL Files.

percent, interspecific range competition presented another naturally limiting factor for elk abundance in Yellowstone.[104] The growing potential for conflict between the two species had gained the attention of Service staff, and some of them viewed the situation with resentment. In 1928, Milton Skinner reported:

> Recently, a new menace to the elk herds has appeared in the growing "tame herd" of buffalo . . . . While this herd was few in numbers, its menace was small, but now that the herd numbers nearly a thousand the competition is being felt by the elk. Already thousands of acres of the Yellowstone area are reserved for the "tame" buffalo herd, and this falls with telling effect upon the elk, because these acres were all former elk range. And it is winter range of which we are manifestly short.[105]

The obvious preference for elk exposed an ambiguity toward the bison, which the Park obviously valued, but which had only a limited and narrow appeal in the region.

The problem of the winter range, caused by a lack of foresight in boundary placement in 1872, came to be defined in elk-specific terms. Perceived deterioration of the northern range, which fell under intense scrutiny after 1930, prompted Park managers to contemplate further ungulate removal. Since one bison used up 1.5 "elk units," staff viewed bison reduction as a way of sparing one and a half times the number of elk, even though the wapiti outnumbered the bison more than tenfold.

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[104] William Miller, "Elk Interactions with Other Ungulates," in *North American Elk: Ecology and Management*, ed. Dale E. Toweill and Jack Ward Thomas, 434-47 (Washington DC: Smithsonian Institution Press, 2002): 440-41; Cahalane, "Restoration of Wild Bison," 139.

[105] Skinner, "The Elk Situation," 315.

The Park Service even proposed building a permanent slaughterhouse at the Buffalo Ranch, preferably "hidden away out of sight" from visitors.[106]

Yellowstone gradually dropped the various protocols associated with bison ranching because they conflicted with the Park's goal of "natural presentation of wildlife." The agricultural management practices drew criticism from Service biologist Victor Cahalane in 1944 when he noticed "changes in temperament and habit" among the herds. Domestication had occurred not only in practice, but also in the very nature of the animals, whose instincts had been suppressed and their behavior modified by decades of intensive manipulation. Cahalane suggested that a more traditional form of management could be achieved by reinstating the bison's game status to take care of some of the surplus through a boundary hunt similar to one carried out by elk hunters near Gardiner.[107] Park administration rejected the idea, citing the unsporting nature of bison hunting and the difficulty hunters would have in downing the massive animals.[108] By this time, staff had killed 1,863 Lamar bison, and Yellowstone continued its reduction program in the coming years.[109] Even though elk eventually fell to a similar method of population control,

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[106] Park scientists based this 1.5 to one ratio on the comparative amount of food consumed by elk and bison. Daniel B. Beard, "Special Report: Bison Management in Yellowstone National Park," 10 Dec. 1940, YPL Files.

[107] Cahalane, "Restoration of Wild Bison," 137-38, 141.

[108] James A. Pritchard, *Preserving Yellowstone's Natural Conditions: Science and the Perception of Nature* (Lincoln: University of Nebraska Press, 1999): 178.

[109] Cahalane, "Restoration of Wild Bison," 137.

the public sympathy and indignation that attended—and eventually halted—elk reductions would visit the bison only marginally in the late twentieth century.

Yellowstone's fauna yielded to vigorous manipulation that was guided by the species-specific goals of Progressive-era conservationism. Even as wildlife stewards began to recognize the Park's biota as a whole, interconnected community, they still perceived the relations between its components as conflicting rather than complementary. In fact, for their purposes of elk regeneration over mere protection, the wapiti's relationships to the bison and the wolf *were* conflicting. Wolves interfered with maximum production through predation, while bison both competed for ungulate range and revealed, by submitting to severely restrictive management, the elk's supremacy as a valued species.

Wildlife stewardship under the budding, agriculturally inspired "sustained yield" doctrine of natural resource administration aimed to perpetuate the desired "crop," in this case the elk, by restraining or eliminating unnecessary elements that curbed the efficiency of production. Though elk management never quite approached monoculture, it bore some of the marks of this science, and Park staff later recognized the dangers of this type of overproduction and excessive manipulation. Both within the boundaries and beyond, the cultural and economic value of elk in Greater Yellowstone prompted heavy-handed

guardianship and enthusiastic use that often provoked conflicts among stakeholders.

CHAPTER 4

BORDER CROSSING: GARDINER AND JACKSON HOLE

When Theodore Roosevelt admonished Yellowstone to take precautions against further growth of the elk population, he advised against unwise supplemental feeding and offered his own remedy. Hunting, he instructed, would adequately regulate the annual increase of the herds.[110] Residents of the states adjacent to the Park took Roosevelt's advice, but at times this solution proved problematic. In addition, Roosevelt's strategy was grossly inadequate where circumstances were far more complex than a hunting season could remedy.

The popular practice of hunting migrating Park elk in Montana and Wyoming satisfied Yellowstone's role as a reservoir of game animals. Although it eventually came to be Yellowstone's preferred method of population control during the years of its direct reduction program, it horrified the highly protective early stewards of the Northern herd. For all the care and capital they invested over the years in the preservation of the elk, when the animals crossed the Yellowstone border, they moved beyond Park jurisdiction and out of the hands of their guardians. Nineteenth-century hide hunters like Ed Howell had ignored Park

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[110] Theodore Roosevelt, "Three Capital Books of the Wilderness," *The Outlook* 102 (30 Nov. 1912: 712-15, as cited in Haines, *The Yellowstone Story*, vol. 2, 77.

boundaries, much as the wildlife they poached. Montana elk hunters, though, patrolled this border with eager vigilance, poised for the moment when an elk would breach the "firing line." The federal stewards accepted Yellowstone's function as a game reservoir, but this hunt troubled them.

Boundary hunting began early. To fetch Park elk without actually trespassing, some Montanans in the 1880s sent their dogs in to chase game across the border to where they legally could kill the ungulates.[111] Later, though, elk hunting along Park limits became a state-sanctioned activity that brought notoriety to the wapiti for its learned ability to comprehend the Yellowstone boundary. Frustrated hunters were convinced of this human attribute, and Montana newspapers enjoyed the irony when the occasional hunter drew a citation for his or her inability to recognize the line.

> It was positively maddening to the hunters to gaze across the line and see elk roaming around inside the preserve evidently fully aware of the fact they were safe. Once in a while a cow would approach fairly close, but just when the hunter was figuring on getting a shot, the animal with a whisk of the head and a whistle would turn about and stroll back to the herd, giving the indignant nimrods the elk laugh. Six or eight Butte hunters broke the bounds and accordingly bumped into [two game wardens], and were taken down to Three Forks to see what the justice thought about it.

[111] Richard A. Bartlett, *Yellowstone: A Wilderness Besieged* (Tucson: University of Arizona Press, 1985): 317.

The resulting citations cost the hunters $100 apiece, an impressive sum in 1918. Immediately after the close of the season, one "nimrod" suspected, the elk would be "swarming around the hunting grounds."[112]

Wildlife biologists exposed to elk hunting in Greater Yellowstone have disagreed over the hypothesis that elk suppressed their migratory instincts through "conditioned avoidance behavior." In 1958, a Wyoming researcher believed that reduced elk presence along traditional migration routes usually indicated simply herd population fluctuations rather than any change in the animals' habits brought about by hunting pressure.[113] More recently, elk biologist Doug Houston rejected Anderson's notion after observing the very type of behavior modification along the Yellowstone boundary in the late 1970's that early hunters had noted.[114] According to subsequent studies, only severe weather that brought deep snows and necessitated a quest for forage influenced elk migration more strongly than did heavy hunter presence.[115]

When the elk did breach the border and pass before a hail of bullets, however, Park officials often reacted with displeasure. The early storms in the fall of 1919 that dumped 26.6 inches of snow on Mammoth

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[112] "Elk Strolling by Laugh at Hunters," *Helena Daily Independent*, 17 Dec. 1918.

[113] Chester C. Anderson, *The Elk of Jackson Hole: A Review of Jackson Hole Elk Studies* (Cheyenne: Wyoming Game & Fish Commission, 1958): 110-11.

[114] Douglas B. Houston, *The Northern Yellowstone Elk: Ecology and Management* (New York: McMillan, 1982): 199-200.

[115] Larry L. Irwin, "Migration," in *North American Elk: Ecology and Management*, ed. Dale Toweill and Jack Ward Thomas, 492-513 (Washington DC: Smithsonian Institution Press, 2002): 505-06.

and that many mistakenly believed to have caused the loss of 14,000 elk from the Northern herd had the real effect of pushing the animals out of the Park at the height of the Montana hunting season.[116] In late October Superintendent Albright decried the "ruthless game slaughter" that began when hundreds of elk crossed the line into Montana and ran into "scores" of hunters near Gardiner.[117] The first two weeks of the season brought reports of the massacre of thousands of the animals, resulting in estimates at season's end of four thousand killed outright and just many lost from wounds.[118] Disgusted by this spectacle, Albright condemned the state's hunting regulations in his 1920 annual report as "unworthy of a civilized state."[119]

The firing line method of hunting at Gardiner drew tremendous criticism in the wake of this staggering loss of elk. A conservationist who visited the Park the following summer became convinced that the harvest, coupled with starvation, had eliminated fully half of the ungulate population from a Park "surrounded by a swarm of game killers." In assessing the Gardiner hunt, he declared, "Such a slaughter has not been

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[116] W. M. Rush, *Northern Yellowstone Elk Study* (Helena: Montana Fish and Game Commission, 1932): 23.

[117] "Hundreds of Elk Being Slaughtered," *Helena Daily Independent*, 31 Oct. 1919.

[118] "Starving Elk in the Yellowstone," *Kalispell Times*, 8 Jan. 1920.

[119] Yellowstone National Park, *Annual Superintendent's Report, 1920*, YNPA, as quoted in James A. Pritchard, *Preserving Yellowstone's Natural Conditions: Science and the Perception of Nature* (Lincoln: University of Nebraska Press, 1999): 33.

recorded since the old buffalo days."[120] Even a representative of the Bureau of Biological Survey disparaged these hunting conditions, under which "the element of true sportsmanship was almost wholly lacking."[121] BBS Chief Field Naturalist Vernon Bailey protested the firing line on general principle: the "present policy of raising elk in the Yellowstone National Park to be killed as fast as they come out does not appeal to most of us as a wise conservation policy."[122] The real issue, rather than simply the harvest of elk, appeared to be one of sporting conduct: those who had not participated in the hunt disdained the easy slaughter of animals that had provided no semblance of fair chase, their mass migration having precipitated a sort of collective "game hog" massacre.

Rangers did their best to keep the elk out of harm's way by patrolling the range during daylight. Whenever possible, they pushed wandering herds back across the boundary into the reserve, while simultaneously guarding against trespass by overzealous hunters. To emphasize the Park line, the protective rangers flagged and built fires along the border to keep elk in and people out. Restraining a thousand elk that are attempting to leave behind the thick snows to reach winter

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[120] William C. Gregg, "Fading Game Trails," *The Outlook* (31 Oct. 1923): 361-62.

[121] Walter P. Taylor, "Saving the Yellowstone Elk Herds," *The Conservationist* 3:1 (Jan. 1920): 5.

[122] As quoted in Pritchard, *Preserving Yellowstone's Natural Conditions*, 18.

forage typically proved impossible, however, and the hunters again would enjoy abundant sport.[123]

Even before the 1919 bloodbath, William Hornaday, a former hunter and the director of the New York Zoological Park, identified the firing line as one of the greatest evils plaguing the herds. Judging the rifle-bearing residents of Gardiner, tellingly, as men "who toward game have the gray-wolf quality of mercy," he roundly condemned the town itself: "If the people of Gardiner can not refrain from slaughtering the game in the Park . . ., then it is time for the American people to summon the town of Gardiner before the bar of public opinion, to show cause why the town should not be wiped off the map."[124] Although many of the early boundary hunters doubtless came from the local population, the firing line gradually gained national popularity—even now the chance to participate in the Gardiner late hunt is one of Montana's most coveted permits.[125] The heavy harvest alleged by contemporaries of the 1919 hunt is nearly accurate. Although some observers had overestimated "cripple" losses at an exorbitant four thousand rather than the probable 200-400, hunters at the edge of the Park killed around 3,165 elk, a great

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[123] Ibid., 48-49.

[124] William T. Hornaday, *Our Vanishing Wild Life* (New York: New York Zoological Society, 1913): 337.

[125] Drawing odds for an "either-sex" permit for the Gardiner late hunt in 2004 were less than 1:40 for residents and less than 1:56 for nonresidents. Montana Fish, Wildlife & Parks Commission, 2005 Montana Hunting Regulations: Deer, Elk, Antelope (Helena: MFWP, 2005): 23.

many of them taken by non-locals who shipped their trophies home by train.[126]

The winter of 1919/20 was unique in that the heavy snows and resulting migration came unusually early, allowing a goodly number of elk to be slain in a short period of time. The method of the hunt, though, was representative of the annual scenario outside Gardiner. Milton Skinner in 1928 illustrated the typical commotion that follows a boundary break by a band of elk:

> Then the slaughterers and the butchers that have been waiting, rush out, surround the hapless elk, and begin shooting with Winchesters and pump-guns into the bewildered, huddled band. At times an elk, perhaps wounded, dashes out and through the encircling line. But that encircling line closes in and mercilessly fires into the remaining elk until all have fallen. Sometimes the hunters even continue shooting into the fallen bodies "for fear one will get away." Then all these mighty "sportsmen" rush forward and each claims an elk, saying, "This is the one I shot." . . . But often there are more elk killed than there are licenses. In that case, the superfluous elk have merely been "unfortunate," and are allowed to lie where they have fallen! Such has been the scene of slaughter enacted over and over . . . .[127]

It is easy to understand the objections of both the public and the Park to the Gardiner hunt. As wildlife stewards committed to preserving and protecting the Yellowstone elk, members of the administration were as distraught over the cruel end that faced the animals they had nurtured—albeit less loathsome to them than wolf predation or starvation—as were

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[126] Houston, *The Northern Yellowstone Elk: Ecology and Management*, 14-15.

[127] Milton P. Skinner, "The Elk Situation," *Journal of Mammalogy* 9:4 (Nov. 1928): 317.

other critics of the hunt. The elk enjoyed heavy-handed protection in the Park, but the fact did nothing to alter its role as a favored source of recreation beyond the boundaries.

Poaching in Yellowstone generally had given way to licensed harvest outside the Park (objectionable as it might have been to federal officials), but the wapiti still attracted hunters of the profit-seeking variety on adjacent ranges. The vast basin early known as "Jackson's Hole" traditionally wintered thousands of Wyoming's elk, including the Southern herd, part of which still descends from Yellowstone Park to graze under the Teton Range during the harshest months of the year. Tusk hunting was particularly common to this region, where every year the ungulates' migration attracted illicit market hunters who slaughtered the elk exclusively for their valuable canines.[128]

Like the hide rustlers, these "tuskers" stood to make a fine profit, but with little of the work involved and considerably less risk of discovery. Using a small instrument, a poacher could dislodge the animal's ivories in seconds and have nothing to haul back to base camp. Compounding game wardens' difficulty in detecting these poachers was

[128] These canine teeth have earned a variety of nicknames over the past century, such as ivories, buglers, and whistlers, but nearly all sources from this era refer to them as tusks.

their trick of fastening elk hooves to the soles of their shoes, as local wildlife biologist Olaus Murie unhappily observed.[129]

Tusk adornment had begun as a custom among several Native American tribes before whites adopted the practice. One Gros Ventre described elk canines as "our greatest decoration," preferred by Indians over the teeth of bears, cougars, horses, moose, wolves, and bison.[130] Crow, Flathead, and other tribes used tusks also as currency, but more often, they appeared in pendants, earrings, and bracelets worn by men and served as dress beads attached to women's clothing. The latter adornment typically signified the hunting prowess of a woman's father or husband and his abilities as a provider. Perhaps Native Americans esteemed the ivories because this part of the elk remained intact long after the rest of the animal decayed with death and thereby symbolized long life to the wearer; whatever their traditional value among Indian cultures, whites came to covet the ivories with increased fervency in the first decades of the twentieth century.[131]

The primary drivers of the market were members of the Benevolent and Protective Order of Elks, who sought the teeth for adornment of

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[129] Olaus Murie, *The Elk of North America* (Washington DC: Wildlife Management Institute, 1951): 286.

[130] Richard E. McCabe, "Elk and Indians: Then Again," in *North American Elk: Ecology and Management*, ed. Dale E. Toweill and Jack Ward Thomas, 120-97 (Washington DC: Smithsonian Institution Press, 2002): 168-69.

[131] Ibid., 168-171.

watch fobs, cuff links, and other jewelry.[132] Although the Elks usually labored for the protection of the emblematic animal, an exceedingly wasteful type of poaching took its toll on the herds and garnered the ire of locals and conservationists. Naturalist William H. Wright in 1907 penned an indictment of the B.P.O.E., whom he considered to be entirely responsible for the slaughter of the Southern herd.

> I wish that I had the gift of language to express my opinion of an . . . order of individuals who, for the purpose of securing the teeth of any animal, place a premium on the destruction of the emblem of their order. . . . At the present time they seem to try to see which member will pay the highest price for a set of elk's teeth.

Wright claimed that, although the typical going rate ranged from $10 to $25 per set, he was aware of men who had purchased them at $150, "just to let the world know that they are Elks."[133] The same year, Wyoming legislators confirmed his assertion, finding that a fine pair of mounted tusks might fetch hundreds of dollars.[134]

The surge in illegal commercial harvest that the growing market generated did not go unnoticed. In 1916, the Biological Survey reported to Wyoming Representative F. W. Mondell that members of their local staff had observed one hundred slaughtered elk in Jackson Hole, their

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[132] James B. Trefethen, *Crusade for Wildlife: Highlights in Conservation Progress* (Harrisburg: The Stackpole Co. and New York: Boone and Crockett Club, 1961): 230-31.

[133] William H. Wright, "Slaughtering Elk for the Elks," *World's Work* 13 (March 1907): 8665.

[134] S. Dwight Bunnell, Michael L. Wolfe, Mark W. Brunson, and Dale R. Potter, "Recreational Use of Elk," in *North American Elk: Ecology and Management*, ed. Dale E. Toweill and Jack Ward Thomas, 700-47 (Washington DC: Smithsonian Institution Press, 2002): 731.

ivories alone salvaged by tuskers. When Mondell informed a state game warden, the warden accused the federal government of devising the story as a ploy to wrest control of the state's elk on the premise that the game and fish department had been remiss in its guardianship.[135] The warden apparently felt more protective of Wyoming's jurisdiction over its wildlife than of the slain elk themselves.

Jackson Hole residents felt differently. They, too, stood to profit from the tusk trade, but typically used a legal method of harvest. Many settlers could supplement their small incomes by searching for winter- or predator-killed elk and lawfully removing the ivories that, unlike most other parts of the animal, retained their value long after death. Tuskers cornered this market and worse, depleted a resource that both fed the region's population and drew nonresident hunters who replenished the local coffers during their stay.[136]

The state had prohibited the sale of game or parts thereof in the nineteenth century, but later revised its law to permit marketing of wildlife with a state-issued tag that cost 25 cents, a small chip off the profit. In the usual outlook of the day, William Wright was convinced that this liberal Wyoming regulation would trigger the extinction of the elk, fearing that without its revocation, "there will not be an elk left in the

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[135] Neal Blair, *The History of Wildlife Management in Wyoming* (Cheyenne: Wyoming Game & Fish Department, 1987): 52.

[136] Robert G. Righter, *Crucible for Conservation: The Creation of Grand Teton National Park* (Boulder: Colorado Associated University Press, 1982): 8.

state of Wyoming."[137] The trouble, though, lay in the heavy demand for tusks. Their ivories' function as human adornment was only one of the burdens placed on this beleaguered resource, but it supported an especially wasteful practice.

This problem finally was remedied when the Boone and Crockett Club and other conservation organizations appealed to the B.P.O.E. to discontinue promoting tusk procurement among its membership. Years earlier, the Elks had denied that poaching on behalf of the Order bore responsibility for an inordinate level of elk mortality in Jackson Hole, but this time, it complied with the requests of conservationists by issuing an official statement of position against the purchase of elk teeth. Despite the Wyoming game warden's skepticism regarding the prevalence of tusk hunting in his district, the Game and Fish department, too, became more vigilant and eventually brought the practice to an end.[138]

Poaching took a regrettable toll, but a far greater threat to the elk of northwestern Wyoming was mass starvation, brought about by the gradual but extensive loss of their winter range through settlement of the lower-elevation areas surrounding Yellowstone. Permanent white occupation first came to the area in 1884 and five years later it boasted around sixty-five inhabitants. In the years following Wyoming's

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[137] W. H. Wright, "Slaughtering Elk for the Elks," 8666.

[138] Trefethen, *Crusade for Wildlife*, 230-31; Murie, *The Elk of North America*, 286; Bunnell et al., "Recreational Use of Elk," 732.

statehood in 1890, settlement expanded to include large areas appropriated for cattle ranching. In two decades, this ancestral winter range for elk also fed about three thousand head of cattle that lived among 889 people, according to a 1910 census.[139]

With increased human and agricultural encroachment during this time, the condition of the elk in Jackson Hole—representing perhaps twenty to twenty-five percent of the world's population at this time—quickly deteriorated.[140] Reports of starvation among animals closed off from their former grazing pastures abounded: "heavy losses" from local herds seemingly occurred in 1890, 1891, 1897, and 1911, with assertions of a die-off exceeding ten thousand animals in the 1897 crash.[141] True or not, such claims reveal the urgency sensed by both locals and the State of Wyoming, who felt compelled to apply some remedy to this tragic and alarming situation.

The first person to conceive of setting aside a special area to serve as an elk asylum in Jackson Hole was Wyoming game warden Dan C. Nowlin, who asked in his 1902 report, "Shall we wait for the final

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[139] Glen F. Cole, *The Elk of Grand Teton and Southern Yellowstone National Parks*, Reprint of Research Report GRTE-N-1 and Manuscript for Fauna of the National Parks of the United States (Washington DC: Office of Natural Science Studies, NPS, 1969): 12; John Wilbrecht and Russell Robbins, "History of the National Elk Refuge," in *North American Elk: Ecology, Behavior, and Management*, 248-54 (Laramie: University of Wyoming, 1979) 248; Dillon Wallace, "Saddle and Camp in the Rockies: The Tragedy of the Elk," *Outing Magazine* (Mar. 1911): 187.

[140] Harold D. Picton, "A Brief History of Elk: The Hunt, Research and Management," in *Elk Vulnerability: Proceedings of a Symposium*, 10-15 (Bozeman: Montana Chapter, The Wildlife Society, 1991): 11.

[141] Wilbrecht and Robbins, "History of the National Elk Refuge," 248-49.

disappearance of our elk . . . before we provide for their protection?" In 1908, Nowlin formally recommended the establishment of a permanent refuge, but disagreement over possible locations prevented his proposal's fruition. Other measures taken for the elk's protection in the meantime resulted from local concern for the animal's plight. Funded by the Teton National Forest, a warden in 1907 provided hay to two hundred snowbound elk on Willow Creek near Pinedale, launching a supplemental feeding program that in 1910, its first year of State funding, drew five thousand dollars from the Wyoming Legislature.[142]

Formal provision for the starving wapiti of Jackson Hole owed largely to the persistent efforts of prominent rancher, photographer, and former State legislator Stephen N. Leek. "Never before in the history of the universe," waxed Leek, "has such a sad plight been evinced among the wild animal kingdom as that which has been witnessed in Jackson's Hole, . . . and never again, I hope, will the government allow these animals to suffer and die as they have in the past." In 1911, Leek described a recent winter loss of about eighty percent of the calf crop and an alarming mortality rate among virile, mature bulls, resulting in a weakening of the gene pool, he believed, such that only "inferior" stock survived to propagate the herds. He held that the solution was organized

[142] Blair, *The History of Wildlife Management in Wyoming*, 38-39; Wilbrecht and Robbins, ibid., 249.

state feeding, which he successfully prompted with dire predictions of mass starvation delivered to Wyoming legislators.[143]

Jackson Hole ranchers who both pitied and highly valued the troubled elk had engaged for years in their own feeding programs, reportedly supplying the herds with hay raised for their livestock to prevent mass starvation of the wildlife. "I have never visited a game country," remarked one visitor, "where the people were so unanimously game conservers, so keenly alive to the value of game and have individually sacrificed so much for its preservation as the people at Jackson's Hole."[144]

In addition to feeding, this "preservation" involved the forceful exclusion of unwanted sheepherders, whose stock suffered infamy for their ability utterly to deplete a range. In one instance, a shepherd with a valid federal grazing permit arrived with his flock in Jackson Hole, prompting an "indignation meeting" among the settlers, who attempted to encourage his departure initially by peaceful means. When the shepherd insisted upon his right to graze his stock, a special committee appointed by locals showed the man a rope and advised him of its intended use, whereupon the sheepman "discretely departed," not to

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[143] Stephen N. Leek, "The Starving Elk of Wyoming," in *A Teton Country Anthology*, ed. Robert W. Righter, 163-69. (Boulder: Roberts Rinehart, 1990), 164-69.

[144] Wallace, "Saddle and Camp in the Rockies: The Tragedy of the Elk," 190.

return.[145] Jackson Hole echoed Yellowstone's response to the elk's imperilment by excluding "harmful" species, convinced that this type of intervention was necessary to offset a situation that would only worsen with increased human development. In this ranching community where the Southern herd once found their winter store, though, the elk problem bore special emphasis through the highly visible corpses of winter-starved animals dotting the landscape.

One outdoors magazine dispatched a correspondent to report on the crisis, described as "the one subject of conversation" in the region. As Dillon Wallace toured Jackson Hole, he "read the sickening story of the tragedy of the elk, written in bold characters on every field, on every hill and mountainside, and by every brook." Stephen Leek, who accompanied the reporter on his ground survey to document photographically the elk's plight for the article, assured him that in some years, he "could walk a half mile on the bodies of dead elk." Similar accounts asserted that within a one-mile radius, residents had found two thousand—and in one case, five thousand—elk carcasses that bore evidence of the dire repercussions of human infringement on the elk's range.[146]

Regardless, Wallace concluded that it was not the Jackson Hole residents who were to blame, but "Uncle Sam," who, by neglecting to

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[145] Hornaday, *Our Vanishing Wild Life*, 337; Wallace, ibid.
[146] Wallace, ibid., 188.

consider the seasonal migrations of wildlife when ascribing Yellowstone's boundaries four decades earlier, consequently "bred animals in the summer, to turn them out in winter, without provision, to starve."[147] The author's charge is one that would gain currency and long remain a point of dispute. Yet, the federal government's repeated efforts to remedy this early shortcoming only occasionally met with success, and suffered a major defeat twenty years later, ironically, by the residents of northwestern Wyoming.[148]

In the meantime, though, the Jackson Hole elk situation begged resolution and the state continued its efforts. Like Yellowstone, Wyoming began in 1910 to attempt thinning the herds by transplanting surplus animals to other ranges in the state, but this measure proved costly and had little impact on population size.[149] Local feeding efforts continued, but Dillon Wallace, who had charged negligence on the part of the federal government, directed the same criticism toward Wyoming. He accused the state of being resentful of criticism but offered his own by deeming it "utterly unable or unwilling to care for these migratory animals which she chooses to claim as her own the moment they enter her territory." If

[147] Wallace, ibid., 198.
[148] See Chapter 4.
[149] Anderson, *The Elk of Jackson Hole: A Review of Jackson Hole Elk Studies*, 26-27.

Wyoming legislators remained idle, he insisted, "the Federal authorities should take the matter in hand."[150]

In response, Congress authorized a thorough assessment of the Jackson Hole elk situation to be completed by Survey biologist Edward A. Preble. In late 1911, he submitted a report in which he recommended a permanent reserve in the basin for the protection and caretaking of the herds:

> Such a refuge should be of considerable size, should be situated in a valley which the elk naturally seek, and should comprise pasturelands, as well as meadowlands which will produce hay for feeding the animals after they have exhausted the available forage.[151]

Fulfillment of Preble's recommendation would grant the U.S. government increased jurisdiction over Wyoming's wildlife, but there was little else for the state to do but support the establishment of this federally funded reserve. Congress acted quickly: during 1912 and 1913, appropriations totaling $50,000 enabled the acquisition of private lands north of Jackson for hay production and sanctuary for the elk.[152]

Almost immediately, the 2,760-acre National Elk Refuge revealed both its disadvantages and its inadequacy. Originally designated as a

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[150] Wallace, "Saddle and Camp in the Rockies: The Tragedy of the Elk," 198, 201.

[151] Anderson, *The Elk of Jackson Hole*, 25; "Preble Report" quoted in Bruce L. Smith, "Winter Feeding of Elk in Western North America," *Journal of Wildlife Management* 65:2 (2001): 174.

[152] Paul G. Redington, Bruce Nowlin, A. E. Bowman, and L. T. Oldroyd, *Cooperative Wild Life Conservation and Control in Wyoming under the Leadership of the United States Biological Survey* (N.p.: U.S. Biological Survey, 1928): 21; Wilbrecht and Robbins, "History of the National Elk Refuge," 249-50.

facility where only intermittent, emergency winterfeeding should occur, this practice became an annual fixture. Already too small to maintain herds that numbered up to 10,000 animals, the Refuge now exacerbated the problem by keeping the population unnaturally high and precipitating the destruction of the range. Chester A. Anderson of the Wyoming Game and Fish Commission authored the first comprehensive volume on the Jackson Hole elk, in which he identified the repercussions of NER management practices that existed almost from the beginning.

> Artificial feeding has kept the herd above the limits of the winter-spring ranges, and of portions of the summer ranges, resulting in destruction of the browse and accelerated soil erosion in some areas. Also, as a result of less forage being produced on the winter range, a progressively larger portion of the herd depends on artificial feed during the winters. Rather than feeding being supplemental to winter range, it has gone far beyond a temporary or emergency measure and has become a means of maintaining the elk at an artificial level. Consequently, much of the original natural range is slowly deteriorating because of too much use by the elk.[153]

Anderson observed both the problematic size of the herds—far too large for the early Refuge, and their continued mortality. The NER reported a loss of 900 animals in 1917, but the total mortality in Jackson Hole was 2,500 that year despite 81 days of hay distribution at the new sanctuary.[154]

Another consequence of the latest elk management program was the partial taming of these wild ungulates, which Victor Cahalane later

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[153] Anderson, *The Elk of Jackson Hole*, 163 (Table 5), 47.
[154] Ibid.; Wilbrecht and Robbins, "History of the National Elk Refuge," 250.

regretfully noted also was a result of bison ranching in Yellowstone. Feeding at the NER duplicated agricultural methods, including line distribution of hay and the use of alfalfa-stocked corrals to accommodate the more vulnerable calves.[155] These practices troubled D. C. Nowlin, formerly the state game warden who first suggested the creation of a refuge. Now the NER's first manager, he wrote in 1922, "Eleven years of continuous feeding have virtually domesticated the elk that annually migrate to the Refuge and they seem to have lost the stamina and all the 'rustling' qualities noted in the wild species."[156] As Roosevelt predicted for the Yellowstone elk several years earlier, these animals reportedly grew pauperized and ill-equipped to fend for themselves, as well as highly numerous and destructive.

Still, the guardians of the Southern herd could identify no other solution in a region where human settlement quickly blocked traditional elk migration routes and usurped their winter range. As for Roosevelt's key to population control, the Gardiner firing line occasionally effected a substantial reduction in the Northern herd, but no amount of hunting could have alleviated the special problems afflicting Jackson Hole.

The restructuring of both the landscape and lines of authority in this region deeply impacted the elk herds, their ancestral migration

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[155] Redington et al., *Cooperative Wild Life Conservation and Control in Wyoming*, 22-23.

[156] As quoted in Wilbrecht and Robbins, "History of the National Elk Refuge," 250.

routes blocked by human settlement and their once abundant rangelands restocked with cattle. Greatly prized by the new local population, market hunters, conservationists, and Park staff, the Southern herd embodied a variety of values in Jackson Hole, whether cultural, economic, or nutritive. In Gardiner, too, the Northern herd stood at a crossroads where local recreational use of elk collided with protective Park stewardship. Here, the hunting culture came under fire from federal authorities who asserted what they deemed to be proper use of the commons, in opposition to state and local interests.

At its core, the possessive and self-righteous guardianship of the herds that the Park regarded as its own reflected a pervasive dissonance between federal control and local authority in the West. In the early decades if the twentieth century, disparate philosophies regarding use of the elk often fueled disagreements over how best to mitigate the problems that resulted from white settlement and fragmentation of the landscape, establishing a precedent for the more spirited battles that followed.

CHAPTER 5

THE BATTLES OF JACKSON'S HOLE: BOUNDARIES AND FEDERAL ENCROACHMENT

Relative to the region's fauna, Yellowstone's original boundaries were arbitrary. In the enabling legislation for the Park's establishment in March 1872, the drafters took special care to provide for the unique and abundant geologic wonders—the Park's stationary features, which were of primary interest at the time. Accordingly, early boundaries contained only these immobile, irreplaceable attributes. Their placement largely disregarded natural topography, failed to include the Grand Teton Range—what most considered a natural extension of and therefore regrettable omission from the Park, and reflected no understanding of the seasonal movements of some of the reserve's mobile residents. The Organic Act forbade "wanton destruction" of wildlife, but even Superintendent Albright, Yellowstone's most dutiful booster, noted that preserving the animals "was a matter that was given little thought" by the Park's founders.[157] This early inattention to the needs of wildlife proved most troubling in years to come.

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[157] Horace M. Albright, "Game Conservation in Parks," *Western Magazine* (May 1925): 163.

In 1882, Phil Sheridan joined the usual repertoire of early Yellowstone game conservationists when he identified a solution that, not surprisingly, was reproduced in *Forest and Stream*.

> I would like to see the Government extend this Park to the east as far as a north and south line though Cedar Mountain. This would be due east about forty miles, at the same time placing the southern boundary of the Park at the forty-fourth parallel of latitude, which would be due south ten miles. This would increase the area of the Park 3,344 square miles, and would make a preserve for the large game of the West, now so rapidly decreasing.

Forest and Stream promised "the heartfelt support of every sportsman in the land" for this wisely conceived boundary extension.[158] Of course, no objections came from the southern range because as yet it supported no white settlement. The plan would have doubled the Park's area and secured additional range for the Park's wildlife by precluding both settlement and livestock grazing in the currently unoccupied, expanded area. Alas, Sheridan's proposal came to nothing, but his was not the last attempt. After statehood and rapid settlement, though, the stakes changed.

Subsequent bids for expansion implied federal encroachment on lands already held by one of the surrounding states or a private landowner. Even absorption of adjacent federally owned Forest Service sections threatened the loss of public multiple-use domain that had served as popular hunting grounds or livestock grazing allotments. Not

[158] "Their Last Refuge," *Forest and Stream* 19 (14 Dec. 1882): 383.

surprisingly, even when proposals to alter Yellowstone's borders enjoyed support in Congress and among conservation-minded stakeholders, many locals responded with indignation and defensiveness, ever suspicious of a distant, intrusive federal government. In two cases, the spite and wariness of the people of northwestern Wyoming materialized from a history of concerted elk protection in that region.

The final years of World War I brought the rise of a movement of sorts that Emerson Hough (the journalist who in 1894 brought infamy to poacher Ed Howell) dubbed "Greater Yellowstone" in late 1917. Greater Yellowstone sought to secure safeguards for the Park's biota and waterways by rectifying the inadequate boundaries assigned in 1872.[159] Ultimately, the remapping proposals aimed to render a geographically rational and ecologically complete unit better suited to contain and protect Yellowstone's fluid entrustments. The borders always had been an issue. At various points, staff erected fences, including one that extended four miles along the north boundary to protect ungulate range from livestock, and some suggested constructing a continuous fence or razing the timber along the entire Park line.[160] The problem, though, was not one of demarcation but one of poor placement.

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[159] Aubrey L. Haines, *The Yellowstone Story: A History of Our First National Park*, rev. ed., vol. 2 (Niwot: University Press of Colorado, 1996): 320, 416n.

[160] Chris J. Magoc, *The Creation and Selling of an American Landscape, 1870-1903* (Albuquerque: University of New Mexico Press, 1999): 167; Karl Jacoby, *Crimes against*

The solution, under the auspices of Greater Yellowstone, first found expression in H.R.11661, a Park expansion bill introduced in April 1918 by Wyoming Congressman Frank Mondell. His ambitious wartime bill proposed the addition of the Teton Range, Jackson and other lakes, and the upper Yellowstone/Thorofare region, which contained the headwaters of the Yellowstone River outside the southeast corner of the Park. Mondell's proposal seemed likely to pass in the absence of unified opposition; even Chief Forester Henry S. Graves initially supported the bill that would strip his agency of vast holdings outside the Park.[161] In the 1919 elk study that Graves had prepared with Biological Survey Chief E. W. Nelson, southward extension to secure additional range for the Park's elk appeared as a key recommendation for improving their lot.[162] Although one historian believed that the residents of Jackson Hole offered a "tongue-in-cheek acceptance" of this measure to usurp their hunting and grazing grounds, Olaus Murie disagreed: "Everyone in the valley was opposed to this seemingly thoughtless dumping of a part of

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Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation (Berkeley: University of California Press, 2001): 107.

[161] Robert W. Righter, *Crucible for Conservation: The Creation of Grand Teton National Park* (Boulder: Colorado Associated University Press, 1982): 28.

[162] Henry S. Graves and Edward W. Nelson, *Our National Elk Herds: A Program with Special Reference to the Herds on the National Forests Adjacent to the Yellowstone National Park* (Missoula: Missoulian Publishing Co.): 15.

the valley into [an] already large national park. . . . The administration was suspected of trying to 'swallow up' all of Jackson Hole."[163]

Nevertheless, Mondell revised the bill and introduced it in February of the following year. After passing the House unanimously, the bill suffered defeat under the objections of Idaho Senator John Nugent. The failure of the proposed legislation was a dreadful loss, for by the time Mondell reintroduced his Greater Yellowstone bill in May 1919, sentiment against Park expansion had gained currency. To be expected, opponents of the boundary changes now included the Forest Service, unenthusiastic about ceding their domain; stock growers, unhappy about losing their grazing range; and dude ranchers, unwilling to forfeit their hunting grounds.[164] This last interest group, combined with big-game hunters, proved to be the most vocal and the most effective at thwarting Greater Yellowstone in coming years. For now, Park expansion was not to be, but in the meantime, the gross inadequacy of the National Elk Refuge in caring for the Jackson herd had stirred up even more controversy over land in the valley.

In the midst of the Mondell battles, the small size of the NER prompted another movement to supplement its grounds. Since they affected the same elk herds, the two issues were strongly linked.

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[163] Haines, *The Yellowstone Story*, vol. 2, 322; Olaus Murie and Margaret Murie, "Valley in Discord," in *A Teton Country Anthology*, ed. Robert W. Righter, 171-81 (Boulder: Roberts Rinehart, 1990): 174.

[164] Righter, *Crucible for Conservation*, 29-31.

Theoretically, if Yellowstone were to expand southward and absorb more elk range (mostly intermediate fall range in the present case), the elk would enjoy increased protection and undisturbed grazing during the hunting season. The resulting population growth would be intensely burdensome and potentially catastrophic in an area already lacking sufficient winter range to maintain its herds. Accordingly, District Forester Smith Riley urged "no addition to the Yellowstone National Park until the elk have been completely provided for" in the valley.[165] It was folly to support further herd increases with a Park extension when already the NER could not maintain the elk in their present numbers. Refuge expansion must precede Park expansion. Jackson resident J. R. Jones spoke for the population of the valley in admonishing both situations: "The probable extension of the Yellowstone National Park south, to cover nearly all of the summer range of this southern herd, will mean absolute summer protection, and we hold that failure to provide winter protection would be indefensible."[166]

By 1924, the Izaak Walton League of America, a conservation organization, had begun a national rally to raise funds for the purchase of lands in the basin for addition to the Refuge. Hal Evarts, outdoor editor for *The Saturday Evening Post*, had visited and hunted in the

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[165] Smith Riley and J. R. Jones, "The Wyoming Elk Situation," *Outdoor Life* 42 (1918): 176.

[166] Ibid., 174.

region and eagerly took up the IWLA's cause. In doing so, he lauded the integrity of valley residents and their vigilance and sacrifice in ensuring the survival of the Southern herd: "The majority of the natives of Jackson Hole *have helped save the elk*. The mere fact that there is a *single elk alive in the hole today is sufficient evidence of that*." Like past conservationists, Evarts declared that protection of the elk through Refuge expansion would "provide the best hunting ground in the nation for all time to come" and expressed scorn at the virility of bison in Yellowstone, which were "increasing so rapidly as to become an embarrassment." (He did express hope, however, that soon the bison would reach numbers adequate to ensure a supply of bulls for harvest by local hunters.)[167]

The year 1925 brought two important developments in the battles of Jackson's Hole. First, the Izaak Walton League had amassed enough capital to purchase 1,760 more acres of land toward the NER's expansion; the title transfer two years later enlarged the Refuge to 4,520 acres, and not a moment too soon.[168] The Jackson herd then numbered nearly 20 thousand elk and the valley feared for the survival of such a large population. The IWLA addition had been critical, but a "game problem of the first magnitude" called for still more provisions to prevent

[167] Hal. G. Evarts, "The Final Rally," *Outdoor America* 3 (Dec. 1924): 8-12.

[168] John Wilbrecht and Russell Robbins, "History of the National Elk Refuge," in *North American Elk: Ecology, Behavior, and Management*, Mark S. Boyce and Larry D. Hayden-Wing, eds., 248-54 (Laramie: University of Wyoming, 1979): 251.

the species' extermination with the next severe winter. E. A. Goldman of the Biological Survey stressed the necessity of more intensive game conservation in Jackson Hole in order to maintain a healthy surplus of elk for recreational shooting and for the attendant financial support from hunters that would enable the animal's continued management by Game and Fish. Goldman's bottom line—wise capitalization for the benefit of sportsmen and state "game funds"—generously supported the values of Wyoming.[169]

The second development in 1925, the emergence of a revised proposal for Yellowstone boundary changes, generally had the opposite effect in the State. This latest attempt to broaden the National Park inherited a seven-year history of resistance from the valley. The new plan, though, suggested additions and deletions along the north and east sides of the reserve as well as some different ideas about how to rectify problems at the south end of the Park. The tentative Wyoming adjustments, which included annexation of the Tetons as a geographically separate component of Yellowstone, once again roused the locals. And once again, foresters, livestock producers, and hunters and guides had a stake.

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[169] E. A. Goldman, "What to Do with the Yellowstone Elk?," *American Forests* 33 (May 1927): 279-82.

In reality, though, the Forest Service had little to invest. This time, cession of the National Forest areas in Wyoming (barring the Tetons and the Thorofare) would be reciprocated by an almost equal gain of forfeited Yellowstone territory; it was primarily the Park's absorption of federal lands in Montana to the north that would account for a net loss of only 78 square miles.[170] Further, sheep and cattle grazers had enjoyed almost no access to the Forest areas in question and therefore had no reasonable quarrel with these land exchanges. The third class of opposition, the hunters and dude ranchers, found their case buttressed in the State by "an inherent dislike of federal control and an inherent hatred of any interference with individual action," in this case, hunting elk.[171]

Struthers Burt, one of the only dude ranchers who supported Park extension, himself had battled previous Greater Yellowstone proposals for these very reasons. To him, Yellowstone's custodians routinely restricted personal liberties by being too strict and didactic in prescribing public uses of parklands; on this basis, he had firmly opposed Mondell's bills several years earlier.[172] An apparent reexamination of the conservation philosophies of Roosevelt and Gifford Pinchot prompted Burt's reversal. The salvation of elk and other natural resources

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[170] Haines, *The Yellowstone Story*, vol. 2, 325-31.

[171] Struthers Burt, "The Battle of Jackson's Hole," *Nation* 122:3165 (3 March 1926): 226.

[172] Righter, *Crucible for Conservation*, 30.

depended upon the conservation practices embraced by the Park Service, rather than those by the Forest Service.[173]

By the end of 1928, the earlier Greater Yellowstone plan had transformed in two crucial ways: rather than annexation of the Tetons, this range would comprise a wholly separate Park; and, the Thorofare region at the southeast corner that included the Yellowstone River's headwaters had to be relinquished under tremendous pressure from hunting guides. Finally, two distinct acts, passed a few days apart in late winter of 1929, created Grand Teton National Park and instituted Yellowstone's first boundary amendments.[174]

Compromise shaded both victories, though. First, regarding the Tetons, the new reserve "was a stingy, skimpy, niggardly little park of only about 150 square miles," the very nature of which precluded any human settlement or resource extraction.[175] The same "useless" quality had accompanied Yellowstone's creation fifty-seven years earlier. This conciliatory act was only the beginning of Teton's problems, however; another deeply troubling compromise would tarnish its expansion in 1950. Second, the adjustment of Yellowstone's boundaries secured more protected ungulate range and embraced the headwaters of several Park

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[173] Burt, "The Battle of Jackson's Hole," 226-27.

[174] Haines, *The Yellowstone Story*, vol. 2, 330-31; Righter, *Crucible for Conservation*, 40.

[175] John Ise, *Our National Park Policy: A Critical History* (Baltimore: Johns Hopkins Press, 1961): 329; Righter, ibid., 41-42.

streams to the north, and used natural topography to delineate a logical, more manageable border to the east. The Thorofare matter to the south, though, remained unresolved.

Unwilling to roll over on the important Thorofare issue, the Park Service pressed forward for one last grasp at Greater Yellowstone's objectives. Superintendent Albright guarded his optimism when he stressed that "The southeastern corner is not entirely lost," but this time the agency had a special committee in place to determine the necessity and social feasibility of a Thorofare expansion.[176]

The duties of the newly appointed Yellowstone National Park Boundary Commission involved inspection of the areas considered for adjustment and formal recommendations that would be reported to the president and ultimately Congress. The conservation-oriented panel of five included chairman E. E. Brownell and fellow members Arthur E. Morgan, T. Gilbert Pearson, Charles H. Ramsdell, and Arthur Ringland.[177] Three areas concerned the committee, two of them slated for removal: the Bechler Region in the southwest corner of the Park, which Idaho ranchers wished to remove from the reserve and put to use for irrigation; a 40-square-mile area between the south border and the Snake River for

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[176] As quoted in Haines, *The Yellowstone Story*, vol. 2, 333.

[177] U.S. Congress, House of Representatives, *Final Report of the Yellowstone National Park Boundary Commission on an Inspection of Areas Involved in the Proposed Adjustment of Southeast, South, and Southwest Boundaries of Yellowstone National Park, Made Pursuant to Public Resolution No. 94*, 70th Congress. 71st Cong, 3d sess., HD 710 (Washington DC: GPO, 1931): part I, v.

transferal to the Teton National Forest; and the long-coveted upper Yellowstone/Thorofare district, the pending 340-square-mile addition that was "so repugnant to the Cody hunting guides."[178]

A series of public meetings followed the Commission's tour of south Yellowstone and revealed the hostilities residing at the core of the new boundary conflict that preoccupied northwestern Wyoming. The original purpose of absorbing the Yellowstone's headwaters was to protect the watershed, but the matter evolved almost entirely as one of Wyoming's right to continue using the federal Teton Forest lands within its boundaries as an elk hunting range.

The hearing at Cody in July 1929 began with the impassioned testimony of Horace Albright, who extolled the proposed southeast addition. Since the new boundary line would follow the Continental Divide on the east, it must be "God Almighty's plan for the park."[179] Cody Mayor R. C. Trueblood remained unconvinced; his response to the superintendent encapsulated what became the principles raised throughout the meeting—elk hunting privileges and states' rights. The mayor argued on behalf of his state's superiority in caring for the elk

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[178] Ibid., part I, "Conclusions," 7-9; Haines, *The Yellowstone Story*, vol. 2, 331.

[179] *Final Report of the Yellowstone National Park Boundary Commission*, part III, appx. II, "Public Hearing at Cody, Wyo., July 15, 1929," 77. Anticipating this attempt to seize the Thorofare from Wyoming, Albright a few years earlier had tried to mollify the Game and Fish Commission by encouraging hunting in the vicinity and by offering to instruct Park naturalists to praise the sport in their public lectures. James A. Pritchard, *Preserving Yellowstone's Natural Conditions: Science and the Perception of Nature* (Lincoln: University of Nebraska Press, 1999): 70-71.

herds of Wyoming and responded angrily to this new plan to seize control of the upper Yellowstone.[180] Dude rancher J. W. Howell was of the same mind. As one accustomed to guiding seventy hunters per year who spent about one thousand dollars each in the communities they visited, Howell believed "that the State of Wyoming and the forest people have handled this successfully and see no reason for a change. The State has taken good care of the elk."[181] His protestations bore evidence of the continued contempt for federal interference that locals had voiced since the nineteenth century. By their reckonings, a boundary change would not only involve the loss of state domain, but also undermine both their method of elk management and an economically important Wyoming industry.

Another outfitter, Ned Frost, took this notion further and launched an attack on the Park Service, citing the administration's negligence that had precipitated the famed winterkill of 1919/20. If the Park wanted to claim supremacy in protection of the region's elk to justify their new land piracy plot, Frost had evidence to the contrary:

> When I attempted to go across from Mammoth to Tower Falls I had to hold my nostrils because of dead elk along that stretch—there must have been thousands of elk winterkilled there. Think of the suffering, the useless pollution of streams. There were no trout because of the rank water. . . . Don't think the Government or any

[180] *Final Report of the Yellowstone National Park Boundary Commission*, ibid., 77-78.
[181] Ibid., 79.

> other people have the right to protect wildlife by permitting them to get out of control.

Frost's remedy echoed Roosevelt's: they must continue hunting, the benefits of which would be stifled by the permanent loss of the upper Yellowstone to the strictly protective stewardship of the Park.[182] Naturally, the guide responded favorably to a suggestion that hunting be permitted in this new section of the Park, an idea endorsed by Game Commissioner A. J. Martin, who reasoned, "In order to supply the demand for recreation in hunting, we are going to have to open up some sanctuaries for hunting . . . ."[183] At present, though, this compromise failed to gain the currency that it would in the next few decades.

Exactly how much of this type of recreation the southeast region provided itself became an important point of dispute. If the area proved inconsequential to the State's hunting interests, then Wyoming would have no legitimate argument against the boundary expansion beyond the abstract "State's rights" banner. The Park's case would be buttressed further by evidence that this territory actually supported relatively few elk. Neither point seemed likely to supply a resolution. Martin claimed that hundreds of hunters frequented the Thorofare, although records revealed that from a harvest between two thousand and 2,500 in the Jackson region alone, only 2.5 percent came from the upper

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[182] Ibid., 80-82.
[183] Ibid., 83.

Yellowstone.[184] Elk biologist Olaus Murie, who had prepared a report on this area specifically for the Boundary Commission, asserted "that the Thorofare-Yellowstone region is not an outstanding elk country and that the elk occupying the territory are not numerous." He did note, however, that the local game warden had officially estimated the Thorofare herd to number four thousand, "much too high" by Murie's accounting. Nevertheless, those elk that had been using the area at the time of his survey were "bombarded out of there by hunters," indicating the veracity of the locals' claims that the Thorofare hosted much of this sport.[185]

Interestingly, the region's moose population nearly escaped mention during this forum. The Thorofare moose had suffered a decline in numbers possibly approaching ninety percent since 1905 as result of hunting pressure directed particularly at mature bulls for their trophy mounts.[186] Even Murie minimized the level of concern due this "absurdly tame" species unless the annual harvest were to begin matching the high number of permits issued by the game commission.[187] A "local" himself, however, Murie used caution in expressing bias in the findings of his research.

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[184] Ibid., 84; part I, "A Minority Report Relative to the Areas C and D on Plan Herewith and A Dissenting Opinion as to Area C Alone as on Plan Herewith," 14-15.

[185] Ibid., part II, exhib. II, Olaus Murie, "Game Conditions of the Upper Yellowstone-Thorofare Region," 62.

[186] Ibid., part I, "Minority Report and Dissenting Opinion," 14.

[187] Ibid., part II, exhib. II, "Game Conditions," 72.

Frederick Law Olmsted, Jr., the landscape architect who fourteen years earlier had drafted the National Park Service Organic Act, took a special interest in the role that properly drawn boundaries played in conserving Park values. He conveyed a more forthright position than did Murie, acknowledging the proposed border adjustment as "the most logical from [a] topographic and general administrative standpoint." Further,

> objections to that boundary are now raised almost wholly on [the] grounds of its allegedly serious interference with important hunting interests. Those objections have impressed me as partly misconceived or greatly exaggerated and as a whole unconvincing.[188]

It was this type of "outsider" reproach that particularly galled Wyoming residents. One witness who wanted Washington "to cede back all Government lands in the State" asked, "What would the people of Chicago or San Francisco think if we said, 'Double your parks; they aren't big enough for us to get into.'"[189] Although occasionally punctuated by similar expressions of sagebrush sentiment, the testimony at Cody consistently revealed that the primary concern of Wyoming residents and officials focused on the loss of elk hunting privileges and its implications, both recreational and economic.

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[188] Ibid., part I, "Copy of a Telegram from Frederick Law Olmsted," 16.
[189] Ibid., part III, appx. II, ""Public Hearing at Cody," 88.

Bighorn County State Representative N. E. Lovell expressed the general tone of the Cody hearing: "I have hunted this land a number of times. As I see it, [Yellowstone expansion] will vitally interfere with one of the industries of the state." He insisted, "If you deplete our elk herd, you deplete the dudes. In Yellowstone Park less than 2 per cent see the elk," whereas the animals served a vital economic function in the adjacent state. Seeing broader implications in this seemingly minor boundary adjustment, he stressed, "You kill our elk herds and the hunting that Wyoming is noted for will be ended. We have the greatest elk herds in the world. Hunters come from all outside countries. . . . [W]e are opposed to Park extension."[190] Throughout the meeting, such concerns about the loss of elk and of hunting opportunities produced impassioned protest. With a local herd of around 20 thousand animals, the opponents of Park expansion hardly faced a collapse in the hunting industry because of the possible loss of a small amount of marginal elk territory, but the potential loss of this territory carried with it the larger, volatile issue of federal encroachment. As a result, they insisted on superior claims to the Thorofare and rejected any land forfeiture from the region that might benefit Yellowstone visitors.

Another hearing on this matter occurred the following February in Washington DC. There were few surprises, given that Wyoming

[190] Ibid., 89.

spokespersons included Senators Kendrick and Sullivan, Representative Carter, and Governor Frank Emerson, all of whom testified on behalf of the state interests they represented. Congressman Carter bemoaned the threat of federal interference, Governor Emerson rejoiced in his state's superior hunting opportunities, and the two senators loyally conveyed the familiar position of their constituents. From all appearances, the Washington hearing was shaping up to be only a facsimile of the Cody meeting.

Tellingly, though, some dissenters expressed themselves with relative anonymity within the local community by sending letters to the Boundary Commission or state officials. But Wyoming guide Irving Larom, who wrote to Senator Kendrick in support of the boundary change, still found himself exposed. In the letter, he dismissed the misinformed and illogical position of his Cody adversaries as "tommyrot" and praised the added measure of protection that Park expansion would provide for the elk.[191] In Governor Emerson's zeal to retain an area that he considered to be "particularly made for hunting," the state official turned on Larom, one of his own constituents:

> Human beings seem to be heir to the failing of looking after and protecting their own interests, and it is rather evident that the

[191] Ibid., part IV, appx. IV, Letter from Irving H. Larom to Hon. John B. Kendrick, January 27, 1930, 166-67.

> effect of his extension of the park to within 14 miles of Mr. Larom's dude ranch would be of considerable advantage to him.[192]

Perhaps he believed that closure of this watershed to hunting might adversely affect Larom's competition while nurturing a healthy herd that would descend into the guide's easy range with a good snowfall. Whatever the logic behind his suspicions, the Governor stood prepared to dismiss deviants from the highly vocal core of his constituency as being dishonorably motivated. It is not surprising that those who did not embrace the general position of the local hunting interest sometimes opted out of public dissention among this group.

Frank Sparhawk, another pro-expansion dude rancher who took the Larom approach, informed Horace Albright in writing that Senator Kendrick and Game Commissioner Andy Martin deliberately had prevented his appearance at the Cody hearing because he rejected their stance on the Greater Yellowstone measure. Embittered, he charged that his fellow guides near the Park "exist there on the game and hunters and are very small taxpayers, and, undoubtedly, game poachers; and are only speaking for their own special existence and afraid they will lose some of their business," which owed solely to the very presence of the reserve.[193]

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[192] Ibid., part III, appx. III, "Public Hearing at Washington, D. C., February 3, 1930," 103-04.

[193] Ibid., part IV, appx. IV, Letter from Frank Sparhawk to Hon. H. M. Albright, July 27, 1929, 154-56.

Faced with nothing like Sparhawk's risk in vocal opposition, outside stakeholders generally shared his view. An agent of the American Nature Association argued at the hearing, "we do not think under the present circumstances the Wyoming Game Commission has proved itself as capable of handling the hunting situation as well as the National Park Service or the Forest Service." He charged, "there are no State rights involved except the right of hunting in that area" and requested that on behalf of the Association, the committee "find out definitely whether the game interests should overweigh the interests of the people."[194] As to the last point, the panel quite agreed:

> Why should the Nation favor, under present conditions, the minority hunters, who might be permitted to kill off most of the moose and a great many elk under State permit? This loss of game would be at the expense of the majority of visitors who have five or six months visiting period compared to about two months of hunting for the hunters?[195]

Of course, the Commission's charge was to make its decisions based on the greatest good for the greatest number, but such an idea necessarily precluded the area's special interest groups, particularly the minority Wyoming hunters who financially supported the Game and Fish department. This fact brought particular alarm to Commissioner Bruce Nowlin, who feared a complete loss of the Southern herd in the event that

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[194] Ibid., part III, appx. III, 118.
[195] Ibid., part I, "Minority Report and Dissenting Opinion," 14.

Yellowstone should assume ownership of the Thorofare.[196] This unit supported only a fraction of the Jackson herd, as indicated by Murie, and the elk still would need to migrate to lowlands beyond the Park, as they always had, but Nowlin's exaggerated concerns were familiar in the Greater Yellowstone, where elk stewardship routinely involved protectionism and intense concern.

In the end, the Boundary Commission favored southeast expansion. As for the proposed Bechler and Snake cessions, apparently nearly everyone involved took for granted that their inclusion in the plan had been ill-conceived and these eliminations were heavily opposed. Early in 1931, the five members advised against these two forfeitures, but recommended proceeding with the Thorofare addition on the basis of its relative insignificance as a hunting destination. Rather, the upper Yellowstone was a gem of nature that should be enjoyed by thousands of visitors each year, "without the hazard of the hunters' and poachers' guns."[197]

After years of inspection, contemplation, and debate, however, the process begun in 1929 came to nothing. The local hunting interest, backed by strong endorsement from Wyoming representatives, carried

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[196] Neal Blair, *The History of Wildlife Management in Wyoming* (Cheyenne: Wyoming Game & Fish Dept., 1987): 70.

[197] *Final Report of the Yellowstone National Park Boundary Commission*, part I, "Conclusions," 7-9; "Minority Report and Dissenting Opinion," 14-15, 11.

the day despite the Boundary Commission's formal recommendations.[198] In its final attempt, the Greater Yellowstone goal of absorbing the Thorofare again failed under intense pressure from elk hunters and their supporters, who had successfully stressed the animal's economic and cultural importance in defiance of incongruent Park priorities and the associated federal agenda.

Despite adjustments and additions at the east and north sides of Yellowstone, the Park Service's boundary problems in Jackson Hole remained. The upper Yellowstone now was lost, but the time had come to reexamine Grand Teton. The new Park consisted primarily of mountaintops—a striking scenic feature, but this narrow strip of high-elevation land hardly provided sanctuary for the majority of the region's wildlife.

Shortly after the Thorofare matter abated, Yosemite ranger naturalist George M. Wright embarked with two colleagues on a study of wildlife conditions in the National Parks. Their first report, familiarly known as "Fauna No. 1," emphasized the geographical shortcomings responsible for some of the problems facing resident wildlife.[199] Although their observations and recommendations applied to most any

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[198] Haines, *The Yellowstone Story*, vol. 2, 334.

[199] The authors specifically lamented the absence of the Thorofare from inclusion within Yellowstone's original boundaries. George M. Wright, Joseph S. Dixon, and Ben H. Thompson, *Fauna of the National Parks of the United States: A Preliminary Survey on Faunal Relations in National Parks* (Washington DC: Government Printing Office, 1933): 114.

western Park, Teton's creation four years earlier had provided for almost no other feature beyond the peaks themselves, which soon earned it the nickname "Park of the Matterhorns."[200] Wright explained the failing of such a limited reserve:

> All of the western parks are mountain areas. Some of them are a fringe around a mountain peak; some of them are a patch on one slope of a mountain extending to its crest; and some of them are but portions of a slope. All of them have arbitrary boundaries laid out to protect some scenic feature. But our national heritage is richer than just scenic features; the realization is coming that perhaps our greatest national heritage is nature itself, with all its complexity and its abundance of life, which, when combined with great scenic beauty as it is in the national parks, becomes of unlimited value. This is what we would attain in the national parks. In order to obtain it, their boundaries must be drafted to meet the needs of their wild life.[201]

Jackson Hole underwent seventeen more years of controversy before Teton finally secured its wildlife habitat.

At the height of the Greater Yellowstone commotion in the 1920s, philanthropist John D. Rockefeller, Jr. began to lay the groundwork for Jackson Hole's next conflict. He shared Wright's viewpoint that a National Park should enfold some degree of natural diversity and offered his vast financial resources to this end. Behind the façade of his newly incorporated Snake River Land Company, Rockefeller began purchasing private properties in the valley for eventual inclusion in Teton.[202] The

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[200] Alfred Runte, *National Parks: The American Experience*, 3rd ed. (Lincoln: University of Nebraska Press, 1997): 125-26.

[201] Wright, Dixon, and Thompson, *Fauna of the National Parks*, 37-38.

[202] Righter, *Crucible for Conservation*, 46-49.

philanthropist enjoyed enthusiastic support from Horace Albright, who provided local guidance to Rockefeller's agents with the promise of National Park expansion in an area that he long had prized. To aid this endeavor, in 1929 President Coolidge withdrew from further entry those public lands adjoining the new Rockefeller tracts, which in time grew to nearly 35,000 acres.[203]

Naturally, when Rockefeller's plans for these extensive land acquisitions became known, some valley residents and state officials again grew defensive and alarmed at yet another conspiracy involving the federal government that threatened the loss of multiple-use domain in Wyoming. For the state game agency, the appropriation of traditional elk hunting grounds for use in a wildlife preserve might prove disastrous to their feeding operations at the National Elk Refuge. Wyoming, after all, shared in the management expenses, and increased protection of the elk could lead to a serious overpopulation in the valley, which would both drive up the state's costs and endanger the herds.[204]

Amidst ongoing protests to the Rockefeller plan, for nearly two decades Congress delayed in making a commitment to accept the new lands into the National Park system. By 1943, President Roosevelt would wait no longer: on March 15th, he signed Executive Order 2578, granting

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[203] Runte, *National Parks: The American Experience*, 125-26.

[204] Mark S. Boyce, *The Jackson Elk Herd: Intensive Wildlife Management in North America* (Cambridge: Cambridge University Press, 1989): 5.

the National Park Service control over the new 221,610-acre Jackson Hole National Monument.[205] The valley responded predictably to this de facto Teton extension; local businesses soon posted signs in their windows stating, "We are opposed to the Jackson Hole National Monument," while Wyoming Senator Edward Robertson likened the surprise presidential order to Japan's sneak attack on Pearl Harbor.[206] Almost immediately, Representative Frank Barrett launched a campaign to dissolve the reserve and introduced a bill "To Abolish the Jackson Hole National Monument" in reply to Roosevelt's audacity. Barrett believed it "unthinkable that this hunters' paradise should be molested in any way" and continued a charge against the Monument that lasted until 1948.[207]

By the end of the decade, others had begun to make progress in the effort to absorb the reserve into Grand Teton. Three obstacles, though, prevented its easy accomplishment. The first two concerned the loss of land taxes and grazing privileges and found quick resolution in a compromise that provided for tax reimbursement to Teton County and granted stock grazing rights within the National Park. The third issue was far more problematic. By no means was Jackson Hole prepared to

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[205] Righter, *Crucible for Conservation*, 109-10.
[206] Murie and Murie, "Valley in Discord," 179; Righter, ibid., 110.
[207] Righter, ibid., 117, 125; Runte, *National Parks: The American Experience*, 142-43.

cede any further measure of control of the elk herd that it had nurtured for half a century.[208]

The only solution appeared to be that once established, the enlarged Park would permit sport hunting. This compromise would constitute a colossal breach of established Service policy and "would be the first step toward the destruction of our national parks."[209] An internal memo that Acting Director Hillory Tolson circulated in 1944 anticipated the rise of a lobby for hunting in Teton. He firmly opposed this concession:

> Sportsmen vary widely in skill. Without disparaging the ability and ethics of the better class, it is obvious that great damage to the game species, non-game species, and habitat would result from admitting the less skillful and game-hog types to the parks. Such hunters, released among animals that have been accustomed to regard man as harmless, would kill and destroy wastefully. Many animals would be wounded and escape only to endure untold suffering, permanent crippling, or long-drawn-out death.

Tolson's objections echoed the argument presented by the Yellowstone Boundary Commission thirteen years earlier, arguing that it was unfair and illogical to appease the minority hunting interest at the expense of the vast majority, who were "either apathetic, or even hostile, toward sport. The non-hunting public approves of parks as wildlife sanctuaries."[210] But six years later, the administration saw no other

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[208] Righter, ibid., 138.

[209] Hillory A. Tolson, Acting Director, "Memorandum for the Regional Directors," April 3, 1944, with attachment titled "Is Hunting the Remedy?," YPL Files.

[210] Ibid.

choice but to acquiesce to local demands or lose the battle for Teton's expansion. The neighboring National Elk Refuge already had succumbed to an overpopulation crisis the year of the Jackson Hole Monument's creation and now allowed hunters to reduce the herds on its grounds.[211] In reality, the very feeding operations at the Refuge that maintained unnaturally large herds now prompted for the "need" of a Teton elk hunt.[212]

The bill to re-designate the Jackson Hole National Monument lands as an enlargement of Grand Teton passed in 1950 with a provision for joint elk management between the federal government and the State of Wyoming, a caveat that Park Service Director Newton Drury was loath to accept.[213] According to the enabling legislation, representatives from the cooperating agencies would meet each year to determine the appropriate measures needed "to insure the permanent conservation of the elk within the Grand Teton National Park . . . ."[214]

There remained, though, the legitimacy of public hunting in the Park. Eight years earlier, the United States had been among eighteen countries that signed the International Treaty for Nature Protection and Wildlife Preservation in the Western Hemisphere, which forbade sport

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[211] Wilbrecht and Robbins, "History of the National Elk Refuge," 253.
[212] Boyce, *The Jackson Hole Elk Herd*, 10.
[213] Righter, *Crucible for Conservation*, 139-40; Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997): 196.
[214] Public Law 81-787, 64 Stat. 849, § 6 (a) and (b).

hunting in any National Park.[215] To circumvent the mandate of this Treaty, the drafters of Public Law 787 devised a stipulation whereby licensed hunters would be deputized as Park rangers, rendering them legal caretakers of the elk and therefore permitted to dispatch surplus members of the herd.[216] That these temporary deputies would responsibly effect the necessary population reductions was doubtful. In historian Alfred Runte's judgment, they "were simply hunters under a less offensive title. Even to claim they would fill the void left by the extinction of natural predators, and cull only the weaker and diseased elk from the herd, was naïve at best."[217] On the contrary, the Teton hunt soon degenerated into a replica of the Gardiner firing line, as Tolson had predicted, this time along the edge of Antelope Flats.[218]

Even the government agencies charged with the herd's administration instantly found themselves at odds. When federal wildlife managers refused to comply with the demands of Game and Fish for additional hunting territory inside Teton's boundaries in 1953, Governor Rogers issued a press release accusing the Park Service of being "belligerent" and uncooperative. Biologist Olaus Murie delivered an annoyed response citing the "deterioration of sportsmanship in recent

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[215] Boyce, *The Jackson Hole Elk Herd*, 5-6.
[216] Public Law 81-787, 64 Stat. 849, § 6 (a).
[217] Runte, *National Parks: The American Experience*, 144.
[218] See "Embarrassing Inconsistency in Philosophy," *Jackson Hole News*, 11 Dec. 1975; Tolson, "Memorandum for the Regional Directors," April 3, 1944.

years" as ample reason to take caution in planning the Teton hunts; he also advised the governor of the impropriety of his public charges.[219] Enough contention arose when conflicting management principles met along the artificial borders that separated them; but when agencies embracing sharply opposed conservation philosophies and resource values shared simultaneous stewardship over a segment of the biotic community, they lacked the benefit of a boundary line to determine which could claim superior jurisdiction.

From the beginnings of settlement in this vast basin south of Yellowstone, fragmentation of the landscape complicated custodial jurisdiction. Due to the elk's ability to pass from one sphere of authority to the next and its unparalleled value as a wildlife resource, this animal emerged early as both an icon and a pawn in the battles over land use in the region. The greatest challenge to applying a remedy to Greater Yellowstone's boundary problems stemmed from local hostility toward any realignment in jurisdiction over, and therefore use of, elk and other natural resources.

Aptly described as "a most unfortunate concession to the selfish demands of Wyoming sportsmen" the Teton elk hunt that was plagued

[219] Olaus Murie, "Teton's Elk Problem Continues," *National Parks Magazine* (Apr./June 1953): 56-57.

from the onset caused enormous difficulties in the coming years.[220] In the final analysis, though, Jackson Hole came out far ahead: Wyoming retained the Thorofare, acquired a massive Elk Refuge largely funded by the federal government and private contributions, and secured the unique privilege to hunt elk in Grand Teton. Thus empowered, the residents of Wyoming identified new ways to spar with the National Park Service over the administration of the Yellowstone Elk.

[220] John Ise, *Our National Park Policy: A Critical History*, 507.

CHAPTER 6

ABUNDANCE

The 1930s brought a marked shift in wildlife management. By this time, Yellowstone bison had rebounded to the point of creating a nuisance, wolves no longer preyed on the region's valuable ungulates, and both the Park and hunters beyond the boundaries enjoyed strong, abundant elk herds. But in this decade, an old problem gained intensified scrutiny. The failing health of the northern range, which administrators had noted as a point of concern as early as 1911, emerged as the greatest threat now facing the Park's elk herds. Earlier in the century, when wildlife custodians had assumed the role of game producers rather than only protectors, their highly proactive management ultimately led to what now was deemed an overpopulation of elk. The result was a badly overgrazed northern range.

At the same time, "game management" strongly asserted itself as a discrete, scientific discipline. The flurry of research and publications given to the sphere of wildlife stewardship during this era promoted ecological analysis and long-term planning, albeit still in the agricultural tradition, rather than species-specific management based on the apparent needs of the occasion. Most prominently, Aldo Leopold in 1933 published his comprehensive *Game Management*, in which he directly

conveyed an emphasis on environmental regulation with a firm reliance on agricultural principles:

Game management is the art of making land produce sustained annual crops of wild game for recreational use. . . . Like the other agricultural arts, game management produces a crop by controlling the environmental factors which hold down the natural increase, or productivity, of the seed stock.[221] Leopold defended the high degree of manipulation that he and his colleagues deemed essential to effective, modern wildlife governance:

> There are still those who shy at this prospect of a man-made game crop as at something artificial and therefore repugnant. This attitude shows good taste but poor insight. Every head of wildlife still alive in this country is already artificialized, in that its existence is conditioned by economic forces. Game management merely proposes that their impact shall not remain wholly fortuitous.[222]

This "impact" is exactly what now concerned the custodians of Yellowstone's northern range. Without some measure of control, they believed, the land soon would fall to irreparable damage and once again wreak havoc on the elk herds it sustained.[223] Like other wildlife administrators at the time, they long had used an agrarian model, and through the eyes of a domestic stock producer, the northern range would

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[221] Aldo Leopold, *Game Management* (New York: C. Scribner's Sons, 1933): 3.
[222] Ibid., 21.
[223] Don Despain, Douglas Houston, Mary Meagher, and Paul Schullery, *Wildlife in Transition: Man and Nature on Yellowstone's Northern Range* (Boulder: Roberts Rinehart, Inc., 1986): 82-85.

appear utterly depleted. Livestock ranchers relied on rotation and limited herd sizes to maintain productive pastures, but the elk's custodians, by all appearances, had been extremely negligent in this regard. In agreement with Leopold, the Park believed that the "principles of stock management . . . should be followed in the management of the elk" and began a vigorous search for a solution to the pressing problem of the northern range.[224]

In 1928, Horace Albright commissioned Forest Service research biologist William Rush to complete a study of Yellowstone's Northern herd. The resulting "Rush Report" represented a thorough analysis of these elk and identified the serious condition of their winter range as a grave problem in urgent need of remedy. By Rush's estimation, the northern range had deteriorated at least fifty percent since 1914—the Park needed to reconsider its current elk management policy. He provided a solution:

> To fully protect the Park area from erosion and permanent damage to the plant life about the only recourse the Park Service has . . . is to maintain a comparatively small herd and handle it much the same as the buffalo herd is being handled at present.

The bison, of course, underwent systematic slaughter within the Park to avoid the type of overpopulation now facing the elk. Like most other scientists at the time, Rush expressed no concern for the range for its

[224] William B. Greeley, "Report on the Yellowstone Elk, 1932" (N.p.: Committee on Conservation of Forests and Wild Life of the Camp Fire Club of America, 1932).

own sake; the value of this habitat rested solely in its continued ability to support other life forms. He held that "its highest use" lay "in producing game animals" and feared that a decreased ability to perform this basic function would result in a biotic collapse on the northern range.[225]

During the same period, a young ranger naturalist at Yosemite, George Wright, had been conducting his own self-funded investigations of the National Parks' wildlife conditions.[226] His first study, "Fauna No. I," differed from Rush's in spirit and imagination. Fauna No. 1 conveyed an extremely thoughtful approach to the biotic disarray resulting from years of often-haphazard administration and lack of foresight in wildlife stewardship. The report suggested sensitive, long-term management plans—albeit ones that still borrowed occasionally from agricultural principles.

Remarkably, Wright stressed the ecological value of predators and provided one of the earliest formal acknowledgments that the extreme control measures of the past bore significant responsibility for the current overabundance of ungulates in several Parks. He insightfully explained the merits of reintroducing lost species: Restoration of an animal which has been exterminated is desirable not only because it will bring back that species itself, but because it will fill once more the niche

[225] W M. Rush, *Northern Yellowstone Elk Study* (Helena: Montana Fish & Game Commission, 1932): 5, 126, 82-83.

[226] Richard West Sellars, *Preserving Nature in the National Parks* (New Haven: Yale University Press, 1997): 86-87.

that was deserted, and so help to restore the life of the park to its primitive dynamic balance.[227]

Wolf restoration, even if somewhat agreeable to the National Park Service, was out of the question at this time, and federal and state agencies beyond Yellowstone's boundaries continued to destroy predators forcefully. In the absence of this natural population check, Wright's suggested elk policy agreed with Rush's:

> That the numbers of native ungulates occupying a deteriorated range shall not be permitted to exceed its reduced carrying capacity and, preferably, shall be kept below the carrying capacity at every step until the range can be brought back to original productiveness.[228]

Although Wright recognized the fallacy of earlier assumptions about predator-prey relationships, he drew the same conclusions about range conditions as did his colleagues and promoted an aggressive remedy that Yellowstone managers were quick to embrace.

In September 1934, a meeting of the Emergency Conservation Commission brought together members from the Park Service, the Forest Service, and Montana Fish and Game, each of whom had an interest in the Northern herd. The committee members agreed to a reduction of 3,000

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[227] George M. Wright, Joseph S. Dixon, and Ben H. Thompson, *Fauna of the National Parks of the United States: A Preliminary Survey of Faunal Relations in National Parks* (Washington DC: GPO, 1933): 35, 23.

[228] Ibid., 148. The National Park Service adopted verbatim nearly all of the recommendations in *Fauna No. 1*—including this one—as official wildlife policy. See National Park Service, *Wildlife Conditions in National Parks, 1941* (Washington DC: NPS, 1943): 58.

elk per year, which for the first time would involve direct shooting by rangers inside Yellowstone to supplement hunter harvest near Gardiner.[229] Two months later, Director Albright reaffirmed his revised predator policy of 1931 by issuing an order prohibiting any further removal from the National Parks.[230] Considering the history of the northern herd, it is no wonder that Yellowstone's custodians chose a radical approach. They had found previous winterkills revolting and predicted that continued range deterioration would result in mass starvation among the elk. However unpalatable their proposed methods, they wielded the ability to prevent such a disaster.

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The most obvious question posed by this relatively sudden failure of the northern range demanded explanation as to why this ancestral elk habitat would collapse only now, after supporting this and other species for thousands of years. Contemporaries provided several answers. First, the region's residents always had recognized the effect of their encroachment on wildlife habitat. In Jackson Hole, settlement had caused mass displacement of the elk herds that historically had migrated

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[229] A. L. Olson, "The 'Firing Line' in the Management of the Northern Elk Herd," *University of Idaho Bulletin* 33:22 (Dec. 1938): 38; R. Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana: University of Illinois Press, 1992): 75.

[230] Victor Cahalane, "Evolution of Predator Control Policy in the National Parks," *Journal of Wildlife Management* 3:3 (July 1939): 236; Aubrey L. Haines, *The Yellowstone Story: A History of Our First National Park*, rev. ed., vol. 2 (Niwot: University Press of Colorado, 1996): 313.

through the valley, bringing catastrophic repercussions that required intensive, long-term "fixes." Wildlife managers such as Service biologist Victor Cahalane believed that the same "push" must have occurred from Paradise Valley north of the Park.

> The valley of the Yellowstone was once a major migration route and a winter feeding area for the northern elk herd. The tide of civilization flowed up the valley to the park boundary, continually forcing the elk higher on the mountainsides and seriously disrupting their migrations.[231]

If this basin separating Gardiner and Livingston traditionally had provided either winter or year-round habitat for the Yellowstone elk, then their use of the northern range would have been minimal prior to human occupation and the subsequent thrust of the herds onto new, protected pastures in the Park.[232]

Related to this problem, familiarly, was the Park's boundary placement that failed to include sufficient ungulate wintering grounds. That they had any such habitat at all was incidental: "Perhaps because the park fathers were anxious to amply buffer the Mammoth Hot Springs, the Yellowstone Canyon, and other features, the northern boundary by chance included about 85,000 acres of the vast elk winter range."[233]

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[231] Victor H. Cahalane, "Elk Management and Herd Regulation—Yellowstone National Park," in *Transactions of the Eighth North American Wildlife Conference*, 95-101 (Washington DC: American Wildlife Institute, 1943): 95.

[232] See also Paul Schullery, *Searching for Yellowstone: Ecology and Wonder in the Last Wilderness* (Boston: Houghton Mifflin, 1997): 150-51.

[233] Cahalane, "Elk Management and Herd Regulation," 95. Later sources estimate the Northern range to cover around 120,000 acres, although severe winters reduce the

Cahalane and others concluded that since this area within the Park only recently had been overburdened with far greater herds than it had supported prior to valley settlement and Yellowstone's establishment, the current condition of the range must have represented a highly unnatural state.

In recent years, research on the historic distribution of elk has indicated that large herds did, in fact, occupy the northern range and that the level of the elk's former reliance on lands in Paradise Valley had been greatly overestimated by Park scientists in the 1930s.[234] Further, these men neglected to consider the drought at the time as a possible factor in the poor appearance of the grasses, forbs, and browse species (willows and aspen) on the range. Though disregarded at the time, the assessment of one assistant park naturalist who questioned the general consensus of his peers finally found credence only several decades later:

The climatic conditions vary greatly from year to year and with these varying conditions not only the amount of forage produced but the total acreage of range utilized varied greatly. Indeed, climate seems to be a much more important factor in the fortunes of the range than the numbers of elk, except that numbers of elk is a controllable factor and

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usable area to under 90,000 acres. National Park Service, "Long-Range Wildlife and Habitat Management Plan for Yellowstone National Park," October 1964, YPLF.

[234] Douglas B. Houston, *The Northern Yellowstone Elk: Ecology and Management* (New York: Macmillan, 1982): 11.

the climate is not.[235] With no firm evidence against the overpopulation theory, Yellowstone's managers had only their observations of a disastrously depleted range to guide their decisions.

Additionally associated with the current range problem was the familiar Gardiner firing line. Hunting in some years reduced the herds by several thousand, but biologists believed that shooting wandering elk in Montana ultimately had the effect of concentrating too many animals on the northern range. Cahalane speculated

> that those elk with a strong migratory urge have been killed outside the park, while the present day survivors are the descendants of animals that have always made a precarious living by remaining at the highest elevations. Can it be possible that the migratory urge is being bred out of this herd?[236]

It was not simply hunting that troubled Cahalane, but the nature of the firing line that, by forming a wall that blocked movement out of the Park, essentially forced the animals back to the higher elevations despite thick snow cover and lack of forage. Once trapped inside by the line of hunters, the once-migratory elk herds overbrowsed what scant resources

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[235] W. B. McDougall, "Random Remarks on the Yellowstone Winter Range Survey," unpubl. report, 1943, as quoted in Despain, Houston, Meagher, and Schullery, *Wildlife in Transition*, 83-84; see also National Park Service, "Management of Northern Yellowstone Wildlife and Range," 10 Nov. 1962, YPLF.

[236] Victor H. Cahalane, "Wildlife Surpluses in the National Parks," in *Transactions of the Sixth North American Wildlife Conference*, 355-61 (Washington DC: Wildlife Management Institute, 1941): 358.

remained. He considered it "almost miraculous that this range still retains capacity to feed as many animals as it does."[237]

In his *Northern Yellowstone Elk Study*, William Rush called for extensive regulatory revision by Montana Fish and Game specifically to alleviate grazing pressure on the range:

> With [a limited license system] in practice here congregation of dozens and hundreds of hunters on the Park line would be eliminated and the fall migration would not be halted on the Park line with the resultant damage to the Park range. Enough elk to more fully utilize the outside range would pass out, the hunting would be in the rear of migration instead of in front and pot shooting would be eliminated to a large degree.[238]

Identifying the firing line as a prime culprit in the current crisis must have been easy for Yellowstone staff, who always had loathed the hunt on principle; nothing had changed since the famous slaughter of October 1919. Rush echoed Horace Albright's earlier scorn for this mode of recreation, wherein "the resulting scramble of the 'hunters' (?) after the killed and wounded animals has resembled more the expurgated accounts read of African savage ways than that of regulated hunting in North America."[239]

The hunt continued despite complaints from Yellowstone, although a few times the Fish and Game department cooperated with the Park in attempting to make the hunt less dangerous and more sporting. For a

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[237] Ibid., 357.
[238] Rush, *Northern Yellowstone Elk Study*, 80-81.
[239] Ibid., 84-86.

short while, officials actually trapped elk within the reserve and transported them to a corral in the Gallatin National Forest, where they remained until the Jardine mine whistle signaled the start of legal shooting hours. Upon their release, the elk bolted from a line of state license-holders, who chased them down en masse using horses and jeeps, hunting in a manner far removed from the gentleman ethics that early sport conservationists espoused.[240]

In 1934, ongoing public criticism over the Gardiner slaughter prompted Montana actually to move the hunting line farther north.[241] This type of idea appealed to Olaus Murie, who believed that a buffer zone stretching northward would cause the elk to migrate farther beyond the Park and disperse more widely through an extended winter range.[242] Liberalized hunting regulations that season offset any added safety to the elk, though: compared to a hunter kill of 136 elk the previous winter, in

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[240] Tom Lemke, "A Montana Tradition," *Montana Outdoors* 26 (Mar./Apr. 1995): 5-6.

[241] Olson, "The 'Firing Line' in the Management of the Northern Elk Herd," 40.

[242] Olaus J. Murie, *The Elk of North America* (Washington DC: Wildlife Management Institute, 1951): 319. Murie earlier dismissed the notion of migratory paralysis in his report to the Yellowstone Boundary Commission: "In the face of a great array of guns, cars and general bombardment, when the times comes the elk will leave the park and work northward to their winter range. Other examples can be given, showing the stubborn and often stupid determination of these animals." U.S. Congress, House of Representatives, *Final Report of the Yellowstone National Park Boundary Commission on an Inspection of Areas Involved in the Proposed Adjustment of Southeast, South, and Southwest Boundaries of Yellowstone National Park, Made Pursuant to Public Resolution No. 94*, 70th Congress. 71st Cong, 3d sess., HD 710 (Washington DC: GPO, 1931): part II, exhib. II, Olaus Murie, "Game Conditions of the Upper Yellowstone-Thorofare Region," 71.

1935 the harvest totaled 2,598 animals.[243] The firing line adjustment lasted only until 1937, when pressure from hunters and local businesses after a disappointing total take of a scant 257 elk compelled Fish and Game to reinstate the original position of the hunting boundary. The next winter, hunters killed 3,587 elk by the second week of January.[244] As Victor Cahalane observed, "Formerly, nature put a premium on the most strongly migratory elk. Now the instinct was a lure to almost certain death."[245] Sympathetic Montana biologist and game warden Joe Gaab "watched as the elk lost their migratory behavior, never moving far from the national park boundary because of constant hunting." He stated regretfully, "We needed to let the lead elk through and keep the memory bank alive, but people didn't want to hear that."[246] Although this perceived reengineering of elk instincts and behavior (noted earlier by frustrated hunters near Gardiner) was unintentional, it posed another threat to the natural integrity of Yellowstone fauna that biologists sought to preserve.

With this problem in mind, Murie noted a twofold benefit of direct reduction: culling the herd inside the Park not only would reduce numbers, but also would ensure the removal of less migratory individuals

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[243] Sellars, *Preserving Nature in the National Parks*, 115; Houston, *The Northern Yellowstone Elk*, 16.

[244] Olson, "The 'Firing Line' in the Management of the Northern Elk Herd," 40-41; Houston, ibid.

[245] Cahalane, "Elk Management and Herd Regulation—Yellowstone National Park," 95.

[246] Lemke, "A Montana Tradition," 5.

rather than *only* the migratory animals, as always had occurred in the Gardiner hunt.[247] Yellowstone staff long had protested this practice, yet they actually depended upon hunting in Montana to check elk populations, particularly after the disappearance of wolves. No one in the Park wanted to shoot the surplus elk, but absent significant hunter harvest, rangers now would assume responsibility for the reductions necessary to achieve the new management goals set in 1934.

The last major factor held accountable for the decline of the northern range was the Park's long history of wolf control. In the 1930s and 1940s, Yellowstone biologists came to understand that at the root of their current predicament was a dearth of natural predation. Cahalane directly acknowledged that years of wolf removal "had a detrimental effect on maintenance of a healthy park fauna and biotic balance. A result of the widespread destruction of predators has been an abnormal increase of grazing mammals within the park and accelerated range destruction."[248]

The growing concern for ecological "balance" revealed in Cahalane's assessment informed both biologists' empirical perceptions of the northern range and their understanding of its condition. In assuming that the range had only one natural state that could sustain no more than

[247] Murie, *The Elk of North America*, 324.
[248] Cahalane, "Wildlife Surpluses in the National Parks," 358.

a fixed number of grazing ungulates, they overlooked what Murie described as the "ebb and flow of animal life, together with similar changes in the plant world, all correlated with environmental influences and an intricate variety of changing relationships."[249] But they did comprehend the valuable role of the lost association between the wolf and its prey. Although famous wolf advocate Aldo Leopold remained ambiguous about their removal during the 1930's,[250] Cahalane quickly joined George Wright among "a maturing community of ecological searchers and conservationists [who] came to realize that predator control was problematic at best, and a danger to the parks at worst."[251]

At this time, though, no wolves had inhabited Yellowstone since rangers killed the last ones in 1926; the Park's only options were to increase human predation on the oversized elk herds or to reintroduce this canid, as Wright had advocated in 1933. Cahalane recognized the impossibility of reestablishing the highly mobile wolf in a reserve surrounded by ranches and general "public prejudice," but resentfully noted that the "unwritten prohibition against the more potent carnivores is especially deplorable. These are the predators which might assist in

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[249] Murie, *The Elk of North America*, 281.

[250] Prior to his epiphany famously described in the essay "Thinking Like a Mountain," Leopold recognized the potential benefits of wolf predation within the biological community, but still largely condoned their removal to appease certain interest groups. See Leopold, *Game Management*, 230-52.

[251] Paul Schullery and Lee H. Whittlesey, "Greater Yellowstone Carnivores: A History of Changing Attitudes," in *Carnivores in Ecosystems*, Tim W. Clark et al., eds., 11-49 (New Haven: Yale University Press, 1999): 28.

stabilizing the numbers of elk" and other game species.[252] The biologist dismissed the "absurd" claims of wolf depredation from livestock growers outside the Park in a manner unlike his predecessors, who had sympathized with such charges to the ultimate extermination of the species and detriment to the northern range.[253]

Ironically, the Park's legal basis for wolf removal, which personnel had carried out primarily on behalf of the elk population, now supported the elk's slaughter in Yellowstone. Under Cahalane's definition of surplus as the excessive number of animals of any given species whose effect on food or other factors of the environment would cause such destruction as to endanger the continued existence of itself, its food, or other interdependent species of animals or plants, rangers unquestionably could summon the Organic Act's provision "for the destruction of such animals . . . as may be detrimental to the use of" the Park as sufficient authority to dispatch surplus elk.[254] The Service's new policy, adapted directly from Wright's Fauna No. I, stated,

The number of native ungulates occupying a deteriorated range shall not be permitted to exceed its reduced carrying capacity and, preferably shall be kept below the carrying capacity at every step until the

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[252] Victor H. Cahalane, "A Program for Restoring Extirpated Animals in the National Park System," *Journal of Mammalogy* 32:2 (May 1951): 208.

[253] Victor H. Cahalane, "The Evolution of Predator Control Policy in the National Parks," *Journal of Wildlife Management* 3:3 (July 1939): 236-37.

[254] Cahalane, "Wildlife Surpluses in the National Parks," 356; 16 U.S.C. §3.

range can be brought back to original productiveness.[255] Mindful of their practical value, administrators determined that those elk slaughtered in the Park under the "direct reduction" policy would be butchered and sent to local Indian agencies.[256]

Because of their own investment in the Northern herd, most conservation and sports clubs initially approved of Yellowstone's new plan. After several disappointing hunting seasons over an eight-year period and a perceived improvement in the range, however, public support for direct reduction began to flag. Unsuccessful hunters accused the Park of over-reporting elk numbers and needlessly removing them from a range that was not damaged at all.[257] To make matters worse, heavy rains and "California" winters had thwarted rangers' attempts to cull the Northern herd even as it continued to increase. In response, the Service enlisted the help of Montana's Game Commission, which promised to extend the 1942/43 hunting season until an adequate removal had occurred. When the season finally closed on January 14th, a record 6,539 elk had been harvested, a number unheard of since the old

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[255] National Park Service, *Wildlife Conditions in National Parks, 1941*, 58.

[256] R. Gerald Wright, *Wildlife Research and Management in the National Parks*, 75.

[257] James B. Trefethen, *Crusade for Wildlife: Highlights in Conservation Progress* (Harrisburg: The Stackpole Co. and New York: Boone and Crockett Club, 1961): 233, 236; Cahalane, "Elk Management and Herd Regulation—Yellowstone National Park," 97; Olson, "The 'Firing Line' in the Management of the Northern Elk Herd," 40-41.

poaching days.[258] In addition, rangers shot nearly seven hundred elk in the Park and winterkill claimed another 872, decreasing the population in a single season by more than eight thousand animals.[259]

The 1943 herd cropping took place at a time when the country was deeply entrenched in World War II and even the wildlife constituted an important wartime resource. So essential was its maintenance that the War Department barred Montana Wildlife Restoration Division chief Bob Cooney from enlisting. He recalled, "I was told the restoration program was of national importance. . . . Wildlife was considered a national asset. If there was an invasion on either coast that would have forced an inland retreat, the thought was that there would at least be a supply of meat."[260] Seemingly in opposition to all efforts beyond the Park to maintain abundant wildlife populations, Yellowstone carried on with its reduction program.

Their persistence raised the ire of the public, who complained that wildlife managers should "expend their talents on winning the war—not

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[258] Victor H. Cahalane, "A Conservation Spiral," *Audubon* 45:1 (Jan./Feb. 1943): 18; Trefethen, ibid., 236; Cahalane, ibid., 97-98.

[259] The average hunter harvest between 1935 and 1942 was 1,768 elk per year. "Record of Elk Reductions, Northern Yellowstone Elk Herd, Yellowstone National Park," 1967 (?), YPLF. Jackson Hole lost a significant portion of its herd that season as well. Despite 2,653 tons of hay provided on the NER, 1,057 elk perished on the Refuge by early April. Chester C. Anderson, *The Elk of Jackson Hole: A Review of Jackson Hole Elk Studies* (Cheyenne: Wyoming Game and Fish Commission, 1958): 164 (Table 5).

[260] As quoted in Dave Books, "The War Years," *Montana Outdoors* (Nov./Dec. 2000): 16.

on destruction of the country's game resources."[261] Typically, butchered elk went to Indian agencies or to Montana Fish and Game, which distributed the meat primarily to state residents.[262] In the early 1940s, though, the War Relocation Authority proposed that the slaughtered elk be used to sustain interned Japanese Americans, a move that would both "release equivalent amounts of beef for our own soldiers and civilians [and] save taxpayers' money."

The public responded with outrage. The insult was too much for those who already scorned direct reduction as a violation of the Park's integrity, but even the program's advocates inundated President Roosevelt, Park Service staff, and members of Congress with letters of complaint. A local rod and gun club wrote, "The club opposes killing Yellowstone elk to feed slant-eyed Japs!"; other protesters insisted that internees be limited to a diet of rice. Not surprisingly, the War Relocation Authority quickly reconsidered.[263] Apparently, no one objected to Indians' use of the meat, but with the memory of Pearl Harbor fresh in the American mind, the proposal to nourish the "enemy" by killing the nation's treasured elk bordered on treason. This outburst marked only the beginning of what eventually became an enormously controversial management policy in Yellowstone.

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[261] Cahalane, "A Conservation Spiral," 14.
[262] Cahalane, "Elk Management and Herd Regulation—Yellowstone National Park," 99.
[263] Cahalane, "A Conservation Spiral," 14-15.

Yellowstone administrators and biologists faced growing criticism of the elk management program during the postwar years, when public use became paramount. Culling herds by direct reduction, however necessary to conserve the impoverished northern range, struck the American community as a wasteful endeavor on two levels: every elk killed by a ranger was one fewer that a Park visitor could photograph and enjoy, and it was one fewer that a hunter could put to its highest use as a game animal. Because of the elk's tremendous value as a cultural and recreational resource, biologists found themselves defending the preeminence of science in wildlife management amidst increasingly resentful local opposition.

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Another substantial elk removal coincided with the launching of "Mission 66" in 1956. That winter, a ranger take of 2,635—by far the largest to date—supplemented a hunter harvest of 3,900 to effect a total removal of 6,535 animals from the Northern herd. A month later, the National Park Service inaugurated Mission 66, a "use" enhancement program that sponsored development of Park facilities—generally at the expense of science programs—under the directorship of Conrad Wirth,

who thereafter would be a thorn in the side of scientific management advocates in Yellowstone.[264]

The new visitor-biased Park administration brought about the unfortunate resignation of Chief Biologist Victor Cahalane in 1955, as "Wirth appeared to care neither about wildlife issues nor about what the biologists were doing, and to believe that scientists were using money that could better be spent drawing park plans." The director confessed in a letter to Horace Albright, another resolutely "use"-oriented administrator, that he disliked any over-reliance on science and felt the best way to handle the northern range situation in Yellowstone was to "slant a practical eye" toward elk management. Albright quite agreed, citing a certain lack of interest in biological matters on the part of Park visitors.[265]

The direct reduction program sharply opposed the philosophy of the retired Service director, who valued visitor experience above all else. As Yellowstone superintendent during the 1920s, he delighted in showcasing the resident bison and elk by arranging and penning the herds to ensure optimum viewing opportunities for Park patrons. He had a history of protesting the routine bison removals since his departure from the Service and as rangers intensified the elk culling operation,

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[264] Houston, *The Northern Yellowstone Elk*, 17; Sellars, *Preserving Nature in the National Parks*, 183.

[265] Sellars, *Preserving Nature in the National Parks*, 168.

Albright wrote a letter to Director Wirth in December 1958 concerning his recent trip west. He complained,

> I was deeply disappointed in not seeing much wildlife in Yellowstone Park. I have been going to that Park since 1915. Never on any previous trip did I see so few wild animals . . . . I was particularly disappointed in not seeing elk and buffalo. In talking with people who visited the Park during the summer, I have found no one who felt that he had seen much in the way of wildlife.

With full knowledge of the elk reduction program, he furtively added, "I am sure earnest attention is being given to ways and means of making wildlife more available to the traveling public in Yellowstone, which for nearly ninety years has been noted as one of the world's greatest wildlife preserves." A sympathetic Conrad Wirth promptly forwarded this excerpt from the letter to his staff at Mammoth.[266]

In fact, an aerial census the following spring (although now deemed "below accepted standards") counted only 4,884 elk in the same herd that Albright had believed to number 25,000 in 1919, the first year of his superintendence.[267] The Park removal during winter 1958/59 constituted over 78 percent of the total herd reduction. The comparatively low hunter take that season reflected a shift that occurred in 1956, after which Park control exceeded recreational harvest every year except one

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[266] Conrad L. Wirth, Director, Memorandum to Superintendent, Yellowstone, "Wildlife in Yellowstone National Park," January 16, 1959, Box N-9, file N16, "Wildlife Management—Gen. 1957-1962," YNPA. For discussion of Albright's interference in Park management long after his departure, see Sellars, ibid., 156-57.

[267] Houston, *The Northern Yellowstone Elk*, 19; Houston, "The Northern Yellowstone Elk: Parts I and II, History and Demography" (unpubl. report, Yellowstone National Park, 1974): 15, YPLF.

until the program ended in 1968. Range condition was not improving as direct and recreational reduction most years failed to accomplish management objectives. With increasingly aggressive culling efforts between 1956 and 1968, in-Park removals largely supplanted hunter kills in Montana, effecting 72 percent of the herd's annual decreases, whereas from 1934 to 1955 sport hunting accounted for 84 percent of the these removals.[268] The Montana Fish and Game Commission grew understandably vexed.

In 1960, Commissioner E. J. Skibby composed an essay titled "Big Game Hunting in National Parks" for perusal by Yellowstone staff, bringing to the fore an issue that had been simmering since before Grand Teton's expansion. Skibby feared "that a point might well be reached in lowering the present numbers within the Park, that harvest on the outside would become insignificant." To compensate, sport hunting in Yellowstone "might furnish substantial amounts of high quality recreation [and] solve long-standing problems of surplus game and resultant damage to vegetation." Superintendent Lemuel A. (Lon) Garrison circulated the essay among several of his rangers and solicited their comments; he received an impassioned response from each of them. Elt Davis of the West District felt especially qualified to speak on the subject

[268] Houston, *The Northern Yellowstone Elk*, 17 (Table 3.2); Glen F. Cole, "Elk and the Yellowstone Ecosystem," Research Note No. 1, Feb. 1969, 10 (Table 1), YPLF.

as a former Grand Teton ranger who experienced firsthand the opening years of public game control in that Park. He was at no loss for reasons to condemn the hunt:

At Grand Teton hunters shot every coyote that came within range. There was a family of two adults and three young along the Pacific Creek Road all summer in 1951. They even took food from visitors. As soon as the reduction started the young were found gut shot beside the road. They were too trusting. Maybe they knew the law but they didn't know hunters. A bear and cub had been seen repeatedly at Two Ocean Lake Campground all summer. She was shot and so was the cub. They were left to rot in the woods. Moose were shot and the alibi was that they were mistaken for elk or they were shot to try out a rifle and the carcass was left on the ground for the birds. I saw one bull near Emma Matilda Lake with one antler half shot off where some smart aleck had shot at the antler for fun to try his aim. Ravens and eagles were shot from their perches so that the open hunting area of Grand Teton National Park became a wildlife desert in one year.

Supervisory Park Ranger B. Riley McClelland echoed many of his colleague's concerns and concluded that "it would be a disastrous mistake to ever allow public hunting" in Yellowstone. All of them expressed contempt for hunters, most of whom could not be called "true sportsmen." Owing to their general lack of ethics, "anything that crawls,

walks, swims, or flies is shot without hesitation in areas of public hunting."[269]

The implications of this form of "recreation" in Yellowstone clearly precluded it as a means of elk population control. The firing line at Gardiner long had illustrated the dark underside of sport hunting, but the herd's yearly migration into Montana served at once to release Park staff from their guardianship while providing an essential tool for sustaining the necessary decreases. A public reduction program within Yellowstone might help to achieve elk population objectives, but at too severe a cost to other Park values. With hunter presence, detractors predicted an increase in human-caused fires, further destruction of vegetation from heavy trammeling by people and pack animals, and a badly littered landscape, all in addition to the direct assault on members of the wildlife community.[270] Teton notwithstanding, a National Park was not the place for the brand of subtractive resource use enjoyed on other public domain; consumption here must remain passive, not exploitative.

By and large, Yellowstone management embraced this philosophy and rigidly defended it. But the public remarks of visitor-use advocate and Mission 66 champion Director Wirth early in 1961 directly

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[269] Lemuel A. Garrison, Memorandum to District Managers, "Comments on Attached Report by E. J. Skibby," with attachment "Big Game Hunting in National Parks" by E. J. Skibby, n.d. and memoranda from O. T. Dick, July 13, 1960, Elt Davis, June 26, 1960, Elbert L. Robinson, June 30, 1960, B. Riley McClelland, July 2, 1960, box N-21, file N1427, "Elk," YNPA.

[270] Ibid.

contradicted his agency's resource conservation mandate and dealt a serious blow to Yellowstone staff. In a speech given at the North American Wildlife and Natural Resources Conference, Wirth granted the possibility of opening the Park to elk control by "responsible citizens in local areas"—namely Wyoming, which had begun claiming joint ownership of this Northern herd that technically resided within its boundaries. His comments suggested to a local newspaper "that the door should be wide open whereby the Wyoming commission and the Park Service may be able to devise a plan to control Yellowstone elk" in accordance with the interests of "Wyoming sportsmen."[271]

Even worse, Wirth penned a provocative letter that February to Anthony Smith of the National Parks Association in which he defended the logic and legality of public hunting in these reserves. Citing the Organic Act clause that grants "discretion for the destruction of such animals . . . as may be detrimental to the use of said parks," he concluded that "under this provision it is within the authority and discretion of the Secretary to permit the control of surplus wildlife populations in the parks by public participation, if need be, in the reduction effort." Calling ranger removals "disagreeable," Wirth asserted that a public hunt carried out under consultation with state game

[271] *Billings Gazette*, "Plan to Control Park Elk," Mar. 1961.

commissions "promises to be an effective management tool based on demonstrated needs, and permissible under present law."

In a lengthy letter printed alongside Wirth's in *National Parks Magazine*, Anthony Smith responded on behalf of the Association by threatening legal action in the event that hunters were permitted to violate the sanctuary that Parks provide. He continued by blaming "the wanton and stupid destruction of predators" for "a large part of our wildlife management problems" and obliquely condemned Mission 66 for its disproportionate appropriation of funds that could be used for the protection and proper management of animal populations. In direct rebuttal of Wirth's proposed alliance with state game commissions, Smith advised him that ceding control of Park wildlife to state agencies would be unacceptable to the Association.[272]

Yellowstone was horrified. Superintendent Garrison recognized the effect that the director's public stance had on his staff's morale and issued a memo confirming his own position against the "almost appalling" proposition of a recreational hunt in his Park. Based on the ideas expressed in the Wirth letter, he felt that "One of the keystones of the National Park Service suddenly crumbles and the cause of pure park conservation which has drawn many of us strongly loses much of its

[272] "Your National Parks Association at Work," reprinted letters from Conrad L. Wirth, 20 Feb. 1961 and Anthony Wayne Smith, 21 March 1961, *National Parks Magazine* 35 (May 1961): 14-15, 19.

vitality." To further discredit the notion of public game control, he used the poor harvest and participation numbers from Grand Teton to point out that 20,000 shooters would be required to effect the level of reduction that Yellowstone biologists sought.[273] In truth, Garrison underestimated: each year from 1951 to 1958, Teton issued 1,200 elk permits of which half remained unused. Of those who did participate in the hunt, only 27 percent harvested an animal, giving a final success ratio of one elk killed for every seven that the Park wished to remove. Based on this quotient, Yellowstone would need to issue 35 thousand hunting permits in order to dispose of five thousand elk, the target reduction number in the 1960s.[274]

Particularly because of the program's failure at Teton, Garrison dismissed Wirth's plan to use "responsible citizens in local areas" to control the elk herds and urged, "*this is not the answer here*." Instead, he reinforced Yellowstone's stance: "It remains our own firm conviction that the losses of other vital park values, the damage to other wildlife species,

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[273] Lemuel A. Garrison, Memorandum to Regional Director, Region Two, "Reduction of Surplus Game Animals," 24 March 1961, box N-21, file N1427, "Elk," YNPA.

[274] Arthur H. Carhart, "Shall We Hunt in National Parks?," *Sports Afield* (Dec. 1961): 102. Participation and success ratios appeared to be statistically consistent: when Teton significantly raised the number of permits issued to 2,000 in 1961, the fifty percent of the permits actually used resulted in a hunter kill of 28 percent of the target harvest. Robert H. Bendt, "Report on the 1961 Elk Management Program, Public Law 787, Grand Teton National Park," 13 Dec. 1961, YPLF.

. . . and the general havoc that attends hunting camps, would soon prove the fallacy of [the] public-aid-shooting approach."[275]

Perhaps due to the backlash against his incongruous statements of position, Conrad Wirth underwent a complete reversal manifest in his "Wildlife Conservation and Management" policy released several months later.[276] Thus united (at least superficially), the National Park Service stood prepared to deflect six more years of mounting criticism from the hunting community just beyond Yellowstone.

[275] Garrison, Memorandum, "Reduction of Surplus Game Animals," 24 March 1961.
[276] Sellars, *Preserving Nature in the National Parks*, 199.

CHAPTER 7

OUTRAGE AND RESOLUTION

Even as ranger kills inside Yellowstone eclipsed hunter harvest beyond the boundaries, another shift occurred. Formerly, the Park had served as a haven against the excessive slaughter of wildlife that took place both before its creation and through the long years of tusk hunting and the firing line. Even recently, moral indignation characterized the administration's view of the wanton and wasteful destruction that attended the elk's annual migration. But now it was the hunters who responded with outrage over what they deemed a wanton and especially wasteful management protocol within Yellowstone's boundaries. Now it was they who crusaded for an end to the butchery being carried out by the herd's own protectors, and effectively reassigned the stigma that once they had borne.

That the hunting community constituted the vast majority of the Park's opposition is significant. To them, the ultimate value of an elk lay in its preeminence as a game animal. These hunters still embraced the Rooseveltian perception of a reserve like Yellowstone as a wildlife reservoir that would furnish sport with its overflow to neighboring areas. If the grazing lands needed a reprieve from an excess of ungulates, then

the Park should remove the surplus not by destroying them but by transferring the elk to other ranges, preferably in Wyoming.

Few people at the time questioned the elk's value as a game animal, but even fewer challenged the overriding assertion that once lethally removed by rangers, the wapiti essentially was wasted. The fact that Yellowstone salvaged every elk it killed to provide nourishment for Indians and Montana schoolchildren did not impress the hunting community as a sufficiently worthy use of this animal; they persisted in condemning direct reduction as a wasteful slaughter absent the recreational benefit that sport hunting offered.

By autumn 1961, the Northern herd contained an estimated ten thousand elk.[277] Yellowstone's management plan called for a fifty percent decrease to bring the herd in line with the carrying capacity of the northern range. The Park hoped that hunter harvest in Montana would suffice in reducing the population to where they could avoid a large-scale ranger kill. If the weather failed drive the elk out early, then the state presumably would extend its hunting season into the winter months, as it had done in the past.[278]

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[277] The exact count from the March census was 8,150 elk; biologists added a natural increase allowance of 20 percent to arrive at a fall population figure of roughly ten thousand. National Park Service, *Wildlife Management in National Parks, 1961-1962* (Washington DC: NPS, 1963): 35.

[278] NPS, "Long-Range Management Plan for the Northern Yellowstone Elk Herd," Yellowstone Natl. Park, Nov. 1961, YPLF.

Lon Garrison and his staff sought the cooperation of Wyoming and Montana to ensure the success of the 1961/62 culling operation. At an interagency meeting at Canyon Village in June 1961, the superintendent addressed representatives from each state's game agency first by announcing the Park's planned reduction of five thousand elk in the coming season, then by appealing for their assistance in several aspects of the program, including direct reduction. Garrison invited discussion among the group of 29 state and federal resource managers and a Bureau of Indian Affairs officer from Billings, who offered what turned out to be the morning's only positive comments. Percy Melis of the BIA supported direct reduction and not only requested two thousand carcasses from the next Park harvest, but refuted the notion that this method of control constituted waste. The Indians "use[d] the meat fully to the extent that the hunter" did and actually caused "less waste than in the normal [hunter] kill."[279]

The state game agencies turned a deaf ear and used this open forum to reiterate their standard grievances and demands, the sum of which was a refusal to assist in the direct reduction program. Montana Commissioner Don Brown again appealed for a public hunt in Yellowstone, reasoning that by holding an open season after Park

[279] "Discussion of Cooperative Elk Management Program" and "minutes of Meeting Held at Canyon Village, June 2, 1961, to Discuss the Northern Yellowstone Elk Herd," in W. W. Dresskell, comp., "Yellowstone River and Gallatin River Elk Herds: Management Progress and Problems," Missoula: U.S. Forest Service, 17 July 1961, YPLF.

visitation had decreased, there would be "less danger of shooting sight-seeing tourists." On behalf of his state, he objected to the Park's repeated calls for a late season, which would serve to "deplete [Montana's] resident herd" and offered help only in the form of a public hunt within the reserve. Wyoming Game Commissioner Bob McManis followed up by calling for joint management decisions between the Park Service and the states (as was the case in Teton) and refused assistance in Yellowstone's direct reduction, saying, "we are like Montana, we don't want any part of it."[280] When the time came, the Park found its neighbors to be as uncooperative as they had promised.

A damage assessment at the end of the Grand Teton hunt on November 30th that year should have quieted the calls for an open season in Yellowstone. As in the past, the "deputized rangers" legally achieved only 14 percent of the target decrease, but also managed to poach 23 more elk, 11 moose, and one man. Like Lon Garrison had done, Chief Naturalist Robert N. McIntyre used Teton statistics to observe that in his Park, a similar hunt theoretically would yield the five thousand legal elk, plus 410 poached elk, 196 moose, and almost 18 men![281]

McIntyre was not the only one given to grandiose expressions. Early in December 1961, merchant policeman and outfitter Bob Knievel

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[280] Ibid.

[281] Robert N. McIntyre, "The Threat of Public Sports Hunting in Yellowstone and Other National Parks," lecture trans., Yellowstone Natl. Park, 10 April 1962, YPLF.

left his home in Butte, Montana carrying two suitcases and a set of elk antlers. His goal was to hitchhike to Washington DC and present the twelve-point rack to President Kennedy; Knievel claimed that "It may be the last chance he'll ever have to get a set if the slaughter in Yellowstone Park continues." Failing to see Kennedy, he refused to speak to anyone else at the White House but did gain an audience with Interior Secretary Stewart Udall. The outfitter described Udall as being "very fair and very honest" during their conversation about Yellowstone elk management, but evidently their meeting did not result in the Secretary's reconsideration of the rangers' slaughter of five thousand elk that winter.[282] The tactic employed on the Wyoming front brought even less success. As Knievel embarked on his journey east, three Cody outfitters filed a lawsuit that sought to enjoin Garrison and his staff from killing Park elk. Governor Milward Simpson actually persuaded his law firm to take the case pro bono, but in the end, a federal judge dismissed the suit on the grounds that the National Park Service had sole authority and discretion in the management of its elk herds.[283]

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[282] Edmund Christopherson, "The Elk Shooting," *Outdoor Life* (June 1962): 105; "Elk Antlers Arrive with Hitchhiker," *Billings Gazette*, 9 Dec. 1961; "Udall Interested (in Elk Proposal)," *Billings Gazette*, 12 Dec. 1961.

[283] "The National Park Elk Story," *Park County News*, 25 Jan. 1962; "Elk Slaughter Protests Rage On," *Billings Gazette*, 6 Dec. 1961; R. Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana: University of Illinois Press, 1992): 48.

Winter weather began to push the elk early in 1962. More than two hundred people on January 7th crowded into the basement of the Livingston Elks Club, where a public meeting would determine the status of a proposed late hunt north of the Park.[284] Fish and Game recently had decided that without strong public support from the hunting community, there would be no late season outside Yellowstone.[285] Embittered by the refusal of Park administrators to heed the demand for a halt to the ranger kill, one Montanan argued, "If we open hunting outside the park, it indicates we're going along with the park reduction." Another conveyed the general feeling of distrust for the Service now common among area hunters: "This is ridiculous. There's no proof that there are more than 5,000 elk in the park, let alone 10,000. Why open a season at all?"[286] Back in Helena, Governor Donald Nutter unsuccessfully had been petitioning Park officials for a public hunt since the previous May and did not endorse any late season that would assist federal reduction efforts. In line with the resentment expressed at the June Canyon Village meeting, the Game Commission enjoyed the support of the governor and the hunting public when it declined to open a late season.[287]

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[284] Christopherson, "The Elk Shooting," 107.
[285] Robert S. Sykes, "Sykes Clarifies Position of MWF on Yellowstone Elk," *Montana Wildlife Federation News* 2:1 (Jan. 1962): 4.
[286] Christopherson, "The Elk Shooting," 107.
[287] "Nutter Seeks Public Hunting," *Billings Gazette*, 9 Dec. 1961; Christopherson, ibid.

Lacking assistance from the state game agencies, the 1961/62 reduction would be far larger in scale and more difficult than any previous operation, but Park stewards remained convinced that their complacency would only bring disaster to the northern range. In temperatures plunging to sixty degrees below zero, trained shooting teams moved ahead of hired butchers to pick their way toward the five-thousand goal. Only 125 elk had fallen to Montana hunters during the open season, so in addition to the 310 that the Park would trap for transplant that year, 4,565 animals would need to be shot and field dressed before spring. They fell short of that target, but not by much: in the end, 4,309 elk perished in the operation, but another 476 succumbed to starvation. The Northern herd decreased that winter by 5,220, more than half the population.[288]

Based on the migratory instinct hypothesis proposed by earlier biologists such as Victor Cahalane and Olaus Murie, the Park-heavy removal that year should have benefited the herd as a whole. By January 15th, more than 2,500 elk had migrated into Montana, this time safe from hunters' bullets; the animals killed within the Park, then, theoretically were the less migratory of the species.[289] Valid or not, the reduction was

[288] "Record of Elk Reductions, Northern Yellowstone Elk Herd, Yellowstone National Park," 1967 (?), YPLF.

[289] Management biologist Bob Howe discovered during the April census that he actually had underestimated the migration when he counted 3,147 elk north of the

overall an enormous success for Yellowstone but a travesty to Wyoming and Montana. The Northern herd had undergone two considerably larger decreases in the past twenty years with heavy recreational harvest north of the Park, but this time, the heavy loss alarmed the hunting community enough to elicit a challenge to the biologists' census data. Superintendent Garrison, who had endured midnight phone calls and death threats during the winter ordeal, found he could tolerate this latest insult.[290]

Numerous demands for an open herd survey that spring essentially reiterated the request by George M. Donick of Anaconda, who wrote to Garrison,

> You have assured the people that there were ten thousand head of elk in Yellowstone National Park. . . . I ask that you now sponsor a public count so that there will be proof to us that you are a man of your word, as this killing program was fully under your leadership, against the will of the people.[291]

The resultant aerial census took place April 2-4 with participants from three conservation groups, two Montana sports clubs, the Forest Service, the Wildlife Management Institute, and Montana Fish and Game.[292]

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boundary. Robert E. Howe, "Final Reduction Report, 1961-62, Northern Yellowstone Elk Herd," Yellowstone Natl. Park, 17 May 1962, YPLF.

[290] James A. Pritchard, *Preserving Yellowstone's Natural Conditions: Science and the Perception of Nature* (Lincoln: University of Nebraska Press, 1999): 203.

[291] George M. Donick to L. A. Garrison, 27 Feb. 1962, box N-9, file N16, "Overall Animal Census and Inventory 1957-1962," YNPA.

[292] "Northern Yellowstone Elk Herd Helicopter Census, April 2-4, 1962," attachment to Memorandum from Lemuel A. Garrison to Regional Director, Region Two, "1962 Helicopter Elk Census, Northern Range," 25 April 1962, box N-9, file N16, ibid.

Wyoming declined to participate because they felt deeply offended by the Park's invitation to come only as ground observers. The fact that the Northern herd had no bearing on the state's hunting program mattered little to them, although one commissioner worried that their reduction might create "a vacuum to draw elk from outside," thus robbing Wyoming of its own elk.[293] The Game Commission's initial request to have a representative on every flight taken those three days was rebuffed by the Park in favor of including participants from the agencies actually responsible for managing the migrating herds. Izaak Walton League member F. Howard Brady chastised the state's haughty refusal to take part in a second-rate capacity as "unprofessional" and ultimately to Wyoming's detriment.

Further, Brady found himself so impressed with the actual count of 5,725 individuals during this survey and with the impoverished appearance of the elk's winter habitat that he suggested a base herd of only a thousand, rather than five thousand, similar to assessments given by observers from the Wildlife Management Institute and the United Sportsmen's Associations of Montana.[294] A "Show Me" tour of the

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[293] Minutes of Meeting at Canyon Village, May 25, 1962, to Discuss Northern Yellowstone Elk Management Plans, attachment to letter from Lemuel A. Garrison to W. J. Everin, 12 June 1962, box N-9, file N16, "Wildlife Management—Gen. 1957-1962," YNPA.

[294] Letter from F. Howard Brady to Alden J. Erskine, 26 April 1962, Letter from William B. Morse to Lemuel A. Garrison, 25 April 1962, and Letter from Pat O'Hern to Lemuel A. Garrison, 30 April 1962, box N-9, file N16, "Overall Animal Census and Inventory 1957-

northern range two weeks later further convinced participants such as Montana Wildlife Federation President Earl R. Nott, who praised the "caliber and [mettle] of the person[n]el charged with the responsibility of keeping our beautiful Yellowstone Park in good order."[295] The Montana Conservation Council offered congratulations "for 'sticking to your guns' and following the directives of sound biological science rather than political expediency" in the Park's managing its elk herds.[296]

Support from conservation groups stood in contrast to the fervent opposition of Wyoming officials and perhaps a majority of local hunters, whose pursuit of the issue of Park hunting led to the introduction of S.2545 in the Senate. The bill called for the National Parks' yearly consultation with neighboring governors to determine wildlife management policy and authorized sport hunting in those areas overpopulated with game animals, obviously using Grand Teton as a model.[297] Although "many competent and renowned conservationists in the field of wildlife management, or closely related areas of natural

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1962," YNPA; "1962 Helicopter Census, Northern Yellowstone Winter Range," April 1962, ibid.

[295] In addition, Superintendent Garrison received three letters of similar tone from the Wyoming Conservation Association, Libby [MT] Rod and Gun Club, and Western Montana Fish and Game Association. Earl R. Nott, "Report of Show-Me-Trip Yellowstone National Park April 16, 1962," attachment to Memorandum from Luis A. Gastellum to Regional Director, Region Two, "Range Show-me Trip, Yellowstone, April 16, 1962," 8 May 1962, box N-9, file N16, "Wildlife Management—Gen. 1957-1962," YNPA.

[296] Letter from W. F. Clark to Lemuel A. Garrison, 18 April 1962, box N-9, file N16, ibid.

[297] Department of the Interior, Office of Stewart L. Udall, Secretary, "Interior Department Asks Congress to Defer Bill to Permit Hunting In Park Areas," press release, P.N. 8465-62, 23 May 1962, YPLF.

resource conservation, recognized the needs for" direct reduction, Yellowstone still fell under attack by the hunting community and its allies, who relentlessly attempted to penetrate the Park's rigidly protective boundaries. The Service felt contempt for these "Vociferous, largely misinformed, and selfishly motivated groups of individuals," whose

> insistence upon opening the Park to public hunting was not always due to a lack of knowledge regarding the overpopulation of elk, but was primarily based upon selfish interests . . . . These included many State Fish and Game Commissions, several "sportsmen" organizations, members of the United States Congress, misguided newspaper sports writers and a few individuals who had direct or indirect benefits to be gained from public hunting in a National Park.[298]

A few "competent and renowned" conservationists brought about the bill's defeat, but the persistence of the litany of Park-hunting advocates and the threat of this legislation motivated the Interior Department to seek some way to buttress the Park Service's jurisdiction over its own wildlife and to justify its current management policies in Yellowstone.[299] Interior Secretary Udall sought the aid of a "Blue Ribbon" committee consisting of "unbiased and thoroughly expert persons" in the field of resource management to conduct a lengthy investigation of Yellowstone's

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[298] NPS, *Wildlife Management in National Parks, 1961-1962*, 34.

[299] Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997): 200.

wildlife problems, placing special emphasis on settling the question of public hunting in the National Park.[300]

This team nearly had completed its study when Montana's House Representative Arnold Olsen, under pressure from his constituency, called a Congressional hearing in Bozeman prior to the start of Yellowstone's coming reduction operation. As the hunting season in Wyoming and Montana closed, Park administration faced frustrating but unsurprising complaints from unsuccessful hunters who charged that the rangers had decimated the elk population in the previous winter's removal. Now even non-locals joined the discontented; Garrison reported to his superior, "We hear continuing rumbles from out-of-state hunters who have purchased Wyoming elk permits at $100 each that their outfitters have advised them the reason for poor hunter success this fall is that the rangers killed them all in the Park last year."[301]

The new season of controversy got underway when an article by Representative Olsen appeared in the October 1962 issue of *Sports Afield*, titled "Yellowstone's Great Elk Slaughter." The Congressman revisited the alleged atrocities from the previous year's elk removal (with a great many perhaps unintended inaccuracies) to prime his readership

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[300] DoI, "Interior Department Asks Congress to Defer Bill to Permit Hunting In Park Areas," 23 May 1962.

[301] Memorandum from Lemuel A. Garrison to Regional Director, Midwest Region, "Publicity on Wildlife Management Programs," 26 Nov. 1962, box N-9, file N16, "Wildlife Management—Gen. 1957-1962," YNPA.

for the hearing that he staged two months later.[302] On December 18 at the Montana State University Student Union Building, the usual repertoire of game commissioners and hunters angrily denounced the rangers' "slaughter" in the Park but promoted recreational "harvest" by local citizens. The singular value of the elk as a game animal to this interest group was made abundantly clear by the comments of two members of the Wyoming delegation, who jointly asserted that "people cannot make use of the elk in the park unless sport hunting is allowed. Only by hunting can people make use of national parks. Yellowstone Park is elk heaven."[303] The crime in direct reduction, again, lay in its preclusion of public opportunity to indulge in a favored sport, its non-recreational character, its depletion of "game," and its essential stripping the elk of its most basic value. Non-consumptive use among Park visitors seemed inconsequential and infinitely subordinate to their own use.

For the most part, hearing participants preferred trapping and transplanting to killing the elk, but a number of others pointed to the inability of saturated ranges beyond the Park to support translocated animals; besides, this method of removal was both costly and difficult. Earlier in the year, Regional Forester Wally Dresskell told Lon Garrison

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[302] Arnold Olsen, "Yellowstone's Great Elk Slaughter," *Sports Afield* 148 (Oct. 1962): 40-41, 87-88.

[303] Testimony of Sprague and Snead, "Minutes of Special Subcommittee of Elk Hearing, Committee on Insular Affairs, Student Union Building, Bozeman, Montana, December 18, 1962" (rough draft), box N-21, "Statements on Elk Hearing Called by Cong. Olson [*sic*], December 18, 1962," YNPA.

that he did not "have room to place more elk on Forest Service ranges," and ranchers generally frowned upon elk plants for fear of game damage and competition for grazing resources.[304] However, this problem could be solved with an "immediate open hunting season" in the transplant areas; the elk would perish just as they would in the Park cull, but in this way, hunters could effect the reduction, and with no inconvenience to federal or private landowners.[305]

Still, Congressman Olsen might have been disappointed in the results of the hearing after so much ado and rancor on his part; an equal number of participants defended the Park's elk management program, albeit with some reservation, and the meeting failed to generate the level of public outrage that he had anticipated and that he had hoped would force the Park to abandon its current program.[306] Olaus Murie, as usual, provided his own authoritative, science-based assessment of the Yellowstone elk situation and warned against favoring politics over sound biology in dealing with wildlife problems. Less than a year before his death, Murie testified,

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[304] Statements by W. W. Dresskell from meeting at Canyon Village, May 25, 1962, attachment to letter from Lemuel A. Garrison to W. J. Everin, 12 June 1962, box N-9, file N16, "Wildlife Management—Gen. 1957-1962," YNPA; "Minutes of Special Subcommittee of Elk Hearing, Committee on Insular Affairs, December 18, 1962."

[305] "Minutes of Special Subcommittee of Elk Hearing, Committee on Insular Affairs, December 18, 1962."

[306] Edison Real Bird, vice chairman of the Crow Tribal Council, was especially supportive of direct reduction during this hearing and pointed out the cultural value of the elk's hide and teeth in addition to the obvious value of the meat. Ibid.

> Do we want Democracy in our country? To have one group of people boss the whole show; to have the same kind of activity in every area, to have wildlife looked upon only as game—this is not the freedom we brag about. So many people are in favor of maintaining the integrity of national park policy. This sudden move to advocate hunting in our national parks is going to divide the conservationists into two opposing groups, fighting each other.[307]

The spirit of Murie's testimony matched that expressed repeatedly in past battles involving the Greater Yellowstone elk, when often the most vocal and most insistent interest constituted a minority.

Contrary to Murie's reckoning, attempts to secure hunting rights in Yellowstone had begun decades earlier with the initial recognition of the overuse of the northern range, and it was then that elk "conservation" split into two distinct factions, now represented by the sport hunting advocates and the proponents of science-based stewardship. The latter group worked solidly within the environment-conscious climate of the era, when concern for ecological preservation and the "balance of nature" predominated; the former continued to subscribe to the Pinchotian philosophy of consumption-based conservation and to perceive Yellowstone and other reserves as game manufactories rather than single-use preserves that labored to erase the marks of human intervention, ironically, through intensive management. Biologist Bob

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[307] "Statement of Olaus J. Murie, for the record of a hearing of a special Sub-committee, Hon. Ralph Rivers Chairman, into the management of the elk herds of Yellowstone National Park. At Bozeman, Montana, December 18, 1962," document stamped received 17 Dec. 1962, box N-21, "Statements on Elk Hearing Called by Cong. Olson [*sic*], December 18, 1962," YNPA.

Howe illustrated how the Park's mission and self-perception of the 1960s differed from that of the Progressive period:

> Yellowstone National Park is not managed to produce elk for hunters to shoot. No attempt is made to moralize, to say a coyote is bad and should be killed, or that an elk is good and should be protected from natural enemies. These judgments may be applicable to farm or ranch, or in public lands managed for the benefit of the hunting public, but they have no place in administration of natural museums such as the national parks.[308]

In the eyes of the Park Service, Yellowstone's "game reservoir" era had lapsed; now, wildlife would be managed according to the ecological requirements of the Park rather than the demand for recreation in adjacent communities. The administration outlined this ethic in its November 1962 policy statement:

> The National Park Service must follow valid biological evidence and continue a wildlife management program instead of trying to appease a few critics. "Stop the slaughter of Yellowstone elk!" is a fine, emotional battlecry, guaranteed to make headlines and rally the boys. Another good one is "Save the elk." In all honesty the Service replies that to save them we must keep them in balance with range and other animals.
>
> The National Park Service does not plan to continue to sacrifice its capital, the soil, in a vain effort to save a few hundred elk for a winter or two so they can die of starvation. No responsible authority questions the poor condition of the northern range or the fact that more elk will wreck it. Also, the National Park Service cannot confine its work inside the Park only to live trapping when experience suggests strongly that this spells ruin of the range because enough elk simply can't be trapped.
>
> And if in the final judgment of the years of study and experience the experts and the administrators should prove utterly wrong,

[308] Howe, "Final Reduction Report, 1961-62, Northern Yellowstone Elk Herd."

> natural reproduction on understocked range will restore any desired herd size in five years.[309]

It was a far cry from the Park's panic-driven management policy of the early twentieth century, when a perpetual fear of the elk's extinction informed nearly all decisions made on the its behalf. Yellowstone still valued its elk, but now this ungulate occupied only a niche within the larger natural community; wildlife biology in the 1960s began favoring ecosystem health over any single species.[310]

George Wright and other scientists of the 1930s had begun conceiving of animals within a broader ecological setting, but they still subscribed to the agrarian system of producing a "game crop" and continued to promote species-specific management. When direct reduction began in the 1930s, it functioned primarily to safeguard the elk population from the consequences of habitat depletion; under a new philosophy, Park stewards stressed the equal importance of the soils, the flora, and the fauna—both predator and prey—and sought to bring these elements into balance with one another. W. Leslie Pengelly of the Montana Cooperative Wildlife Research Unit in Missoula explained the contemporary view of 1963 that "the ecological entity involves their sum and their interrelationships. Proper land use implies a solid foundation of

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[309] National Park Service, "Management of Northern Yellowstone Wildlife and Range" Yellowstone Natl. Park, 10 Nov. 1962, 22, YNPF.

[310] See Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (Cambridge: Cambridge University Press, 1987): 113-14.

soil, plants, and animals in a harmonious pattern" in order to ensure their collective survival in perpetuity.[311] This premise derived from the "sustained yield" concept, but differed in its emphasis on the quality of the environment, rather than on nature's ability to produce a desired quantity of a given resource.[312]

It was this distinction that fueled the conflict between hunters and Park administrators in the 1960s. Yellowstone cared for its biota with an eye toward its permanence and challenged the century-old assumption that its "game," while long enjoyed also in a non-subtractive capacity by sightseeing visitors, served no higher function than the one designated by sport hunters. But by 1964, the year of the Wilderness Act, fifty million Americans engaged in wildlife viewing, whereas hunting claimed only one-third that number, according to surveys taken in subsequent years.[313]

In Wyoming and Montana, though, this interest clearly boasted a heavy concentration and a great deal of sway. Greater Yellowstone hunters, although a minority, had blocked the Park's Thorofare extension in 1931, forced an unprecedented hunting clause in Teton's 1950 enlargement act, and insisted on perpetuating the firing line bloodbath that for decades thwarted the Northern herd's migration. When Senate

[311] W. Leslie Pengelly, "Thunder on the Yellowstone," *Naturalist* 14:2 (Summer 1963): 22.

[312] See Hays, *Beauty, Health, and Permanence*, 13.

[313] Ibid., 111.

bill S.2545 to allow hunting in the National Parks gained Interior Secretary Udall's attention in 1962, its threat was enough to impel him to seek expert support for Yellowstone's management policy. Just as poacher Ed Howell represented the danger looming before nineteenth-century elk herds in the form of public hunting, this Senate bill embodied a similar menace currently facing the same herds. Both prompted action that produced enormously important results.

In March 1963, a "Blue Ribbon" committee of conservation-minded wildlife management experts consisting of Stanley A. Cain, University of Michigan Conservation chair; Clarence M. Cottam, Welder Wildlife Foundation director; Ira N. Gabrielson, Wildlife Management Institute president; Thomas L. Kimball, National Wildlife Federation executive director; and committee chairman A. Starker Leopold, highly esteemed Berkeley biology professor, published its findings and conclusions in a document thereafter known as the "Leopold Report."[314] They intended the report's recommendations to fulfill their

> primary goal, . . . that the biotic associations within each park be maintained, or where necessary recreated, as nearly as possible in the condition that prevailed when the area was first visited by the white man. A national park should represent a vignette of primitive America.[315]

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[314] Professional affiliation information from DoI, "Interior Department Asks Congress to Defer Bill to Permit Hunting In Park Areas," 23 May 1962, and Sellars, *Preserving Nature in the National Parks*, 200.

[315] Advisory Board on Wildlife Management, *Wildlife Management in the National Parks* (Washington DC: Wildlife Management Institute, 4 March 1963): 3, YPLF. The report appears also in James B. Trefethen, ed., *Transactions of the Twenty-eighth North*

This mandate implied a restoration of the ecological integrity that Park stewards had spent decades corrupting, with species-preferential manipulation and general disregard for natural components that were "harmful" or less visible to tourists or that contributed little to the scenic splendor of Yellowstone. The report reinforced the trend toward greater sensitivity in this regard but further encouraged the Service to "recognize the enormous complexity of ecologic communities and the diversity of management procedures required to preserve them," which included reduction of "ungulate populations . . . to the level that the range will carry in good health and without impairment to the soil, the vegetation, or to habitat of other animals."[316]

The document corroborated the Park's policy of direct reduction most strongly, though, with repeated admonishments against the invasion of sport hunting in National Parks, specifically in Yellowstone. The committee endorsed ranger removal only and stressed that "it is the unanimous recommendation of this Board that such shooting be conducted by competent personnel, under sole jurisdiction of the National Park Service, and for the sole purpose of animal removal, not

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American Wildlife and Natural Resources Conference (Washington DC: Wildlife Management Institute, 1963): 28-45. The committee members apparently subscribed to the notion that before the arrival of Europeans, Native Americans constituted a part of primitive nature.

[316] Ibid., 5, 8.

recreational hunting."[317] This pronouncement provided just the authoritative support that Yellowstone needed to defend itself against this latest challenge.

As importantly, the Leopold Report advised "that every phase of management itself be under the full jurisdiction of biologically trained personnel of the Park Service," giving Olaus Murie's insistence that sound science rather than political expediency guide wildlife stewardship new legitimacy.[318] Importantly, though, this statement stressed the preeminence of biological management in a realm long given chiefly to visitor enjoyment and *use* accommodation.[319] In a major administrative realignment, Leopold and his colleagues subverted visitor use to ecological integrity in the National Parks. In closing their discussion of management policy, they offered some practical insight:

> Reducing the numbers of elk in Yellowstone . . . is part of an overall scheme to preserve or restore a natural biotic scene. The purpose is single-minded. We cannot endorse the view that responsibility for removing excess game animals be shared with state fish and game departments whose primary interest would be to capitalize on the recreational value of the public hunting that could thus be supplied. Such a proposal imputes a multiple use concept of park management which was never intended, which is not legally permitted, nor for which can we find any impelling justification today.[320]

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[317] Ibid., 9.
[318] Ibid., 6.
[319] See Sellars, *Preserving Nature in the National Parks*, 214-15.
[320] Advisory Board, *Wildlife Management in the National Parks*, 6.

Of course, the "unbiased" panel of "thoroughly expert persons," all of them scientists, proved utterly partial to modern ecological principles that opposed deep-seated cultural and economic values that characterized game use and management outside the Park.

Not surprisingly, the scientific community and nature advocacy groups embraced the documents with enthusiasm, waxing poetic over its importance to the future of ecological management. Stewart Udall rejoiced that "all the wrenching environmental changes wrought by" human society in its "callous competence for destruction is at last causing anxious twinges of conscience." For Udall, the Report reflected a heightened sense of responsibility in good stewardship of nature: "Must not the entire scope of life on earth be considered as a unity—a complex tangle of interrelationships with each member of the host of living things entitled to [its] place at the planetary table?"[321] The Sierra Club praised the document's support of science and biology over the artificial engineering of natural systems and gave a nod to the Committee chair's legendary father by observing that it "applies a wilderness philosophy based on land ethics—perhaps best expressed by Aldo Leopold in his

[321] Anon., "Natural History Chapter," *The Living Wilderness* 83 (Spring/Summer 1963): 24.

Sand County Almanac—to current management problems in national parks . . . ."[322]

One thing that troubled Adolph Murie, though, was the Advisory Board's recommendation that the Parks reflect "as nearly as possible . . . the condition that prevailed" prior to white encroachment. A biologist like his brother Olaus, Murie explained that such a goal "suggests that we freeze the environment at a certain primitive stage. This implies a static condition." He maintained that instead, a National Park must be managed as a "living organism" that undergoes continual change through interactive biotic processes; only then can the ecosystem truly represent an incorrupt segment of nature.[323] Nevertheless, what greatly pleased Murie about the Leopold Report was its dismissal of public hunting in Yellowstone and other Parks as a "management" tool. The National Parks Association and The Izaak Walton League, both deeply invested in the current wildlife problems of Greater Yellowstone, shared Murie's satisfaction with the Committee's final and firm judgment with respect to sport hunting. Similarly, the National Audubon Society had fought the "public-aid" solution "ever since some of the game directors in the Western states started a new campaign to pry the parks open to

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[322] Anon., "Leopold Report Appraised," ibid., 23.

[323] Ibid., 20-21. Before he died in 1983, Starker Leopold often said that had he known then how rigorously scrutinized and important his report would be over the next two decades, he might have taken greater care in his phrasing. Paul Schullery, *Searching for Yellowstone: Ecology and Wonder in the Last Wilderness* (Boston: Houghton Mifflin, 1997): 168-69.

recreational shooting," and approved of the stand that the Leopold Report took against it.[324] Its authoritative endorsement of direct reduction even convinced sporting magazine *Field & Stream*, which soon ran an article that considered the document "required reading for every lawmaker having to do with resource legislation." The author opposed public hunting on ecological grounds, as "it would take nature a hundred years to heal the scars of such an invasion," which also would do harm to the rest of the Park's wildlife.[325]

Although ultimately it was indeed a bellwether in National Parks administration, the Leopold Report itself did not create the ecologically sensitive shift in wildlife management during this era; it was only a signpost of the changing ethic in stewardship of the natural world that reached its full thrust during the 1960s. Yellowstone biologist Bob Howe noticed a difference even at the 1963 Annual Convention of the Western Association of State Game and Fish Commissioners and reported to Lon Garrison that the papers presented at that meeting "either favored present National Park Service administration . . . or treated the entire subject of conservation of wildlife on a broad ecological basis." He described the more liberal-spirited proceedings as "a most refreshing experience at this kind of convention and [hopefully] indicative of a

[324] Anon., "Leopold Report Appraised," 20-23.
[325] Ted Trueblood, "Too Many Elk," *Field & Stream* (July 1963): 73.

broader look at the 'whole' picture by Fish and Game Commissioners." Advisory Board member Tom Kimball delivered a speech on behalf of the National Wildlife Federation in which he identified the past "inability to weld conservationists and sportsmen together to achieve [the] best management" as a prevailing problem in need of remedy—not surprising, considering the Leopold Report's insistence upon interagency cooperation as the best means to achieving a successful wildlife program in Yellowstone. In this fresh environment of mutual support, Montana Fish and Game Commissioner Walt Staves assured Howe that his state would resume planning its hunting season according to the Park's needs in realizing the necessary reductions to the Northern herd.[326]

The Inter-Agency Cooperative Elk Management meeting held at Mammoth in May 1963 bore a similar "difference in tone" from past years' conferences, as observed by Wyoming Game and Fish Commissioner Garl Riggan. What dominated the discussion this year was how to trap and transplant Park elk in a manner that satisfied all of the participating agencies, in a "put and take" operation whereby relocated animals would be subject to immediate hunter harvest.[327] The ensuing

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[326] Robert E. Howe, "Report on attendance at the 43rd Annual Convention of the Western Association of State Game and Fish Commissioners, Tucson, Arizona June 9-12, 1963," attachment to memorandum from Lemuel A. Garrison to Regional Director, Midwest Region, 3 July 1963, box N-9, file N16, "Wildlife Management: Fish and Game 1963-1964," YNPA.

[327] National Park Service, "Minutes of Inter-Agency Cooperative Elk Management Meeting, Mammoth, Yellowstone National Park," 22 May 1963, YPLF.

joint transplant program resulted in a Northern herd reduction of 906 individuals the following winter by trapping alone.[328] State cooperation in this endeavor even included an agreement between Montana and Wyoming that if unfavorable weather were to prevent one Commission from receiving its scheduled elk delivery, the other Commission would provide relief by accepting that shipment.[329] The states' willingness to comply with such a pact seems less remarkable in light of the fact that in 1965, hunters and anglers spent 57 million dollars in Wyoming, where "hunting and fishing had become a major industry" that stood to profit from an increased game supply.[330] Montana enjoyed the same economic and recreational boon from Yellowstone's management plan that called for the transfer of non-migrating elk to Forest areas north of the Park "the first part of the week, and hunting by permit . . . the latter part of the week."[331]

This system, long preferred by the states as a method of Northern herd population control, came under attack by the Gallatin Canyon Elk Protective Association [GEPA]. Any management protocol the Park Service adopted, it seemed, would displease someone. A suit filed in January

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[328] "Record of Elk Reductions, Northern Yellowstone Herd, Yellowstone National Park."

[329] Montana Fish & Game Commission, Minutes of Interagency Meeting, Billings, Montana, 16 Nov. 1964, box N-9, file N16, "Wildlife Management: Fish and Game 1963-1964," YNPA.

[330] Neal Blair, *The History of Wildlife Management in Wyoming* (Cheyenne: Wyoming Game & Fish Dept., 1987): 193.

[331] National Park Service, "1965-66 Elk and Habitat Management Plan for Yellowstone National Park," YNP, Sept. 1965, YPLF.

1964 named Lon Garrison and Bob Howe, as well as Regional Forester Wally Dresskell and two members of Montana's Fish and Game department, as defendants who were "enjoined and restrained . . . from trapping, killing or otherwise cutting down the Gallatin Canyon Elk Herd," a subgroup of the Park's Northern herd.[332] GEPA, formed only two years earlier, consisted of members who were convinced that the herd deemed overpopulous by both state and federal wildlife managers was in fact quickly nearing extinction. Since its inception, this hunters' organization had pressed Fish and Game to provide hay for the starving animals and to modify its elk season to allow unimpaired winter migration from the Park. The wild illogic of GEPA's claim that state regulations aimed eventually to eliminate the Gallatin herd flew in the face of Montana's mission "To produce and maintain a maximum breeding stock of big game . . . ."[333] They further believed that without supplemental feeding, the elk's numbers would decline to a point at which only "limited-permit hunting of the wealthy" would be feasible and "the Montana sportsmen and the average out-of-state hunter [would] only remember the aesthetic value and the hunter recreational value of yesteryear."[334]

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[332] Robert E. Howe, "1963-64 Wildlife Management Report," Yellowstone Natl. Park, April 1965, 20-21, YPLF.

[333] Allen L. Lovaas, *People and the Gallatin Elk Herd* (Helena: Montana Fish & Game Dept., 1970): 32-33; Howe, ibid., 34.

[334] GEPA president H. Elliott Thompson quoted in "Suit Asks Halt Elk Slaughter," *Billings Gazette*, Jan. 1964.

On the confused grounds that the elk's winter range remained adequately healthy and actually could support far more animals than it currently did—despite their own claim that the herds required seasonal feeding—GEPA filed suit in the Montana District Court to bring a halt to any further herd reductions.[335] Because the Park fell under the jurisdiction of the federal District Court of Wyoming rather than Montana, the presiding judge dismissed the case, adding that "an injunction may not be granted against an officer or agent of the federal government if he is acting within the course and scope of his authority."[336] Regardless, the Gallatin Canyon Elk Protective Association continued to harass Fish and Game over hay provisions and hunting seasons, the latter a crucial component of Yellowstone's management program.[337]

In autumn 1964, Yellowstone biologists strove to uphold the long-established goal of 5,000 elk by means outlined in the Long-Range Wildlife and Habitat Management Plan:

> Continue to recognize hunter harvest north of the Park as the most desirable means of controlling elk numbers, and elk migration out of the Park will be facilitated whenever possible. During those years when weather conditions are such that large numbers of elk leave the Park, the State will be encouraged to cooperate in removing animals through hunter harvest well below the maximum 5,000 figure, thus giving hunters the opportunity of removing these animals when they are available. When hunter harvest outside the Park does not achieve the needed herd reduction, elk

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[335] Lovaas, *People and the Gallatin Elk Herd*, 34-35; Howe, "1963-64 Wildlife Management Report," 23.

[336] "Elk Suit Dismissed," *Billings Gazette*, 22 Feb. 1964.

[337] See Lovaas, *People and the Gallatin Elk Herd*, 35-39.

> will be removed from the Park by live trapping and shipment. If both hunter harvest and live trapping and shipment fail to achieve the needed herd reduction, shooting of elk by park rangers will be done as necessary.[338]

Hunters removed 1,012 elk from the herd the following winter, eliminating the need for any lethal reduction in the Park beyond the 205 animals that rangers collected for biological studies.[339] Still, it was not enough: northern range studies indicated that no measurable improvements had occurred since direct reduction and the ravages of winter had conspired to decrease the herd by 5,220 elk in the winter of 1961/62.[340] By October 1966, wildlife administrators recognized the looming necessity of repeating the controversial program carried out five years earlier, stating in the new management plan that "If reduction goals are not achieved for several years in a row, we will soon be faced with a reduction as large as the one made in 1961-62." But they stood close to that dim prospect already: by their calculations, the herd decrease needed by spring 1967 was 3,322 elk.[341]

By the time Yellowstone's final great battle over the elk drew near, two Service personnel changes had replaced the resolute and capable Lon Garrison with new Superintendent John S. McLaughlin, and the divisive

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[338] "Long-Range Wildlife and Habitat Management Plan for Yellowstone National Park," Oct. 1964.

[339] "Record of Elk Reductions, Northern Yellowstone Herd, Yellowstone National Park."

[340] "1965-66 Elk and Habitat Management Plan for Yellowstone National Park."

[341] National Park Service, "1966-67 Wildlife Management Plan of Yellowstone National Park," Oct. 1966, YPL Files.

Conrad Wirth with George B. Hartzog in the directorship. Wirth had vacated that position at the end of 1963 before the completion of his pet Mission 66 agenda, but by this time, Hartzog later observed, conservationists had come to reject the development program in favor of ecology-based National Parks administration.[342] Under the new director, the volatile elk situation in Greater Yellowstone finally came to en end, but not before one last eruption of public sentiment.

Over the previous three years, rangers had avoided direct reduction of the Northern herd by concentrating their efforts on the trap-and-transplant program, so when Superintendent McLaughlin announced his Park's planned lethal removal of six hundred elk early in 1967, Montana and Wyoming responded with shock and anger. Misguided state officials had understood that their impassioned objections to the 1961/62 operation and the subsequent increase in translocation in lieu of direct reduction indicated the Park's compliance with the states' wishes. As rangers began shooting, Wyoming Governor Stan Hathaway, the state game and fish departments, various members of Congress, and the

[342] George B. Hartzog, Jr., *Battling for the National Parks* (Mt. Kisco, NY: Moyer Bell Ltd., 1988): 87. Wirth's professional relationships in the Service had become untenable after Kennedy's election in 1961, when the president immediately appointed Stewart Udall to head the Interior Department. Wirth was a member of the old guard of Eisenhower and found his use-oriented management philosophy incongruous with that of the "New Frontiersmen" of the early 1960's. Sellars, *Preserving Nature in the National Parks*, 342 n32.

hunting community at large waged a storm of protest.[343] After Wyoming introduced a "memorial" in its House of Representatives formally opposing the slaughter, Director Hartzog suspended Park removals pending the outcome of stepped-up transplant operations.[344] Despite their success, Yellowstone managers determined that trapping alone could not decrease the herd enough to bring it down to the target population size.[345]

Recalling the groundswell of support for the Leopold Report four years earlier, Udall sent a team led by the Advisory Board's chair into the field in the hopes that they would reaffirm their official endorsement of direct reduction. They did so, but the local community only scoffed. With renewed vigor, hunters insisted on an open season in Yellowstone in defiance of "the so-called Leopold Committee," while one Wyoming newspaper fueled the fire by fabricating a report that in a previous direct reduction effort, "the park rangers shot an estimated 700 elk and shoved them into pits with bulldozers."[346]

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[343] "Stan Will Protest Unnecessary Killing," *Wyoming State Tribune*, 7 Feb. 1967; "Fish and Game Objects to Park Elk Destruction," *Bozeman Daily Chronicle*, 9 Feb. 1967; "Arguments Continue to Boil Over Slaughter of Park Elk," (Rock Springs, WY) *Rocket-Miner*, 10 Feb. 1967.

[344] "House Protests Elk Slaughter in Yellowstone," *Rocket-Miner*, 9 Feb. 1967; "Elk Shoot Suspended by Park Service," *Wyoming State Tribune*, 10 Feb. 1967.

[345] "Park Rangers Are Shooting 600 Elk," *Casper Star-Tribune*, 27 Feb. 1967.

[346] "Rancher Asks Thinning of Elk Herd by Hunters, Not Rangers," *Rocket-Miner*, 22 Feb. 1967; "Shooting the Elk," *Wyoming State Tribune*, 27 Feb. 1967.

Beyond Greater Yellowstone, conservationists defended the Park's management program as a means of "Balancing animal populations with the environment," best carried out by "trained professional biologists, not politicians and special-interest pressure groups."[347] One Salt Lake City writer summoned the wisdom of Theodore Roosevelt, who in 1915 had recognized the very problem still facing the Yellowstone elk herds in 1967. Roosevelt wrote to fellow Boone and Crockett Club member Charles Sheldon in response to his Game Committee Report,

> you should emphasize the need of a heavy killing of elk that have their summer homes in the Yellowstone National Park. If they are not killed, they will die of disease and starvation; and there will be infinitely more misery. Under no circumstances will the shipping of elk to other places be an adequate solution. This shipping should be encouraged; but for some years to come from five to ten thousand elk can be killed yearly with great advantage to the herd.[348]

The Utah journalist declared, "We need a Teddy Roosevelt today to deal with Wyoming outfitters and politicians who regard the Yellowstone elk herd as a resource to be maintained according to their whims."[349]

Even though it was Montana that shared responsibility for administering the Northern herd, Wyoming, as the journalist correctly observed, bore the lion's share of antagonism toward the Park's ecology-

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[347] Yellowstone Elk War Regular Event," *Salt Lake Tribune*, 20 Feb. 1967.

[348] James B. Trefethen, *Crusade for Wildlife: Highlights in Conservation Progress* (Harrisburg: The Stackpole Co. and New York: Boone and Crockett Club, 1961): Plate VIII (reproduced letter from Theodore Roosevelt to Charles Sheldon, New York City, 7 Jan. 1915.)

[349] Erne Linford, "Teddy Knew Score on Elk Problems," *Salt Lake Tribune*, 25 Feb. 1967.

based management policies. In late February, Senator Clifford P. Hansen reified his state's opposition with a Congressional resolution that aimed to bring lethal herd reduction to a permanent halt. Hansen declared in his proposal that it would be wise to

> question the inflexible and arbitrary control program presently advocated by the Park Service. To establish a maximum elk population at 5,000 head without regard to changing range conditions, snow conditions and hunter harvest defies both good management principles and commonsense. The Park Service claims that the present elk slaughter does not constitute an emergency, but if this is not an emergency, I do not know what is. Further, the Park Service will find itself confronted with recurring emergencies of just this sort if it persists in sticking by a magical limit of 5,000 head.[350]

Worse, Senator Gale McGee, a member of the Appropriations Committee, threatened to insert language into the Interior Department's fiscal package that would forbid Yellowstone to use any of its funding to carry out direct reduction.[351] Yellowstone's neighbors bore down harder than they had in previous years in an aggressive campaign that culminated in the announcement on March 2nd that McGee would preside over a Congressional hearing on Park elk management in Casper the following week.[352]

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[350] Attachment to S. Res. 91, 90th Cong., 1st sess., 28 Feb. 1967, reprinted in U.S. Congress, Senate Committee on Appropriations, *Department of the Interior, National Park Service: Control of Elk Population, Yellowstone National Park: Hearings Before a Subcommittee*, 90th Cong., 1st sess. (Washington DC: GPO, 1967): 89-91.

[351] "McGee Threatens to Cut Park Funds to Save Elk," *Wyoming State Tribune*, 1 March 1967.

[352] "Herd Reduction Hearings to Be Held March 11," *Rocket-Miner*, 3 March 1967.

McGee started the meeting, which was broadcast to the public by radio, with the pronouncement that "as of today the direct kill of elk in the park is stopped," based on an agreement he had reached that morning with Hartzog and Secretary Udall.[353] As Park Service director, Hartzog assumed full responsibility for the poor communication alleged by Wyoming concerning that season's operations and deemed it best to cancel direct reduction for the year in light of the public uproar that had led him to Casper. He refused to indict any Yellowstone staff members and resolutely defended the Park's management program, but added a word of appreciation for "the wonderful spirit of cooperation from the States" in past herd control efforts.[354]

This interagency cooperation did not satisfy GEPA director H. Elliott Thompson, who cited "poor management on the part of the Park [S]ervice and the Montana State Fish and Game Department" and recommended a special committee consisting of representatives of "stockmen groups, sportsmen groups, outfitters and guides" from the states to investigate the "heinous crime against nature" that the Northern herd's stewards were committing.[355] With comparable hostility, the outdoor editor of the Casper Star-Tribune accused the "political-oriented personnel" in the

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[353] *Control of Elk Population, Yellowstone National Park: Hearings Before a Subcommittee*, 1; "'The Elk War' Senate Hearing on KFBC Radio," *Wyoming State Tribune*, 10 March 1967.

[354] Ibid., 21, 26, 34.

[355] Ibid., 113-15.

Service of "empire building" and warned them, "Unless you people change your attitudes, get down and mingle with us from the centers of Wyoming and Montana, your service will be shattered from coast to coast."[356] Of course, the distrust he conveyed existed primarily in Greater Yellowstone; the value system of this region did not extend to all corners of the nation.

As in other hearings conducted over the previous four decades, concern for the economic and cultural value of the elk as a game species underpinned much of the local disgruntlement. "The elk are important economically to Wyoming," testified the governor, "they are important to the sportsmen of this State and many other States." Hathaway assured the Service that because of the animal's tremendous value to his state, "Wyoming stands ready, able and willing to take all your surplus elk on a continuing contract basis, year to year," although if Montana wanted a share of the wealth, he was "perfectly willing to work with them."[357] In typical fashion, legitimate objections to elk transplants came from the ranching community, whose representatives in the courtroom that day gasped audibly after the governor's pronouncement and "began to murmur among themselves."[358] Barbara and Bill Cross of Douglas balked at Hathaway's eagerness to bring in more elk to overrun their pastures and commingle with domestic cattle at the risk of infecting the herds with

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[356] Ibid., 69.
[357] Ibid., 4-5.
[358] Hartzog, *Battling for the National Parks*, 104.

brucellosis.[359] As a hunting advocate, however, Game Commissioner Earl Thomas championed the governor's idea, urging that although Wyoming's ranges were fully stocked, the transplant program should be accelerated for the benefit of "license-buying sportsmen." Fellow Commissioner Walt Reynolds added, "we can direct hunting pressure against [the planted elk] to the extent that they would be hunt[ed] on a put-and-take basis," thus posing minimal risk to nearby ranch stock and avoiding long-term saturation of public lands.[360]

But this kind of overstocking held benefits for the state and outfitters: "A bull elk, or a cow as the mother of a future bull elk, transported to a range in any of the surrounding States where big-game hunting is carried on, can have a value of as much as $1,000 to the economy of that State," according to Izaak Walton League member Burton Marston.[361] Herein lay the "real value of our wild animals," stated Senator Hansen's spokesperson, "I daresay that there is hardly a Wyoming person in this room today who cannot remember as a boy the thrill and pride of having killed his first elk."[362] Outfitter Ned Frost guessed that one elk could be worth between $400 and $1,000, but he believed that "this direct monetary value is insignificant when compared to the value to the

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[359] *Control of Elk Population, Yellowstone National Park: Hearings Before a Subcommittee*, 134.
[360] Ibid., 37, 41, 79.
[361] Ibid., 59.
[362] Ibid., 10.

Nation of those animals in recreational and esthetic enjoyment." He explained,

> The clientele of our business is largely formed from the doctors, the engineers, the lawyers, and business executive[s], and other talented individuals of this nature. When we take one of these men, a leader of his community, tired and worn from the strife of his daily activities, into a Wyoming wilderness on a hunt for a trophy bull elk and return him 10 days or 2 weeks later fresh and zestful, again ready for his work, we, because and only because that elk is there, have performed a service for the Nation.[363]

Most of the testimony from the hunting community, of course, was less inspired and ambitious; Wyoming residents generally sought to secure their own hunting privileges and won the easy support of the state's game agency and political representatives in this regard.

Curiously, no one during the course of the hearing—or the entire decade, for that matter—challenged the principle that translocation was a more "humane" method of culling the Northern herd. Direct reduction by rangers provided a food supply for various Indian agencies and school lunch programs, but was considered a travesty of fantastic proportion by hunters, who would slaughter these animals just the same almost the instant the state released them on public lands outside the Park. Further, the trauma endured by the elk during capture and transport to the killing fields apparently never entered the minds of those hunters said to "have a special spot in their hearts for the majestic Wapiti"; more important was

[363] Ibid., 70.

that the state plant the animals "out where [the] hunters could get out and kill them . . . rather than have the park rangers get to them."[364]

In the end, this ethic prevailed over Yellowstone's contested management protocol. Although several months would pass before the Park officially adopted the new policy of "natural regulation," the Casper hearing effectively signified the end of artificial manipulation of the Northern herd.[365] As for trapping and transplanting, one of the last shipments occurred at the insistence of Governor Hathaway following the hearings. George Hartzog later recalled that when the complaints of Wyoming ranchers finally had drowned out the demands of hunters, Hathaway asked Superintendent McLaughlin to cease delivery. "Tell the governor," Hartzog advised McLaughlin, "if, in the future, he will stay the hell out of my wildlife management program, I'll stop shipping; otherwise, keep shipping, even if you have to unload them on the Capitol grounds." His lapse in diplomacy notwithstanding, the director managed to establish a truce with Hathaway, whom President Ford eight years later would appoint Secretary of the Interior, placing him in charge of Yellowstone and all other National Parks.[366]

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[364] Max Jennings, "Trapping Elk Isn't Easy as It Sounds," *Wyoming State Tribune*, 9 Feb. 1967; "State Residents Protest U.S. Plan to Slaughter Park Elk," *Rocket-Miner*, 8 Feb. 1967.

[365] National Park Service, "Guidelines for the Management of Ungulates in Yellowstone National Park," Information Paper No. 8, 7 Dec. 1967, YPLF; Sellars, *Preserving Nature in the National Parks*, 247.

[366] Hartzog, *Battling for the National Parks*, 104-05, 19.

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Under the new natural regulation policy, Yellowstone's biota, in theory, would self-adjust without interference. Elk biologist Doug Houston described the program as one that would test "a series of hypotheses to determine if [elk] reductions are indeed necessary within the park or if the Yellowstone ecosystem is intact enough that numbers within the park will be regulated naturally."[367]

The absence of two native predators to check ungulate populations, however, precluded any possibility of a return to ecological completeness in Yellowstone. Beginning as least as early as the 1930's, both biologists and conservationists called for reintroduction of the wolf and other carnivora to restore balance among the Park's fauna. E. J. Scoyen of the Service wrote in 1959, "if a normal population of these predators had been present the vegetation cover in Yellowstone would not have been overbrowsed as it is today." But he realized that "the introduction of lions and wolves in a Park surrounded by [the] ranching interest is fraught with complications."[368]

Park biologist Glen Cole blamed Montana's irresponsible hunting practices more then the absence of wolves for the ongoing problems on the northern range and believed that direct reduction might have been

[367] Douglas B. Houston, "A Comment on the History of the Northern Yellowstone Elk," *BioScience* 25:9 (Sep. 1975): 578.

[368] E. J. Scoyen to C. Kenneth Wesley, 27 Aug. 1959, box N-9, N16, "Wildlife Management—Gen. 1957-1962," YNPA.

avoided altogether were it not for the long years of the Gardiner firing line. In 1968, a memorandum of understanding between Yellowstone, the Forest Service, and the Montana Fish and Game Commission provided for modified hunting seasons; "in a cloud of political fallout" after the Casper hearings, the Gardiner firing line finally came to an end.[369]

Yellowstone National Park abandoned its dependence on agricultural models to guide wildlife administration and continued to embrace the 1963 Leopold ideal of encapsulating "a vignette of primitive America" in its management policy. And although the Park's stewards proved highly vulnerable to challenges from their Wyoming and Montana neighbors, they withstood years of pressure from the vocal and influential hunting interest and never allowed Teton's compromise to visit Yellowstone. The coming years would bring new controversy to the Greater Yellowstone Ecosystem, but the great elk battles of the Park's first century had come to an end.

[369] Glen F. Cole, "Elk and the Yellowstone Ecosystem," Research Note No. 1, Feb. 1969, YPLF; Tom Lemke, "A Montana Tradition," *Montana Outdoors* 26 (Mar./Apr. 1995): 7.

CHAPTER 8

CONCLUSION

In the two decades following Yellowstone's conversion to natural regulation as a blanket management policy, which included the termination of fire suppression and bear feeding as well as direct reduction, the Northern herd expanded to 19,000 sighted ungulates.[370] That summer, Park administrators had the opportunity to test their "let it burn" policy when the infamous 1988 fires swept through Yellowstone and ultimately contributed to a winterkill in the coming months of seven thousand to eight thousand elk on the northern range. Public response to this loss by natural processes never approached the outrage that human-imposed control measures had.[371]

Currently, researchers observe a far less significant correlation between herd size and range condition and conclude that climate asserts a far more substantial influence on the carrying capacity of the elk's habitat. Further, the agricultural model long applied by earlier managers

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[370] Michael B. Coughenour ad Francis J. Singer, "Elk Population Processes in Yellowstone National Park Under the Policy of Natural Regulation," *Ecological Applications* 6:2 (1996): 574. Factoring in a "sightability" correction, the actual population estimate approaches 23,000 elk. Francis J. Singer, "The Ungulate Prey Base for Wolves in Yellowstone National Park," in *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage*, ed. Robert B. Keiter and Mark S. Boyce, 323-48 (New Haven: Yale University Press, 1991): 338-39 (Table 21.7).

[371] Robert B. Keiter and Mark S. Boyce, "Greater Yellowstone's Future: Ecosystem Management in a Wilderness Environment," in *The Greater Yellowstone Ecosystem*, ed. Robert B. Keiter and Mark S. Boyce, 379-415 (New Haven: Yale University Press, 1991): 384.

misguided their interpretations of range conditions by substituting economically derived standards, geared toward maximized stock production with minimal waste, for ecology-based notions of carrying capacity more appropriate to the non-consumptive uses of Yellowstone wildlife.[372] Park stewards now prefer the dynamic fluctuations that occur within the biotic community to the "balance of nature" sought by their predecessors, an idea that Olaus Murie dismissed as a fundamental impossibility even in 1951.

The lack of wolves in Yellowstone continued to prevent any true biotic reversion to an intact ecosystem until the Park reintroduced these predators in 1995 and 1996 after a 70-year absence. Under serious consideration since the late 1960s, this restoration project has represented the convergence of scientific and social values in a Park where biological and recreational observation of wolves enables a better understanding of ecosystem dynamics and adds $70 million annually to the region's economy.[373] However, the promise of compensation for subsequent livestock losses to wolf predation has subdued but not silenced protests from adjacent ranching communities, which are

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[372] See Coughenour and Singer, "Elk Population Processes in Yellowstone National Park," 573-93, and Francis J Singer et al., "Thunder on the Yellowstone Revisited: An Assessment of Management of Native Ungulates by Natural Regulation, 1968-1993," *Wildlife Society Bulletin* 26:3 (Fall 1998): 375-90.

[373] Mike Stark, "UM Economist: Wolves a Big Moneymaker," *Billings Gazette*, 7 Apr. 2006. Large predators ranked first (grizzly bear), second (wolf), third (cougar), and fifth (black bear) in visitor preference polls conducted between December 2004 and February 2006. Ibid.

reinforced by the familiar objections of hunters in Montana and Wyoming who fear a decline in game populations as a result of intensified natural culling.[374] Indeed, the Gardiner late hunt, reinstated in 1976 under permit-only regulations, partly bears out their anxieties. A surge in annual harvests followed the reopening of the late season, but after the wolf arrived, the state had to reduce its permit numbers from a recent high of 2,800 to only 148 for the January 2006 hunt due to a sharp decrease in elk counted north of the Park. Montana's regional wildlife manager, Kurt Alt, predicted that his agency eventually would discontinue the hunt altogether for lack of available game.[375]

But direct predation is only partly responsible for the decline in ungulates around Gardiner. The mere presence of wolves has caused changes in elk behavior such that herds have learned to disperse differently and exercise greater vigilance than they did prior to 1995.[376] Perhaps another shift in ecosystem dynamics eventually will result from

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[374] Local hostility toward the wolf lost much of its former fervency, however: a survey conducted in Wyoming in 1987 revealed that only 15.6 percent of the statewide public claimed to "dislike" or "strongly dislike" wolves. Alistair Bath, "Public Attitudes about Wolf Restoration in Yellowstone National Park," in *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage*, ed. Robert B. Keiter and Mark S. Boyce, 367-76 (New Haven: Yale University Press, 1991): 370-71 (Table 23.1).

[375] Tom Lemke, "A Montana Tradition," *Montana Outdoors* 26 (Mar./Apr. 1995): 8; Scott McMillion, "Gardiner Late Hunt to Be Cut," *Bozeman Daily Chronicle*, 17 Dec. 2004.

[376] See, for example, P. J. White and R. A. Garrott, "Yellowstone's Ungulates after Wolves: Expectations, Realizations, and Predictions," *Biological Conservation* 125:2 (Sep. 2005): 141-52.

the loss of 47 wolf pups—68 percent of the total litter—that succumbed to parvovirus in 2005.[377]

In Wyoming, the Teton hunt continues along with winterfeeding of about 23,000 elk on the National Elk Refuge and 22 state-operated feedlots. Under this management system, Wyoming's elk herds climbed to 75,000 animals in the 1970s—nearly doubling since the early 1960s—and numbered upwards of 91,500 by 2006, but critics persistently question both the necessity and the scientific validity of the public cull in the National Park.[378] The feedlots, too, draw attacks for contributing to range depletion, promoting monoculture and domestication, and perpetuating high levels brucellosis infection among wild, migratory herds that are prone to commingle with livestock in Wyoming and adjacent states.[379] Ranchers' concerns are justified: whereas only one to two percent of the northern Yellowstone herd tests positive for the

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[377] Scott McMillion, "Wolf Populations Down by a Third," *Bozeman Daily Chronicle*, 19 Jan. 2006.

[378] Pinckney Wood, "The Elk Hunt Goes On at Grand Teton," *National Parks* (Sep./Oct. 1984): 29-31; Bruce L. Smith, "Winter Feeding of Elk in Western North America," *Journal of Wildlife Management* 65:2 (2001): 174; Joseph E. Brown, "Nowhere to Go," *National Wildlife* 13:5 (Aug./Sep. 1975): 8; "Wyoming Elk Numbers 9,000 Beyond Objective," *Billings Gazette*, 8 April 2006; "Embarrassing Inconsistency in Philosophy," *Jackson Hole News*, 11 Dec. 1975.

[379] See, for example, A. A. Beetle, "Jackson Hole Elk Herd: A Summary after 25 Years of Study," in *North American Elk: Ecology, Behavior, and Management*, ed. Mark S. Boyce and Larry D. Hayden-Wing, 259-62 (Laramie: University of Wyoming, 1979), and Scott McMillion, "New Governor Has a Bison Plan," *Bozeman Daily Chronicle*, 19 January 2005.

bacteria, elk that frequent Wyoming's feed grounds carry a 34 percent infection rate.[380]

The prevalence among bison in the area is more than double that rate.[381] Because they carry brucellosis and tend to be extremely destructive of fences and grazing pastures, Yellowstone bison do not enjoy the privilege of roaming free that "natural regulation" implies. Beginning in 1968, the Park tried several experimental boundary control programs that attempted to reconcile Montana's management objectives with their own, but these animals still found their way to the slaughterhouse when they breached state boundaries and threatened to invade public grazing allotments and private ranchlands.[382] Montana, certified brucellosis-free in 1985, aggressively resists this type of encroachment and now claims jurisdiction over bison through the state Department of Livestock the moment they leave the Park.[383]

Although bison lacked the public sympathy offered elk for most of the twentieth century, the opening of a public hunt to remove surplus animals crossing the boundary in the 1980s caused a public uproar when

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[380] Norman F. Cheville, Dale R. McCullough, and Lee R. Paulson, *Brucellosis in the Greater Yellowstone Area* (Washington DC: National Academy Press, 1998): 47-48.

[381] Ibid., 44-45.

[382] Mary Meagher, "Evaluation of Boundary Control for Bison of Yellowstone National Park," *Wildlife Society Bulletin* 17:1 (1989): 15-16.

[383] For a thorough explanation of current interagency management protocols, see U.S. Department of the Interior and U.S. Department of Agriculture, *Record of Decision for Final Environmental Impact Statement and Bison Management Plan for the State of Montana and Yellowstone National Park*, 20 December 2000.

news cameras captured the spectacle of struggling, incapacitated animals wounded by inept shooters who had been led directly to their quarry by game wardens. After a few seasons, the Department of Fish, Wildlife & Parks discontinued the hunt, but direct reduction of errant bison remains a point of protest among preservationists, who balk at the politically driven control program that has claimed as many as 1,084 herd members in a single season. Interestingly, the revived hunt of 2005/06 garnered relatively little negative press even as the media sensationalized official capture and hazing efforts gone awry.[384]

At the core of this long history of the problems associated with wildlife management in the Greater Yellowstone Ecosystem is problematic jurisdictional fragmentation coupled with the various competing resource values attached to animals whose mobility complicates efforts to administer them. As a result, wildlife stewards in the Park at times have submitted to the vagaries of local politics and conservation philosophies, often losing their struggle to assert the supremacy of scientific principles over cultural values. As the biotic ebb and flow continues, familiar

[384] Don Despain et al., *Wildlife in Transition: Man and Nature on Yellowstone's Northern Range*, (Boulder: Roberts Rinehart, Inc., 1986), 38-42; Cheville, McCullough, and Paulson, *Brucellosis in the Greater Yellowstone Area*, 56; Ron Tschida, "Oft-hazed Bison Killed in Park," *Bozeman Daily Chronicle*, 13 January 2005; Scott McMillion, "State Officials Thinking about Expanding Bison Hunt," *Bozeman Daily Chronicle*, 4 Feb. 2006; Mike Stark, "Bison Hazing Goes Awry: 14 Animals Fall through Ice," *Billings Gazette*, 13 Jan. 2006 is one of many such reports.

questions will arise concerning the extent and type of manipulation necessary to maintain a model of nature befitting Greater Yellowstone. ∞

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