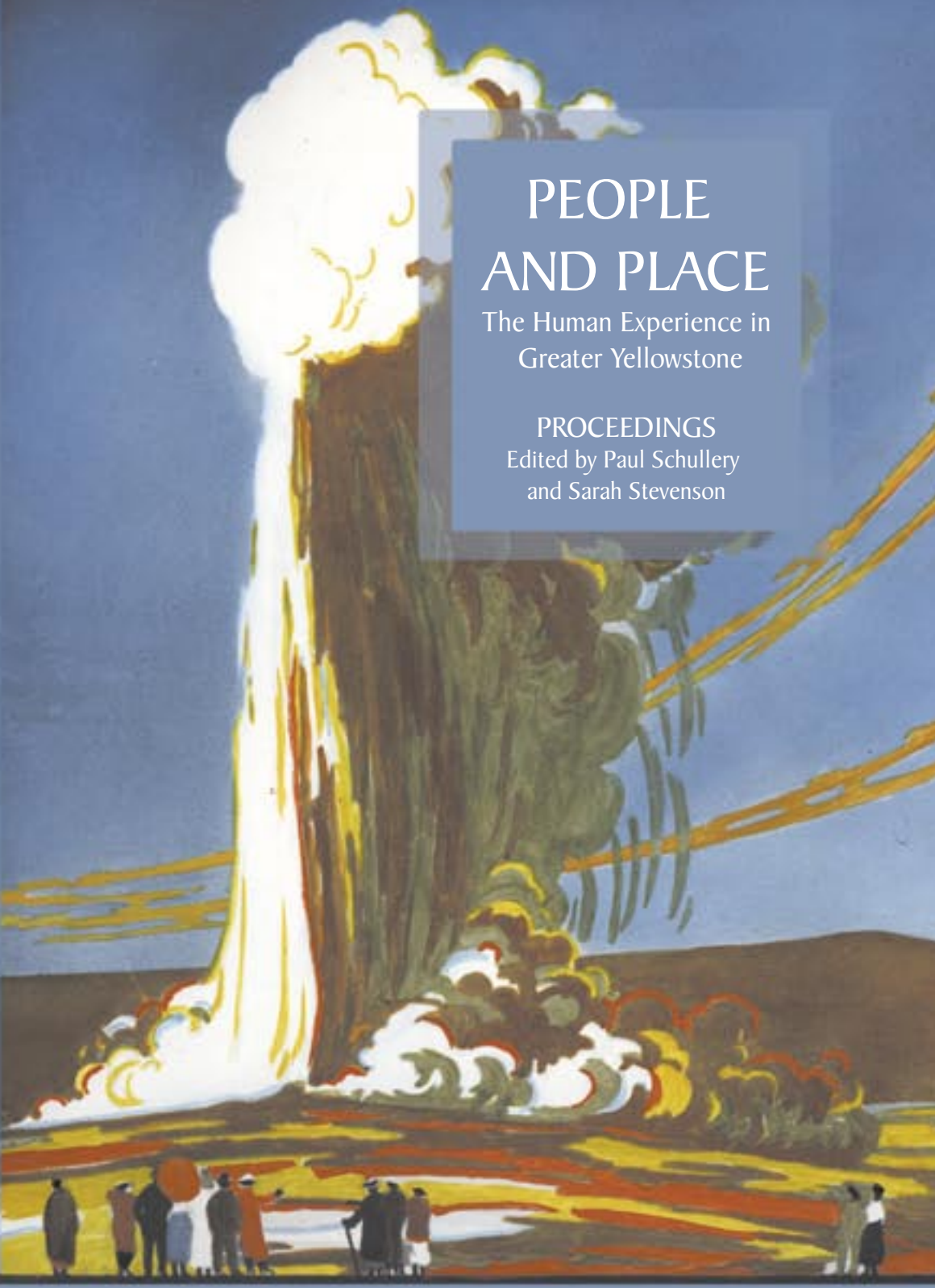

PEOPLE AND PLACE

The Human Experience in Greater Yellowstone

PROCEEDINGS

Edited by Paul Schullery
and Sarah Stevenson

4th Biennial Scientific Conference on the Greater Yellowstone Ecosystem

People and Place

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People and Place

The Human Experience in Greater Yellowstone

Proceedings

Edited by
Paul Schullery and Sarah Stevenson

Associate editors
Tami Blackford and Virginia Warner

National Park Service
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2004

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Foreword

In 1991, when we initiated our biennial conference series in Yellowstone, we fully intended that each meeting attract as many academic disciplines as possible. In fact, the compliment we may have heard most often over the years has been an expression of appreciation for just how widely our agendas range across the scholarly spectrum. A glance at the agendas and proceedings for the first three conferences—which focused on vegetation, fire, and predators—reveal the breadth of information, and the corresponding breadth of audience appeal these gatherings generated.

The year of the fourth conference, 1997, was also the 125th anniversary year of Yellowstone National Park. It was the perfect occasion to celebrate and showcase the wealth of humanities-related research that was underway in greater Yellowstone. As you will see from this generous and representative selection of papers from that conference, it was even more successful than its predecessors in attracting a full, multidisciplinary crowd.

Besides the many outstanding papers presented, the conference featured a series of keynotes by some of the nation's leading figures in environmental history and park-related humanities research. We are fortunate to include several of those presentations here. Conservationist and historian T. H. Watkins, from Montana State University, delivered a stirring Leopold Lecture on the fate of the modern environmental movement. Donald Worster, University of Kansas, considered the parallels and distinctions between Canadian and United States conservation movements. Patricia Limerick, University of Colorado, explored the quirky and revealing nature of the idea of progress in the history of Yellowstone management. And Gordon Brittan, Montana State University met the daunting challenge of summarizing the vast array of ideas, opinions, information, and dreams that were expressed through the three very busy days of sessions.

It was our best-attended conference to date, and in the years since it was held it has achieved a singular productivity record among our conferences, not only in terms of presented papers that later appeared in professional journals and other outlets, but also in a surprising number of papers that developed into or became significant parts of books.

We see these conferences as part of one large and very involved conversation about Yellowstone research, to be sure, but also about Yellowtone's role in the world and our responsibilities to the park and its posterity. As you will see in the papers in this proceedings, that conversation continues to be vital, exciting, and urgently valuable.

Through this proceedings, we formally and gratefully acknowledge the roles played by our sponsors and by many of the presenters. We also recognize and thank the Planning Committee, ably chaired by Laura Joss. They attended to a thousand logistical, procedural, and diplomatic details. The Program Committee, whose task it was to shape the agenda into a coherent and compelling event, likewise did an

outstanding job. We are especially grateful to Susan Rhoades Neel, then of the History Department, Montana State University, not only for chairing the Program Committee but also as the primary shaper of the goals this conference so admirably met. And we thank the conference services office of Montana State University, with whom the National Park Service cooperated in many of the arrangements and events.

John D. Varley
Director, Yellowstone Center for Resources

Part 1

Natives and Locals

The Sheepeater Myth of Northwestern Wyoming

Susan S. Hughes

Abstract

A tribe of diminutive and timid Sheepeater Indians thought to be the only permanent residents of Yellowstone National Park are embedded in the local history and folklore of western Wyoming. Considerable mystery shrouds these people because historical and ethnographic information is scarce. Most problematic is that Sheepeaters vanished by the time Yellowstone Park was established in 1872. According to most accounts, the only traces of this vanished tribe are abandoned conical timber lodges, drive lines, and other wood structures encountered at high elevations. This paper is a critical review of the Sheepeater phenomenon in northwestern Wyoming. Through a detailed examination of nineteenth-century literature and Shoshone ethnography, this paper explores two ideas. First, the Sheepeaters as depicted in northwestern Wyoming folklore are predominantly a myth derived from the medieval wild man and an Indian stereotype passed down through colonial history, and second, a permanent band of Sheepeaters in Yellowstone National Park may never have existed.

Keywords: Sheepeaters, myths, Shoshone Indians, northwestern Wyoming, central Idaho.

Introduction

According to historical accounts and local folklore, the only permanent residents of Yellowstone National Park were the Sheepeaters, a vanished tribe of mountain-dwelling pygmies. Because no Sheepeaters remain and little factual information exists about them, these Indians are shrouded in mystery (Hultkrantz 1970:246; Murphy and Murphy 1960:309). According to tradition, all that remains of their presence are primitive timber structures such as conical timber lodges (Figure 1), sheep traps, and other wood and brush structures located at high elevations in the Rocky Mountains (Frost 1941:17; Norris 1881:35; Tholson 1966; Hultkrantz 1970: 257).

This paper is a critical review of the Sheepeater phenomenon in northwestern Wyoming. I propose that the image associated with the Sheepeaters is predominantly a myth passed down from the mid-nineteenth century and rooted in Victorian romanticism and colonial stereotypes of Native Americans. This paper uses the

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standard dictionary definition of *myth*, a fictional story developed to explain a basic truth (see Hultkrantz 1986:340–2 for a discussion of other meanings of myth). An *image* is a pictorial or mental representation of a people (Berkhofer 1978:xvii).

I propose that the Sheepeater myth is a non-Indian invention, the application of a borrowed Northern Shoshone word to an existing image replayed throughout colonial history. This myth developed during the 1870s, when Philetus Norris, second superintendent of Yellowstone National Park, popularized it to explain the abandoned Indian structures in Yellowstone Park.

Figure 1. Soapy Dale Lodge, northwest Wyoming, typical of the conical timber lodges attributed to the Sheepeaters (Wyoming Bureau of Land Management photo).

This paper does not deny the existence of people who might have called themselves Sheepeaters or were called Sheepeaters by other Shoshone Indians. A myth generally has some factual basis. It does argue that the image applied to these mysterious people, the myth itself, is not factually based, that it is a Euro-American invention, and that the structures often attributed to Sheepeater occupation may be explained in other ways.

In support of this argument, I will explore two lines of evidence. First, the word *sheepeater* has a different meaning to the Northern Shoshone than that conveyed in the myth. Second, the Sheepeater image was in existence long before the word *sheepeater* was attached to it. Lastly, I will explore the evidence that links timber structures to the Sheepeaters in Yellowstone National Park.

The Sheepeater Myth of Northwestern Wyoming

THE MYSTERIOUS SHEEPEATER has appeared frequently in historical and popular literature of northwestern Wyoming (Allen 1913; Chittenden 1940:6–7; Frost 1941; Norris 1880:11, 26; Norris 1881:35; Sheridan 1882:12; Tholson 1966; Thompson 1941; Topping 1983:6). Norris provides a classic description of these people in his 1881 report on Yellowstone Park:

> The only real occupants of the Park were the pigmy tribe of three or four hundred timid and harmless Sheepeater Indians, who seem to have won this appellation on account of their use of the flesh and skin of the bighorn sheep for food and clothing, and their skill in hunting these animals amid the cliffs, crags, and canons of the

> snowy mountains….Whether these people are the remnant of some former race, as the legendary wild men of the mountains, or are descendants of refugees from the neighboring Bannock and Shoshone Indians, is not known, although their own traditions and the similarity of their languages and signals indicate a common origin, or at least, occasional intermingling. These Sheepeaters were very poor, nearly destitute of horses and firearms.…On account of this lack of tools they constructed no permanent habitations, but as evinced by traces of smoke and fire-brands they dwelt in caves and nearly inaccessible niches in the cliffs, or in skin-covered lodges, or circular upright brush-heaps called wickeups.…Other traces of this tribe are found in the rude, decaying, and often extensive pole or brush fences for drive-ways of the deer, bison, and other animals… (Norris 1881:35).

Topping adds another element to the image:

> The cold and privations endured by the Sheepeaters have left their mark, for they are small of stature, and in brain diminutive, and compare very unfavorably with their relatives, the Shoshones (Topping 1883:6).

These descriptions combine to create a romanticized notion of a vanished tribe of pygmies who lived in the lofty recesses of the mountains in northwestern Wyoming, and especially Yellowstone National Park. Pervasive elements of the image are their lack of horses, impoverished state, small size, isolation, and timidity.

While most writers agree on the basic elements of the image, considerable disagreement exists over the relationship of the Sheepeaters to other Indian tribes. As noted above, Norris recognizes a similarity in language to the Shoshone and Bannock, but ponders whether the vanished Sheepeaters represented a separate "race." At about the same time, Sheridan suggests that the Sheepeaters were "a band of Snake or Shoshone Indians, probably renegades" who took refuge in the mountains to protect themselves from their own people and other marauding Indians (Sheridan 1882:12). Most later accounts describe them as renegades or outcasts of other tribes, usually Shoshone or Bannock tribes (Thompson 1941; Tholson 1966; Trenholm and Carley 1981:23). Haines (1977:22–24) describes them not as outcasts, but as people who could not compete against the gun-wielding and equestrian Indian societies of the eighteenth century. To Hultkrantz, a leading ethnographer of the Eastern Shoshone, they represent Shoshone "walkers," Shoshone who "retained the old way of living from the time before horses were introduced and who established a specialized mountain culture" (Hultkrantz n.d.:152; Hultkrantz 1970:247). The conflicting notions of who the Sheepeaters were adds to the mystery and is a clue that the phenomenon may be more myth than fact.

The Shoshone Word for Sheepeater

I PROPOSE THAT THE SHEEPEATER MYTH represents the attachment of a Northern Shoshone word to an enduring Euro-American stereotype of the Native American. A review of Shoshone ethnographic literature reveals that its meaning to the Northern

Shoshone is different from the meaning conveyed in the myth. The Indians in the myth are usually described as a discrete political unit, either a band, tribe, or race, characterized by a unique cultural-ecological adaptation.

In the pre-reservation era, the Shoshone occupied the central Great Basin from southern Nevada to central Idaho and western Wyoming (Figure 2). The Northern and Eastern Shoshone who are ethnically linked to the Sheepeaters occupied the northern Great Basin, middle Rockies, and eastern Plains along with a large group of Bannock speakers who recently migrated to eastern Idaho from Oregon (Murphy and Murphy 1960:315; Steward 1970a:200). While the two tribes coexisted together amiably, they spoke different languages of the Uto-Aztecan linguistic stock (Murphy and Murphy 1960:293; Steward 1970a:625).

Ethnographers refer to those Shoshone occupying the northern Great Basin as the Northern Shoshone, while the Wyoming Shoshone are often referred to as the Eastern Shoshone. In the late 1860s and early 1870s, the Northern and Eastern Shoshone were established on three reservations: Fort Hall on the Snake River in eastern Idaho, Lemhi in central Idaho, and the Wind River in western Wyoming (Figure 2).

According to Julian Steward, these people were nomadic hunter-gatherers characterized by a fluid and shifting socio-political organization. To the Northern Shoshone, the unit of "habitual association and cooperation" was the winter village, a unit usually composed of two to fifteen families (Steward 1970a:232). No higher level of political organization, such as a formal band structure, existed (Steward 1970a:247; Steward 1970b:135–8). Instead, the mechanism that served to connect

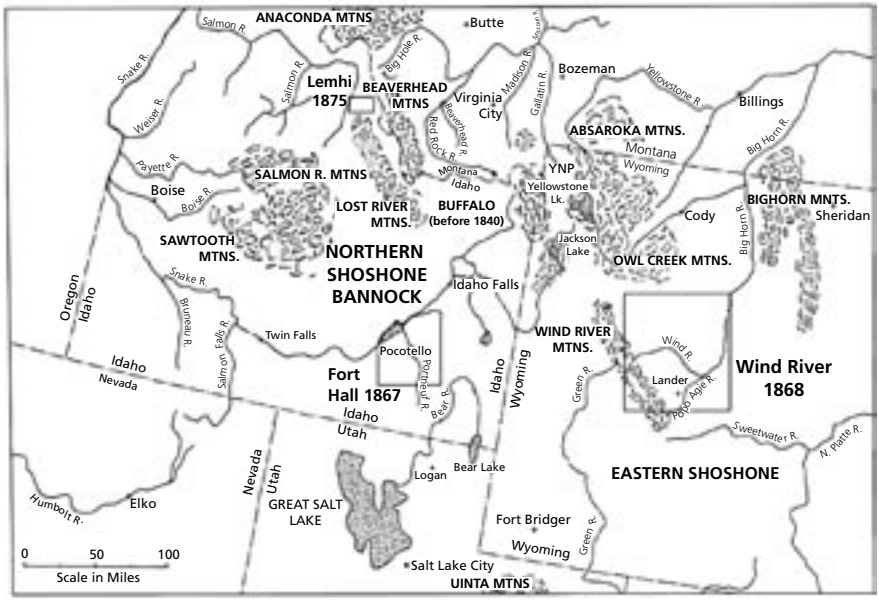

Figure 2. Map of Northern and Eastern Shoshone territory with locations of Shoshone reservations (adapted from Murphy and Murphy 1960: facing page 293).

the Shoshone was a network of temporary and shifting inter-village alliances that extended netlike throughout the entire area (Steward 1970a:248). During the warmer seasons of the year, villages would coalesce into larger groups for communal bison hunting and social functions, or split apart for other economic pursuits. Families could shift their alliance from one village to another or choose to participate in any number of economic pursuits led by temporary leaders (Steward 1970a:248; Liljeblad 1957:16–17; Murphy and Murphy 1960:307–8, 332; Shimkin 1947: 279–80; and Fox 1976:3–4).

In the nineteenth century, a hint of band structure began to develop, especially among the Eastern Shoshone, in response to communal bison hunting, predation by marauding Indians, and the need for leadership when negotiating treaties. The political unrest during this period caused by Euro-American expansion required that Indians travel and cohabit in larger groups for protection, and these larger groups required more formalized leadership. In addition, government officials elevated respected group leaders to greater status as spokesmen and representatives in treaty and other government negotiations. While government officials frequently referred to these groups as bands, the leadership roles were only temporary, and chiefly status was more a non-Indian phenomenon than an Indian one (Steward 1970a:248–9, Steward 1970b:114–6; Murphy and Murphy 1960:313, 332–5).

It was a Shoshone custom to apply food names to people living in certain regions (Steward 1970a:248; Liljeblad 1957:54). According to Steward (1970a:248) and others (Liljeblad 1957:56; Murphy and Murphy 1960:309, 315; Murphy and Murphy1986:287; Hultkrantz 1970:247), food names did not represent cohesive political units. Sheepeater was one of these food name identifiers, and as Murphy and Murphy (1986:287) note, it is the only food name that passed into English nomenclature. Sheepeater is the English translation of a Northern Shoshone word, *Túkudeka* or *Tukuarika*, meaning "flesh or meat eater" ('tuku', flesh, + 'deka', eater; Liljeblad 1957:55; see also Hultkrantz 1970:247; Steward 1970a:186). Those Indians occupying the mountains of central Idaho were loosely referred to as *Tükudeka*. Because bighorn sheep was the most common meat source in this area, the term has come to mean "mountain sheep eater" (Liljeblad 1957:55; according to Shimkin 1947:277, the Shoshone word for ram was *duk*).

The significance of these food names has caused considerable misunderstanding and confusion among anthropologists, government officials, and explorers (Fowler 1965:64; Hultkrantz 1966–7:160; Murphy and Murphy 1986:287). As both historical records and ethnographic accounts attest, many non-natives have treated these food names as formal socio-political units, i.e., bands (Murphy and Murphy 1986:287; Steward 1970b:135–40). Steward (1970b:135) suspects that this stems from a traditional anthropological belief that bands existed among all hunting and gathering peoples. Because food name designators do not represent formal bands, considerable variation exists in the number and names of those identified among the Northern Shoshone. For example, Hoebel (1938) recognizes 15 bands and Lowie (1909) 10, of which only 8 bands overlap (Table 1). Other ethnographers, such as Steward, recognizing the loose organizational nature of food name groups, avoided their use altogether, referring instead to geographic location as an organizational

Table 1. A comparison of the Shoshone "bands" identified by Lowie and Hoebel.

Lowie 1909: 206	**Hoebel 1938: 410–413**
Salmon eaters	Salmon eaters (Agaidika)
Sheepeaters	Mountain Sheepeaters (Tukurika), Lemhi R.
Squirrel eaters	Squirrel eaters (Siptika)
Groundhog eaters	Ground hog eaters (Yahandika)
Pine nut eaters	Pine nut eaters (Tubudika)
Sagebrush people (Pohogwe)	Sagebrush Butte (Pohogoi; also Bannock)
Wind River Shoshone (Gut eaters)	Wind River Shoshone (Pohogoi, sagebrush home, and Kukundika, buffalo eaters)
Seed eaters	Seed eaters (Hekandika)
White knives	
Bannock	
	Minnow eaters (Pirpengwidika)
	Rabbit eaters (Kanurika)
	Big salmon eaters (Piagaidika)
	Yampa eaters
	Mountain Dwellers (Doyia), YNP
	Elk eaters (Parahiadika)
	Row of Willows (Sehewoki)
***n* = 10 bands**	***n* = 15 bands**

system for the Shoshone (Steward 1970a; Murphy and Murphy 1960; Fowler 1965; Shimkin 1947).

According to Liljeblad (1957:56) and Steward (1970a:248), Shoshone food names loosely identify people who were either living in an area associated with a particular food resource, or who were temporarily participating in the acquisition of that resource. Shoshone informants support this meaning. For example, the Nevada Shoshone might call the Idaho Shoshone "groundhog eaters," and the Idaho Shoshone might call the Nevada Shoshone "pine nut eaters." Neither considered themselves members of bands with these names, and only rarely did they use these names to identify themselves (Steward 1970a:172; Shimkin 1947:246). When "groundhog eaters" traveled south to Nevada to collect pine nuts, they would be called "pine nut eaters" (Steward 1970a:172). In a similar way, the Buffalo Eaters of the Wind River Reservation could turn seasonally into either "elk eaters" when hunting elk in the Teton country or "sheep-eaters" when hunting bighorn sheep (Hultkrantz 1970:260, fn 3; Liljeblad 1957:55–6).

Today, Western literatures portrays an entirely different meaning for the word sheepeater. It represents both a formal political unit as discussed above and a cultural-ecological adaptation (Hultkrantz 1970:247; Murphy and Murphy 1960:310). Hultkrantz (1970:247), for instance, tells us that,

> The Sheepeaters represented a particular way of living, the ecologically determined way of a primitive, well-adapted hunting people in the mountainous and wooded ranges of the Rocky Mountains.

This new meaning is attached to the word when it first appears in historical writings of the mid-nineteenth century, and exists today.

Several factors may have contributed to the adoption of this new meaning. First, early non-Indian explorers, settlers, and government officials may have misinterpreted the political significance of the term, as most early ethnographers did. If, as Steward suggests, there was an underlying assumption that all Indians formed bands, then in the absence of Shoshone band names, it is easy to see how Sheepeater and other food names were elevated to this status.

Second, another word exists in the Shoshone vocabulary that identifies people with an adaptation similar to that presently associated with Sheepeater. This term is *Dóyani'* or *Tóyani'*, meaning mountaineer, mountain dweller, or mountain settler (Hultkrantz n.d:152, 1966–7:158; see Steward 1970a:277 for its root, *tóya*, or "mountain" in the Lemhi lexicon).

Hultkrantz's informants on the Wind River Reservation identified certain Shoshone as "Mountain Settlers," or *Tóyani'*. To the Eastern Shoshone, it was a derogatory term referring to impoverished Indians who lived in the mountains away from the encampments of the mounted Shoshone. A mountain settler or mountaineer could be a Bannock (*Pánaiti tóyani'*), a Shoshone, or any other Indian evincing this adaptation (Hultkrantz n.d.:152, 1966–7:158). To non-natives, Sheepeater may have seemed synonymous with mountaineer, and thus, Sheepeater took on the cultural-ecological meaning of mountaineer. In his monograph on Shoshone socio-political organization, Steward refers to those Indians of central Idaho with a mountain adaptation as "mountain villagers" (Steward 1970a:186). Yet later, he refers to them as *Tükudeka* because both Lowie and Kroeber use that identifier (Steward 1970a:187, fn 22). Shimkin notes that the mountain Sheepeaters were also called mountaineers (Shimkin 1986:335). Both references indicate confusion between the two words.

The Indians themselves may have contributed to this change in meaning. According to Liljeblad (1957:56), food names became associated with status in the mid-nineteenth century when band organization and class distinction began to appear. Sheepeaters, as hunters of big game, were highly respected among other Shoshone (Liljeblad 1957:56). If mountaineer was a derogatory term as Hultkrantz notes, then Shoshone mountaineers may have preferred to be identified as Sheepeaters. This misapplication of Sheepeater likely took place in central Idaho through contact with the documented Shoshone mountaineers of that area (Steward 1970a:186–7). Once Sheepeater became attached to this mountain adaptation, it stuck.

Evolution of the Sheepeater Image

Elements of the Sheepeater image were present in early depictions of the Native American long before Sheepeater was identified with that image. An examination of colonial perceptions of the American Indian reveals that the Sheepeater image is a replay of previous images variously called savage, Indian, and Digger. These images are rooted in the wild man image of medieval Europe.

Template for the Image. The template for the Sheepeater image derives from the wild man, a pervasive character in medieval folklore and art (Bartra 1994:2–3; Bernheimer 1970:20; see Figure 3). As described by Berkhofer,

> The wild man was a hairy, naked, club-wielding child of nature who existed halfway between humanity and animality. Lacking civilized knowledge or will, he lived a life of bestial self-fulfillment, directed by instinct, and ignorant of God and morality. Isolated from other humans in woods, caves, and clefts, he hunted animals or gathered plants for his food. He was strong of physique, lustful of women, and degraded of origin (Berkhofer 1978:13).

The wild man was more than a passive image in medieval society; he embodied deeply ingrained beliefs. He was loathed and feared, because he was a metaphor

Figure 3. The Fight in the Forest*, by Hans Burgkmair I (German), ca. 1500/1503, pen and black ink on laid paper, National Gallery of Art, Washington, Ailsa Mellon Bruce Fund (B-30554).*

for the uncivilized, wild, and animalistic part of every human being, that part that must be controlled and tamed (Bartra 1994:7; Bernheimer 1970:20; Thorslev 1972: 281–2; White 1972:28).

As the antithesis of civilized life and the established order of Christian society, the wild man became the universal template to understand all uncivilized peoples encountered during European colonization (Bartra 1994:85–6; Berkhofer 1978: 13; Bernheimer 1970:20; Burke 1972:263–4). The direct association of the Indian stereotype with the wild man image is evident in the interchangeable use of the term "savage" for "Indian" (Berkhofer 1978:13). The sixteenth century French, Italian, and English spellings of savage (*saulvage, salvaticho*, and *salvage*, respectively) were derived from the Latin word *silvaticus* meaning "a forest inhabitant" or "man of the woods." The image behind this terminology probably derives from the ancient image associated with the "wild man" or "wilder mann" of Germany (Berkhofer 1978:13).

Over time the wild man template evolved in western culture (Figure 4). The Enlightenment brought an increased interest in antiquities and exotic peoples, and the loathsome, degraded savage was rehabilitated into the *Noble Savage*, a character to be admired. The Noble Savage was no longer a real character, but an ideal, romanticized figure who rose to high status in the refined literature of the latter seventeenth and eighteenth centuries (Bartra 1994:167; White 1972:30).

The rise of the Noble Savage provided a second image to define Native Americans, and inspired the distinction between the *good Indian* and the *bad Indian*. The *good Indian*, the Noble Savage, was seen as calm, dignified, brave in combat, and a great hunter. The *bad Indian* was characterized as lecherous, indolent, timid, and thieving, the lowest order of human life (Berkhofer 1978:28).

Due to western expansion in the latter nineteenth century, the Indian was viewed less as an ideal and more as a creature to be despised, incapable of rehabilitation. This change developed in part to justify the extermination and subjugation of the Indian during colonial expansion (Bartra 1994:179; Berkhofer 1978:113; Silverberg 1989: 57–58). Indian stereotypes persist today in American movies, art, and literature, even though modern science has long dispelled these ethnocentric notions (Schullery 1997:22–23; White 1972:6).

In many ways the Sheepeater image parallels the wild man image. The similarity

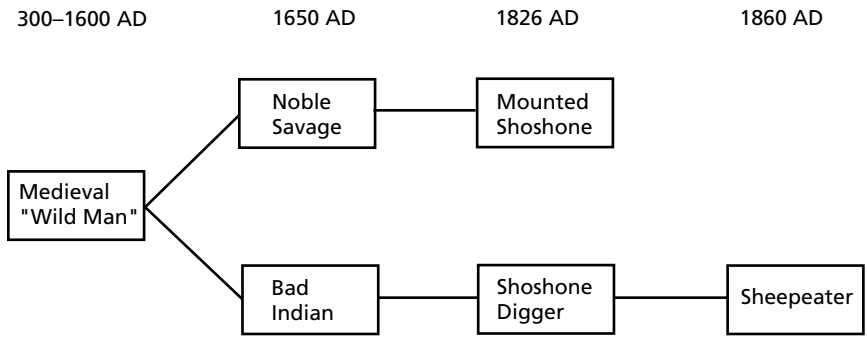

Figure 4. Evolution of the wild man image.

can be seen when comparing the basic elements of each (Table 2). Both characters were similar in appearance. The wild man was depicted either as a dwarf or giant, a giant when warlike and aggressive, and a dwarf when timid. The timid Sheepeater was depicted as a dwarf. This image was possibly reinforced by indigenous beliefs in the "Little People," supernatural beings who figured prominently in Shoshone folklore. Unlike most other supernatural figures, the *ninimpi* or *nü'nümbi* were often malevolent. These invisible dwarfs, present everywhere in nature, brandished bows and arrows that caused sickness and death when shot at unsuspecting humans (Hultkrantz 1986:633; Liljeblad 1986:654; Lowie 1924:296).

Both the Sheepeater and the wild man lived in inhospitable and inaccessible regions, areas unfit for cultivation. Agriculture was then and continues to be a defining characteristic of civilized society. Both characters lived a solitary existence, cut off from contact with other human beings. Both lacked intelligence. Both used primitive technology: the wild man is often depicted with a wooden club (Figure 3); the Sheepeater with tools of stone, wood, and horn. Both creatures subsisted on wild

Table 2. Shared elements of the wild man and Sheepeater images (see Bartra 1994, Bernheimer 1970, and White 1972 for elements of the wild man image).

Elements	Wild Man	Sheepeater
Appearance:	Dwarf or giant[1]; Semi-bestial; Naked and covered with hair.	Dwarf; Semi-bestial; Dressed in fur.
Habitat:	Lived in inhospitable and inaccessible parts of forests and mountains.	Lived in inhospitable and inaccessible parts of forests and mountains; Permanent residents of Yellowstone Park.
Behavior:	Solitary; Isolated from society; Lacking intellectual capacity; Warlike or timid.	Solitary (single family groups); Isolated from society; Lacking intellectual capacity; Timid.
Habitations:	Lived in the open, caves, or trees.	Lived in caves and rude shelters of brush and fallen timber.
Language:	None or communicated by sensations.	Bannock/Shoshone speakers.
Economy:	Subsisted on plants and animals of the forest.	Subsisted on plants and animals of the forest.
Technology:	Wooden club; Lacked horse transportation; Lacked articles of civilized society.	Primitive tools; Lacked horse transportation; Lacked articles of White trade.

[1] The wild man was often depicted as a giant when warlike and aggressive, a dwarf when timid.

plants and animals, the natural products of the forest. The appellation of Sheepeater implies that these Indians focused their subsistence efforts on the hunting of wild sheep.

In medieval times, isolation was a condition to be feared and avoided because it was linked to insanity and/or ignorance of God. According to Augustinian doctrine, knowledge of God was the prerequisite for further mental activity. Without this knowledge, the wild man was portrayed as insane or mentally deficient (Bernheimer 1970:12; Bartra 1994:113). Lunatics in the Middle Ages were rarely institutionalized, often hiding in the woods. Wildness, then, became a synonym for madness (Bernheimer 1970:12; White 1972:4).

The attribution of feeblemindedness to Sheepeaters may be a carryover of this idea, though Topping (1883:7) attributes feeblemindedness to winter cold. That climate influenced physical appearance and mental capacity was a common theme in the nineteenth century (Hallowell 1960:59). Climatically induced food privations and other hardships were thought to contribute to a degenerate mental state (Jordan 1965:63,215; Semple 1911:36). Under this premise, the Sheepeaters, who endured high-altitude winters in and around Yellowstone Park, were excellent candidates for feeblemindedness.

The Sheepeater is always described as a pedestrian Indian. Because the horse was an important symbol of status to both Europeans and Indians, the lack of horses demonstrated the impoverished and degraded state of the Sheepeater. The mounted Indian is often seen as the good Indian, the pedestrian Indian as the bad Indian.

Evolution of the Myth

The Sheepeater image is not the first application of the wild man template to the Shoshone Indians. Prior to Sheepeater, there existed the contrast between the equestrian Shoshone and the Digger, the good and bad Indian reified. To trace the evolution of the image in Euro-American perceptions of the Shoshone Indians, I examined the historical literature for the terms and images used to identify Shoshone groups. The terms fall into five chronological stages that demonstrate increasing Indian and Euro-American interaction and knowledge of the Shoshone (see Table 3). This research reveals that Sheepeater does not appear in Euro-American literature until 1859, and when it does appear, the Digger image is attached.

The year 1804 marks the beginning of the Lewis and Clark expedition to explore the uncharted territory west of the Mississippi River. Up to this point, Euro-Americans knew little about the Indians within and west of the Rocky Mountains. During this era (1804–1814), the first information on indigenous populations was acquired from a small number of trappers and explorers who either encountered these Indians or heard about them from neighboring Indians. Transmission of accurate information was difficult because non-Indians did not know Indian languages, and interpretations were based on personal perceptions molded by the cultural attitudes of the early nineteenth century. The earliest explorers were aware that a group of Indians called Shoshones or Snakes lived west and within the middle Rocky Mountains. At this early date, references to Mountain Snakes appear in the literature,

but these Indians were not referred to as Sheepeaters.

After initial contact, fur traders invaded the Rocky Mountains. Greater diversity in Shoshone culture was observed, but little consistency existed in the identification of these groups, nor were distinct images present. In the Early Fur Trader phase (1812–1826), the Bannocks were introduced into English nomenclature (Elliot 1909:354–6; Bonner 1965:101, 136). Plains Snake replaces Mountain Snake as a subdivision of the Shoshone group. Ross appears to be the first to use a Shoshone food name to identify a Shoshone band (Table 3).

After 1826, the literature reflects a consensus in the identifiers applied to the Shoshone. The Shoshone were divided into three groups: the Bannock, the 'true' Shoshone, and the Digger. The latter two carried strong images (Quaife 1934:80; Irving 1910:237–8; Thompson 1855:490; Humfreville 1903:213). The 'true' Shoshone were the equestrians who hunted bison while the Digger was the quintessential bad Indian. The lowly Digger is described by Humfreville (1903: 213)

Table 3. Terms used by Whites to identify Shoshone and Bannock Indians since first contact.

Phase	Terms	Year Applied	Sources
V.	CONTINUATION OF PREVIOUS TERMS	1913	Allen (1913)
		1895	Chittenden (1940:8)
	"The sheepeater myth" of northwestern Wyoming	1883	Topping (1883:6–7)
		1881	Sheridan (1882:12)
		1879	Norris (1879:11,26; 1881:35)
1879		1875	Dunraven (Kephart 1917:246)
IV.	N.W. SHOSHONE	1879	Gatschet (1879:409)
	BANNOCKS	1875	Ludlow (1875); Strong (1875)
	LEMHI R. SHOSHONE (includes Sheepeaters)	1873	Jones (1875:275)
	W. SHOSHONE	1870	Langford (1905:8,25)
	E. SHOSHONE	1869	Folsom-Cook (Haines 1966:17, 21)
	GOSIUTES	1866	Henderson (1866:9/4, 9/11)
	WEBER-UTES	1861	Stuart (Phillips 1957:192)
	UTAHS	1860	Lander (1860:137)

	PAH-UTES PAH-EDES	1862–1883	*RCIA* (Berry 1871:539–40; Brunot 1872: 127; Danilson 1870:188; Dodds 1868: 148–151; Doty 1864:173, 175; Fleming 1870:178-9; Fuller 1874:264; Harries 1881: 64, 1882:51, 1883:55; Hatton 1880:176, 1881:183; Head 1866:122; Hough 1868: 200; Irish 1865:142-8; Irwin 1874:270–1, 1883:313; Jones 1870:183; Lander 1860: 137; Mann 1862:204, 1864:62, 1868: 156–7; Patten 1878:148, 1879:166; Powell 1868:201; Rainsford 1872:282; Stone 1880: 64; Viall 1871:411; Walker 1872:47–51; Wright 1879:54)
1860			
III.	SNAKES (SHOSHONE)	1859–60	Raynolds (1868:79, 86)
	DIGGERS	1860	RCIA (Greenwood 1860:22)
	BANNACKS	1854	RCIA (Thompson 1855:490)
		1853	Schoolcraft (1853:198–203)
		1903	Humfreville (1903:213–215)
		1842–3	Fremont (1853:183, 234–5)
		1841	De Smet (Thwaites 1906:163, 244)
		1841	Wilkes (1845:471–2)
		1836	Bonneville (Irving 1910:237–8)
		1835	Russell (Haines 1965:143–144)
		1834	Anderson (Morgan and Harris 1967:31, 155)
		1832	Leonard (Quaife 1934:79–80)
1826		1830	Ferris (1940:83,107, 241, 248–9)
II.	SHOSHONE (SNAKES)	1826	Ogden (Elliot 1909:354, 356)
	PLAINS SNAKES	1823	Beckwourth (Bonner 1965:101, 136)
	BANNACKS		
1812	(Dogeaters, Fisheaters, Bannocks) -----F	1819	Ross (Spaulding 1956:166)
I.	SHOSHONES (SNAKES, CHOCHONIS)	1811	Stuart (Rollins 1935:278, 290–99)
	MOUNTAIN SNAKES	1804–6	Lewis and Clark (Thwaites 1959)
1804	ALIATANS[1]	1904	La Raye (Cutler 1812:194, 198)

[1] Another term for Northern Shoshone (Swanton 1952:403).

as: "…the most repulsive of all Indians…Faces devoid of intellectual expression as if lower animals; indeed, one could not but notice a strong similarity to wild beasts in their appearance and actions." He adds that Diggers were known to devour horses, grasshoppers, and insects, cavort naked, and live in brush shelters and caves. Bonneville's depiction of a group of Diggers that he encountered in the 1830s mirrors many later Sheepeater depictions:

> These are a shy, secret, solitary race, who keep in the most retired parts of the mountains, lurking like gnomes in caverns and clefts of the rocks, and subsisting in a great measure on the roots of the earth (Irving 1910:237–8).

The Shoshone-Digger contrast was universal in the historical accounts of this period, and Digger (also Shoshoko) was applied universally to any Shoshone group without horses and practicing a non-bison hunting economy, whether encountered in the desert or the mountains (Ferris 1940:83; Fremont 1853:183; Haines 1965: 144; Irving 1910:224; Morgan and Harris 1967: 154, fn; Quaife 1934:80; Wilkes 1845:472; Murphy and Murphy 1960:298–9; Steward 1970a:263–4). As late as 1854, R. R. Thompson, Indian Agent for Oregon Territory which included Idaho, identified the Mountain Snakes as a branch of the Root Diggers occupying the country north and east of Fort Hall and south into Bear Valley (Thompson 1855: 490).

After the discovery of gold in California, colonization of the western frontiers initiated conflict over land. To protect the lives and the indisputable rights of non-native settlers to Indian lands, the government became involved in Indian affairs (Clemmer and Stewart 1986:530; Schoolcraft 1853:199). Utah Territory was established in 1850 to protect California gold seekers and Mormon settlers (Trenholm and Carley 1981:116). In the 1860s, the United States government began negotiating treaties with the Northern Shoshone for safe passage to the Idaho and Montana gold mines. For management purposes, government officials needed new ways to identify and categorize Indians.

The year 1859 marks the appearance of the first Sheepeater reference in the historic literature. In a message from the president of the United States to the Senate, F. W. Lander, Commissioner of Indian Affairs, identifies six bands of Shoshone Indians within Utah Territory: the Eastern Snakes under Washakie, the Salmon River Snakes (including Bannocks and Sheep-Eaters), the Western Snakes, the Bannocks, the Bannocks of Fort Boise, and lastly the Salt Lake Diggers (Lander 1860:137).

Many historians assume that Sheepeaters were identified by early explorers prior to 1859, but a close examination of this literature reveals that this attribution is given by the editor in a footnote long after the Sheepeater myth was developed. For example, Osborne Russell writes:

> Here we found a few Snake Indians[57] comprising 6 men 7 women and 8 or 10 children who were the only Inhabitants of this lonely and secluded spot. They were all neatly clothed in dressed deer and Sheep skins of the best quality and seemed to be perfectly contented and happy (Haines 1965:26).

In footnote 57, Haines, the editor of Russell's journal, writes,

> Probably nomadic Sheepeater Indians, the only aborigines inhabiting the Yellowstone Plateau. They were a branch of the Shoshonean people, small, timid and impoverished… (Haines 1965:160).

Note the contrast between Russell's description of neatly clothed, contented Indians, and Haines's description of the impoverished Sheepeater.

In 1863, several small Sheepeater "bands" signed the Treaty at Box Elder, Utah, giving protection to travelers on the road to the Beaverhead and Boise River gold mines (Doty 1864:175; Trenholm and Carley 1981:203–4). The Shoshone who signed this treaty were collectively referred to as the Northwest Shoshone and/or the Boise and Bruneau Shoshone residing in west central Idaho. Sheepeater "bands" appear as a subset of these Indians in the 1864 and 1868 *RCIA* reports (*Report of the Commissioner of Indian Affairs*; Doty 1864:175; Hough 1868:200; Powell 1868: 203). In 1869, the Boise and Bruneau Shoshone, under the jurisdiction of the Boise City Agency, were moved to the Fort Hall Reservation and the term sheepeater disappears from the record (Jones 1870:183), only to reappear three years later as a subset of the Lemhi Shoshone.

The Lemhi Shoshone evaded government notice until 1871 when J. A. Viall, Montana Superintendent of Indian Affairs, encountered a large party hunting bison in the Yellowstone River Valley (Viall 1871:415). Destitute and starving because most of the buffalo and other game were gone, these Indians were eager to receive government annuities. Toward this end, Viall removed them to their homeland on the Lemhi Fork of the Salmon River (central Idaho) where a reservation was established in 1875 (Trenholm and Carley 1981:224; Viall 1871:415). Fuller describes them as:

> …of mixed blood, it being difficult to ascertain to which tribe they originally belonged. These Indians formed a confederacy many years ago, and have since been separated from other tribes, making their headquarters in this valley (Lemhi), subsisting mainly on salmon fish and mountain sheep, sometimes venturing on buffalo-hunting expeditions in the countries claimed by the Sioux and Crow (Fuller 1874:264).

From this time on, the term sheepeater appears in government census records and other documents as part of the Shoshone and Bannock mix occupying this reservation (Table 4). The reservation population grew from 500 to 1000 individuals in three years as unattached Shoshone groups trickled in (Fuller 1874:264; Rainsford 1872:282). By 1874, Fuller estimated the population to include 200 Bannocks, 500 Shoshones, and 300 Sheepeaters (Fuller 1874:264).

In contrast to the Lemhi Reservation, government census records from Fort Hall and Wind River do not indicate that Sheepeaters were residents of either of these reservations. In addition, ethnographers who have studied the Wind River Shoshone note the difficulty in finding living descendants of the Wyoming Sheepeaters (Murphy and Murphy 1960:309; Dominick 1964:142). Hultkrantz suggests that this may be due to the absorption of these Indians into the Wind River Shoshone prior to 1872

Table 4. The 1872 BIA census record for the Northern Shoshone (from Walker 1872:47–51).

Fort Hall Agency:	Bannocks (516), Shoshones (521)
Lemhi Fork of the Salmon River:	Shoshones, Bannocks, and Sheep-Eaters (677)
Wind River Agency:	Shoshones (1000)

when the reservation was established. Like other ethnographers and historians, he finds the lack of information on the Wyoming Sheepeaters to be as much a mystery as the mysterious Sheepeaters themselves (Hultkrantz 1970:251)!

In the latter 1860s as the Shoshone were being placed on reservations, the Yellowstone Plateau remained unexplored. Rumors circulated of spouting geysers and wonders beyond comprehension. In 1870, the Washburn expedition was organized to investigate these rumors. The fantastic sights observed by this group led to the creation of Yellowstone National Park in 1872, and brought one of the last bastions of American wilderness under government control. During early explorations, numerous Indian traces were observed in Yellowstone Park and were attributed to the Sheepeater Indians. Shortly thereafter, the Sheepeater myth appears in Norris's 1879 report as superintendent of Yellowstone Park. Whether the myth took form with him or he merely put to paper a developed and circulating image is not known.

An interesting sidelight to Norris's role in popularizing the Sheepeater myth, is that he was familiar with the medieval wild man. In his writings, he compares the Sheepeater to the wild man on two occasions. In his 1880 report, he writes, "it is evident that these harmless hermits, these *wild men of the mountains* were…destitute of horses and fire-arms" (Norris 1881:35; see also Norris 1880:11). Norris (1884) was also a romantic as revealed in *The Calumet of the Coteau*, a book of poetry filled with romanticized images describing the wonders of Yellowstone National Park. As his repeated use of the terms "Wonderland," "Mystic Lake," "Goblin Land," and "Sheepeater haunt" attest, he seemed to view the park as a magical, mystical place, homeland to a vanished race of pygmies.

The myth grew in the popular literature of the late 1800s (Topping 1883; Chittenden 1940), culminating with W. F. Allen's book, *The Sheepeaters* (1913). In this book, Doc Allen, a Billings, Montana, dentist claims to have found the last surviving Sheepeater, a 115-year-old woman living among the Crow Indians. In sign language, this woman tells Allen the history of her people, a story that Hultkrantz and others claim is pure fiction (see Hultkrantz 1970:253–56). The romanticized and fantastic stories revealed in this book have done much to perpetuate the Sheepeater myth (Hultkrantz 1970:255).

Although no longer described as pygmies or feebleminded, most of the basic elements of the Sheepeater myth persist today in local folklore and historical writings. Hultkrantz even implies that the myth has influenced the traditional lore of the Wind River Shoshone. He writes that the Wind River Shoshone including the descendants of the ancient Sheepeaters:

> …believe in the former existence of a now vanished race of Indians which once lived among the mountains. It seems plausible that the common Shoshoni folkloristic conceptions of the little people, the dangerous, pygmy-like *nïnïmbi* spirits, have coloured these ideas. Nevertheless, ultimately they probably represent a 'learned' tradition—the tradition of the mysterious Sheepeaters as formed in the white man's literature (Hultkrantz 1970:253; see also Hultkrantz 1981:181, 1966–7:155).

The Sheepeater image is a reincarnation of the old Digger image (Hultkrantz n.d:152). The historical accounts reveal an evolution of this image, first applied to the mountain Shoshone and later to the Sheepeater when it became synonymous with the Shoshone mountaineer (Figure 4). While Digger continued as the stereotype for the desert dwelling Shoshone, the mountain dwelling Digger was given a new name, Sheepeater (Phillips 1957:192). Any Indian encountered in the mountains and evincing a more primitive Digger lifestyle was identified as a Sheepeater. Unlike the Digger myth, the Sheepeater myth took on a romantic quality, perhaps due to its association with the magical wonders of Yellowstone Park. While the Digger was a vile, disgusting, creature, the vanished Sheepeater was mysterious and ghostly.

Factual Basis for the Sheepeater Myth

As indicated above, the historical and ethnographic literature consistently place Sheepeaters in central Idaho and the Lemhi Indian Reservation. In contrast, the historical evidence placing them in western Wyoming, especially as permanent residents of Yellowstone National Park, is scant. This latter is surprising since most of the popular Sheepeater literature focuses on the Wyoming Sheepeaters.

In this section, I explore the factual basis of the myth in Wyoming by examining two kinds of information. First, I examine the historical and archaeological evidence of Sheepeaters or Shoshone mountaineers as permanent residents of Yellowstone Park. Because the wood structures encountered in Yellowstone Park and the mountainous areas of Wyoming are attributed to the Sheepeaters, I will explore whether other Indian tribes could have constructed these types of structures.

Sheepeaters in Yellowstone National Park

Little information exists to place Shoshone mountaineers in Yellowstone National Park.

One of the earliest references to Shoshone Indians in the park is Osborne Russell's encounter with a small group of unmounted Snake Indians in the Lamar Valley of Yellowstone Park on July 29, 1835 (Haines 1965:26; Hultkrantz 1970: 250). Because these Indians were unmounted Shoshone lacking Euro-American trade items, this reference is considered one of the best pieces of documentary evidence for the mythical Sheepeaters of Yellowstone Park (Hultkrantz 1970:250). In his journal, Russell fails to identify these Indians as mountaineers, mountain Snakes, or Sheepeaters, nor does he indicate they specialized in hunting bighorn sheep. Further, he encounters them in the middle of summer when any group of

pedestrian Shoshone might visit the Yellowstone Plateau. This reference reveals only that unmounted Shoshone were encountered in the park in July, not that a band of Sheepeaters lived permanently in the park.

The first reference to Sheepeaters in northwestern Wyoming appears in 1866. Bart Henderson, leading an expedition exploring mining possibilities, encountered a group of 60 unmounted Bannock-speaking "Sheepeaters" in the Absaroka Mountains (Henderson 1866:9/4, 9/11). These Indians were returning from a hunting expedition and Henderson traded with them for sheep and marten furs. In 1869, the Cook-Folsom party, sent to explore the geological wonders of the Yellowstone region, encountered a large party of equestrian, Bannock-speaking "Sheepeaters" in Yellowstone Park (Haines 1966:17, 20–21). As Bannock-speaking Indians and horsemen, neither group is convincing evidence of the mythical Sheepeaters. Further, like those Russell met, these Indians were encountered during the summer when the park was accessible. Given the depth and consistency of winter snow (Martner 1986: 107–8) and the impenetrability of snow-covered mountain passes as demonstrated by the Raynolds expedition (Raynolds 1868), permanent occupation of the Yellowstone Plateau would have been nearly impossible for any Indian group (Hoffman 1961:15). The above references reveal that early explorers were prone to identify any Shoshone or Bannock Indians encountered in the park and the mountains of northwestern Wyoming as Sheepeaters.

After the Cook-Folsom expedition, no other explorer, hunter, or visitor to northwestern Wyoming who left memoirs ever encountered a Sheepeater there. The subsequent Washburn expedition did not encounter Sheepeaters or Shoshone mountaineers, although this group observed abandoned Indian structures on the shores of Yellowstone Lake. In 1875, the Earl of Dunraven after conducting a hunting trip in the park, writes "all indians now carefully avoid the uncanny precincts of 'Wonderland'. A few wretched sheep-eaters are said to linger in the fastnesses of the mountains about Clarke's Fork; but their existence is very doubtful…" (Kephart 1917:246).

Lastly, Norris never encountered Sheepeaters in his travels through the park (Hultkrantz 1970:252; Norris 1879:842; Norris 1881:35). In 1879, Norris officially removed the Indians from Yellowstone Park, but his report indicates that this action stemmed from the 1878 and 1879 raids of Bannock and Nez Perce Indians (Norris 1879:26; 1881:33).

Most historians and anthropologists assume that the Yellowstone Park Sheepeaters went to live on the Wind River reservation, but government documentation of this is meager. In 1864, Luther Mann, Indian agent of the Wind River Reservation, wrote:

> …about the first of June a party of Loo-coo-rekah or Sheep-Eater Indians stole and brought into camp nineteen head of horses belonging to miners at Beaver head, Montana Territory. Washakie, the chief, informed them that a treaty had been made with the whites. They surrendered the horses to him, and he sent them to Fort Bridger and turned them over to the military authority of the post (Mann 1864:172).

From this reference, it is unclear where these Sheepeaters resided, but the

Beaverhead Mines are located in central Idaho near the Lemhi Shoshone (see also Hultkrantz 1970:251). Some evidence suggests that Indians who called themselves Sheepeaters or Shoshone mountaineers did settle on the Wind River Reservation. In 1870, Agent G. W. Fleming wrote (1870:179):

> They (the Shoshones)…allowed the Bannocks and Toorooreka, or Sheep Eaters, a band of Shoshones inhabiting the mountains entirely, to participate in the [annuity] distribution, each receiving share and share alike.

This, and a letter in the archives at the Wind River Indian Reservation written by R. P. Haas in 1929 (Haines 1977:333, fn 29) indicate that a group of Sheepeaters or mountaineers arrived on the Wind River Reservation around 1870. Unfortunately, neither account reveals where these Indians resided before joining the reservation (see also Hultkrantz 1970:251).

The later accounts of the exploring expeditions by Jones and Sheridan shed some light on this. Both Jones and Sheridan enlisted "Sheepeater" guides from the Wind River Reservation for their respective expeditions through Yellowstone National Park. In 1873, Capt. William A. Jones enlisted ten Wind River Indians to accompany his troops on a reconnaissance of northwestern Wyoming. One of these guides, Togatee, was identified as a Sheepeater, but Togatee, along with the other Shoshone guides, was unfamiliar with the Yellowstone Park area (Jones 1875:11, 34–36, 39–40). Only when the expedition reached the southern park boundary did Togatee recognize his surroundings.

Sheridan had a similar experience in 1881. He enlisted the help of five Sheepeater guides from the Wind River Agency, and not one was familiar with the park area until the party reached the southern boundary (Chittenden 1940:11; Janetski 1987: 80; Sheridan 1882:11). Sheridan noted that these Indians had lived for years around Mounts Sheridan and Hancock near the southern park border (Sheridan 1882:11).

The ethnographic evidence on this subject is somewhat contradictory and appears influenced by the already established Sheepeater myth. While Murphy and Murphy never spoke to a Sheepeater informant, these ethnographers were told by the Wind River Shoshone that Sheepeaters settled in the Trout Creek section of the Wind River Reservation (Murphy and Murphy 1960:309). Trout Creek is in the southwestern part of the reservation adjacent to the Wind River Mountains. Shimkin's Sheepeater informants indicated they resided in the Wind River Mountains (Shimkin 1938: 415), yet Shimkin later describes them as forming a semi-autonomous enclave within all the mountains of northwestern Wyoming (Shimkin 1947:242). Hultkrantz's Sheepeater informants indicated to him that they resided in all the mountain areas of northwestern Wyoming (Hultkrantz 1974b:15; Hultkrantz n.d.:152), but by the time Hultkrantz interviewed the Wind River Shoshone in the late 1940s and early 1950s, legends of the mysterious mountain Sheepeaters as depicted in the Sheepeater myth were part of Shoshone lore (Hultkrantz 1966–7:155).

None of these accounts provide definitive evidence for a enclave of Sheepeaters in Yellowstone National Park. This does not preclude the possibility that the Shoshone mountaineers of Yellowstone Park settled on the Lemhi Reservation as Hultkrantz

(1970:259) suggests, although there is no record of this. While no documentation exists for an influx of Yellowstone Park Shoshone or Sheepeaters to the Lemhi or Fort Hall reservations, abundant ethnographic and historical information demonstrates that Shoshone and Bannock Indians from Wyoming, Idaho, and Montana, mounted and unmounted, hunted in or near the headwaters of the Yellowstone River during the warmer seasons of the year (Berry 1871:540; Hultkrantz 1970:260, fn 3; Janetski 1987:46; Jones 1870:183; Schullery 1997:25–6; Shimkin 1947:248; Viall 1871: 415).

As an example, J. G., one of Hultkrantz's informants, indicated that his grandfather, Tavonasia, would occasionally hunt in Yellowstone Park. Tavonasia was a well-known Eastern Shoshone chief and warrior during the 1860s and 1870s. His equestrian band of Shoshone wintered in the vicinity of Bull Lake in the Wind River valley and sometimes summered in Yellowstone Park. According to J. G., Tavonasia and his group, who were at one time identified as Sheepeaters, were the only ones under Washakie who hunted in Yellowstone Park (Hultkrantz 1979:37).

In addition to the Shoshone and Bannock, a number of other Indian tribes visited Yellowstone Park and the Yellowstone Plateau during the nineteenth century and perhaps before. These groups included the Crow, Blackfoot, Flathead, and Nez Perce Indians (Haines 1977:21–25; Hultkrantz 1974b:22–8; Topping 1883:7). The Bannock Trail through the northern part of the park was a corridor for western Indians traversing the Rocky Mountains to hunt bison on the eastern Plains. The Blackfoot of western Montana journeyed southward across the Yellowstone Plateau to raid the Crow and Shoshone. The Nez Perce traversed the park in their historic flight toward Canada in 1877 (Haines 1977:221). All these groups occasionally visited the park for economic reasons or to quarry obsidian, but none were permanent residents.

Who Made the Wood Structures in Yellowstone Park? Norris and others have attributed most of the timber structures in Yellowstone Park and the surrounding mountains to the vanished Sheepeaters (Dominick 1964;158–9; Frost 1941; Norris 1880:11; Norris 1881:35–6). Norris variously described the structures he observed as decaying lodge poles, wickiups, cliff-sheltered bush-houses, bush screens for arrow shooting, and pole drive lines (Norris 1880:11; 1881:35). Archaeological surveys conducted in the mid-twentieth century located only a few of the structures described by Norris. Two conical timber lodge sites were recorded in the 1961 and 1966 surveys of Yellowstone Park, the Lava Creek and Wigwam Creek wickiups (Arthur 1966:61; Hoffman 1961:39; Shippee 1971:74). Hoffman (1961:40) noted other pole and brush structures in his survey, but closer examination revealed these to be recent leantos and brush piles. Many more structures probably existed in the 1870s, but the ravages of fire, decay, and recreational use over the years have likely destroyed them (Arthur 1966:61).

Similar types of structures are occasionally encountered outside the park boundaries (Arthur 1966:57, 65–6; Ewers 1968:118; Frison et al. 1990; Kidwell 1969:26–9; Voget 1977:7). These structures fall into four basic categories: conical timber lodges, wickiups, cribbed structures, and sheep traps (Ewers 1968:119–21; Frison et al 1990; Hughes 1994:7–8; Voget 1977:3).

Conical timber lodges consist of 40–60 poles stacked in a conical shape with an exterior covering of sagebrush, grass, woven willow branches, or bark slabs (Figure 1). Lodge interior diameters range from 3.5 to 7 feet. An interior firepit may or may not be present, and artifacts are rare (Arthur 1966:57; Ewers 1968:119–20; Hughes 1994:6–7; Kidwell 1969:23,30, and Voget 1977:7). While most were free-standing, others were built around a tree, or with poles leaning against a tree branch to form a lean-to (Arthur 1966:59; Ewers 1968:21; Hughes 1994:16). Although most historical and ethnographic accounts indicate that these lodges were covered with grass, branches, or bark, by the time they were observed in the twentieth century, all that remained was the pole framework.

While many conical timber lodges are referred to as wickiups (Arthur 1966: 56; Hoffman 1961:35; Lowie 1924:220), wickiups are a different type of structure. These are domed grass huts constructed by bending a circle of four saplings inward in a dome-shape and then covering this framework with grass, rushes, or scrub (Nabokov and Easton 1989:338–9). This type of structure was commonly used as a habitation by western Apache and Great Basin Indian tribes or as a sweatlodge by Plains tribes (Kidwell 1969:2–3; Lowie 1924:184; Murphy and Murphy 1986:295; Nabokov and Easton 1989:338–9).

Cribbed structures are square or pentagonal shelters created by laying fallen timber horizontally. At a height of three to four feet, the timbers were cribbed inwards leaving a smoke hole in the center. The cribbed framework was then covered with grass, stripped bark, or hide (Arthur 1966:57; Ewers 1968:121; Voget 1977:3; Hughes 1994:16).

Sheep traps consist of drive lines leading to a small rectangular catch pen entered by a log ramp. The catch pens are made of high, horizontally laid log courses with inward slanting walls to prevent the sheep from jumping out (Frison 1991:248–252). Frison (1991:257) notes that catch pens bear a close resemblance to cribbed structures. The drive line, a fence of fallen timber and rocks, was used to funnel sheep into the catch pen (Frison et al. 1990; Frison 1991:249). Natural topographic features and nets were occasionally used in lieu of catch pens to trap sheep, leaving only the remains of drive lines on the landscape.

Three of these structures, conical timber lodges, cribbed log structures, and sheep traps, are generally attributed to the Sheepeaters when encountered in the mountains of western Wyoming. Because the lodges, like the mythical Sheepeater, are hidden, isolated, solitary, and primitive, they are easily linked to them. The sheep traps have an even closer link to the Sheepeater because sheep were the focus of their economy.

With the exception of sheep traps, the ethnographic literature reveals that the above structures and their variants were built by most northern Plains Indians as temporary shelters while conducting temporary economic activities and warfare (in Arthur 1966:58; Ewers 1968:128; Hughes 1994:15–17; Kidwell 1969:7). When used by war parties, the structures were referred to as war lodges (Ewers 1968: 117). Lewis and Clark observed similar structures among the Hidatsa (Thwaites 1959, vol. 2:343). Ewers (1968:128) attributes conical timber lodge and cribbed structures to the Cree, Crow, Sioux, Gros Ventres, and Assinboine, while Voget

(1977:8) adds Arapaho, Cheyenne, Flathead and Nez Perce to this list. Voget (1977: 8) notes that the Blackfeet preferred cribbed structures rather than conical timber lodges, but according to Ewers (1968:121), the Blackfeet constructed both. The Mandan and Hidatsa constructed conical timber lodges in conjunction with eagle trapping activities (Allen 1982:3). The Shoshone and Bannock were also known to build conical timber lodges and wickiups (Lowie 1909:183–4; Murphy and Murphy 1986:295). Any one of the tribes listed above that visited or traveled through western Wyoming and southern Montana may have constructed the structures attributed to the Sheepeaters.

The ethnographic literature provides little information on which tribes built communal sheep traps in the mountains of western Wyoming, southern Montana, and central Idaho, however, it is known that both the Shoshone and Bannock hunted sheep in these areas (Lowie 1909:185; Shimkin 1947:268). If the Shoshone did build these high altitude traps, then they were built by the *Túkudeka* or Sheepeaters in keeping with the traditional Shoshone use of the term.

While Norris attributed most timber structures in the park to the Sheepeaters, later historians were not so quick to make this association. Haines (1977:25) notes that George Bird Grinnell identified the Yellowstone wickiups as Crow hunting lodges. Dr. Malouf, through archaeological excavations, came to the same conclusion based on the scarcity of artifactual material which he interpreted as indicating transitory use (see also Kidwell 1969:23). Haines (1977:25) attributes the cribbed structures to Flathead occupation. Norris even notes that some recent timber "breastworks" in the park were made by the Nez Perce and Bannocks during their Indian raids (Norris 1881:35).

Evidence is lacking to attribute the campsites and wooden structures in Yellowstone Park and the surrounding areas exclusively to a vanished tribe of Sheepeaters or Shoshone mountaineers. A better explanation is that the timber structures encountered by Norris were temporary shelters and hunting devices constructed by a variety of Indian tribes who visited or traversed the park during the warmer seasons of the year.

Summary and Conclusions

In summary, the evidence presented here strongly suggests that the Sheepeater, as portrayed in most historical writings of the nineteenth and twentieth centuries, is more mythical than real. There is no definitive evidence to support the existence of a permanent "band" of Shoshone mountaineers in Yellowstone Park or to indicate that the conical timber lodges and other timber structures in the park were constructed exclusively by these individuals. A better explanation for these structures is that a variety of Indian tribes constructed them during temporary visits to the park during the warmer seasons of the year.

The Sheepeater myth appears to be a Euro-American creation. A Shoshone food name, Sheepeater, was borrowed and misapplied to an existing stereotypical and ethnocentric image of the Native American. This stereotype has roots in the wild man image of medieval Europe. It evolved throughout the history of American

colonization as the good and the bad Indian. The image of the bad Indian became the template to understand and depict the Digger Shoshone in the early nineteenth century. Sheepeater arose as a subdivision of Digger, the mountain Digger with a new name. Once Sheepeater became associated with the impoverished, unmounted Digger of the mountains, the name was applied to any Shoshone or Bannock Indian evincing these characteristics. Like Digger before it, Sheepeater reflected a negative, degraded image to most who applied it until it evolved into the mysterious, romanticized character described by Norris. Once created, the myth took on a life of its own, becoming firmly entrenched in both Indian and non-Indian folklore of northwestern Wyoming. That the Sheepeater myth still stimulates our imagination is testimony to the tenacity of this image.

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Susan S. Hughes, Department of Anthropology, University of Washington, Box 353100, Seattle, WA 98110

A Ride to the Infernal Regions: An Account of the First Tourist Party to Yellowstone

Lee Silliman

Accounts of the wonders to be found at the headwaters of the Yellowstone River, long regarded as trapper and prospector hyperbole, became more seriously entertained when attested to by the esteemed members of the Washburn-Langford expedition of 1870. Montana Territory newspapers and word-of-mouth, as well as some nationally circulated periodicals, spread the party's intelligence that descriptions of the Yellowstone region—far from being exaggerated—had, in fact, been understated. To dispel all doubt, in the summer of 1871 Congress dispatched a scientific exploration party under the leadership of Ferdinand V. Hayden, chief of the U.S. Geological and Geographical Survey of the Territories. The exploits and renown of the Hayden Survey have long been acknowledged.

Before Hayden's party had left the future park, however, another group—hithertofore mostly unknown and the subject of this discussion—conducted a sightseeing excursion to "Geyserland" in August of 1871. Because their avowed goal

Photo by William H. Jackson taken in 1872 of Mary Bay, Yellowstone Lake, on the east shore of the lake showing a beautiful "L" curve. YELL 36086. NPS archives.

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was to retrace the steps of the previous year's Washburn expedition—this time to enjoy the sights, rather than explore new territory—these six men are considered Yellowstone's first known tourists. Meeting up in Montana Territory from across the country, they sought the curious and the sublime that subsequent legions of visitors have been drawn to ever since.

The Party

Rossiter W. Raymond: While accounts of the trip do not reveal who organized the party, a reasonable conjecture is that Raymond, being the most educated and well-traveled member, was its de facto leader when decisions were demanded. Fellow party member C. C. Clawson referred to him as "Professor."[1] Raymond's duties as U.S. Commissioner of Mines and Mineral Statistics from 1868 to 1876 brought him west on frequent inspection tours. His 1871 trip to Helena and Virginia City, Montana Territory, was a pretense to enable him to see the real object of his desire: the mythical environs of the Yellowstone headwaters. Raymond wrote a lengthy account of this sojourn, which was published in contemporary periodicals and in his 1880 book, *Camp and Cabin, Sketches of Life and Travel in the West.* A widely traveled man with a distinguished career, Raymond sentimentally referred to his 1871 trip to "Wonderland" as the high point of his life.

Calvin C. Clawson: C. C. Clawson was a writer on the editorial staff of *The New North-West*, a weekly newspaper published in Deer Lodge, Montana Territory. Growing up in Wisconsin, he attended Waynesburg College in Pennsylvania and sought his fortune in the newspaper business in Kansas, Colorado, and Montana. In addition to owning newspaper interests, Clawson became involved in Idaho mining ventures.[2] He eventually settled with his wife and son in central Idaho in the late 1870s.

Raymond described Clawson as a shrewd reporter, "interviewing people against their will, following with an intent nose the trails of scandal, picking up scraps of information around the doors of public offices.…" Raymond went on to compliment him for taking notes "in secret as a gentleman should," for being a "jolly companion," and for his culinary skills in the preparation of "dough-gods" and "bull-whacker's butter."[3]

Clawson's 17 installments describing the Yellowstone trip appeared in *The New North-West* from September 9, 1871, to June 1, 1872, under the titles "Notes on the Way to Wonderland; or A Ride to the Infernal Regions" and "In the Region of the Wonderful Lake." Each section must have been penned not long before its publication, for in the last installment, published three months after President Grant signed the park into law on March 1, 1872, Clawson facetiously whined that he could not preempt and thereafter sell a mountain of brimstone in Yellowstone because "the Park Bill put an end to the negotiations."

August F. Thrasher: A. F. Thrasher was an English-born daguerrean photographer and owner of the "Sun Pro" Gallery in Deer Lodge, Montana. Drifting into the state from the California and Idaho gold camps in 1868, Thrasher was an itinerant photographer whose peregrinations took him to the many fledgling post–Civil

A photo (1800s) of Sawtelle's ranch near Henrys Lake, Idaho. YELL 33378. NPS archives.

War mining camps that had sprouted up in southwestern Montana. Raymond praised Thrasher, "He invests the profession of photography with all the romance of adventure.…If there is a picturesque region where nobody has been, thither he hastens.…"[4]

Gilman Sawtelle: Gilman Sawtelle, the first settler of the Henrys Lake region, 15 miles west of present-day West Yellowstone, was the party's local guide. Sawtelle's ranch, 60 miles from the settlements at Virginia City, was an outlier of civilization on the periphery of the Yellowstone Plateau, where he was visited by many travelers. Raymond described him as "a stalwart, blond, blue-eyed, jovial woodsman," and his accompanying dog, Bob, "an excellent spirit and a companionable soul."

Josiah S. Daugherty: A prominent businessman and citizen of Wabash, Indiana, Daugherty toured Utah, Idaho, Montana, and Wyoming Territories in 1871, purportedly to improve his health. His inclusion in this first tourist party to Yellowstone enabled him to return with "many rare specimens of minerals and fossils." An 1884 biographical sketch praised him for his business acumen, and for not neglecting "to store his mind with a general knowledge of what is going on in the world about him."[6]

Josiah S. Daugherty.

Anton Eilers: Not much is known about Raymond's assistant and fellow mining engineer. He must have filled a niche, for Raymond wrote that regarding character and accomplishment, "what one of us lacked another was sure to have."[7]

The Group's Itinerary

The group (six men, eight horses, one mule, and one dog) departed on August 10, 1871, from Virginia City, one of Montana Territory's more populated and vigorous cities. Up the Madison Valley they traversed, crossing the Continental Divide via Raynold's Pass to reach Sawtelle's ranch on Henrys Lake for a three-day respite. Via another low pass they returned to the Madison River and progressed to the East Fork (Gibbon River) confluence, where they saw their first geyser. Continuing up the other branch, the Firehole River, the wanderers came to the Lower Geyser Basin, which they erroneously supposed was the Upper Geyser Basin as described by Nathaniel Langford in his *Scribner's* articles. The thermal features amazed them, but did not fit with Langford's descriptions. For reasons unfathomable, they bypassed the Upper Geyser Basin in a brash, two-day thrust to reach Yellowstone Lake on a miserable route blazed by one of Hayden's scouting parties. Their toil was rewarded with the beauty of the lake and the thermal features of the West Thumb Geyser Basin. They moved north to the lake's outlet and followed the Yellowstone River downstream to the Grand Canyon, where they encountered Lt. Gustavus Doane of the Hayden expedition. He informed them that they had inadvertently detoured around the Upper Geyser Basin with its magnificent spouters and pools. Except for Thrasher and Sawtelle, who stayed to photograph the canyon, the rest of the party struck southwest over Mary Mountain back to the Firehole River and upstream to the Upper Geyser Basin. After enjoying the latter, they descended the Firehole and Madison rivers to Virginia City and dispersed homeward.

Encounters With Wildlife

Mid-nineteenth century western travelers were accustomed to shooting wildlife as their larder or whim dictated, and Clawson's party was no exception—especially considering the fact that no legal strictures against it were in place in 1871. The park's 1872 founding act contained a vague directive for the Secretary of the Interior to "provide against the wanton destruction of the fish and game found within said park," but it would be 20 years before effective checks against killing park wildlife were in place. While traveling up the Madison River outside the park, Clawson lamented that "as yet we had taken no game—not even a chicken killed or a fish caught—and there was a stife among us to see who would get the first blood." An eagle was their first victim:

> In a short time the eagle hunters made their appearance, with their hats bedecked with trophies in the shape of eagle feathers, and an eagle hanging to the horn of each saddle, while the wings dragged the ground. The old one showed fight when she saw the hunters approaching, and settled down by the nest to protect her young. After several shots from a rifle, she was disabled, and Mr. Raymond climbed the tree as far as possible, threw a rope over the limb, and shook the two young ones out, then brought them to camp. They were monsters of their age, and after admiring them a while, we turned them loose to shift for themselves.[8]

Before we condemn them for a crime against nature, let us ask ourselves what we are perpetrating today with no compunction that our great-great-grandchildren will find odious. As Henry Louis Gates, Jr., phrased it, "History is, in no small part, a chronicle of formerly acceptable outrages."[9] On the whole, however, the party apparently restricted itself thereafter to shooting elk and fowl to augment their food supplies.

Clawson noted that Yellowstone was a virginal hunting and fishing ground, "where elk and moose and deer and bear have maintained their rights to this their Eden since the day they were given possession."[10] Raymond concurred, "The forest and the wave alike teem with legged and winged game."[11] Clawson corroborated other early travelers' observations that wolves were native to the Yellowstone Plateau. On their first night at the lake, when Clawson drew night guard duty, the horses were uneasy.

> A band of hungry wolves sat upon a point some distance away and howled and yelped a most heartrending war song that seemed to terrify even our dog, who was a wolf hunter by profession. But with my back to a geyser and the dog and Ballard [a single-shot rifle] in front of me, I gazed into the dark dismal woods and dared either devil or wild beast to 'tackle me.'[12]

This excursion party offers testimony that Yellowstone abounded with wild game prior to the onslaught of subsequent visitors. Some people have contended that Yellowstone was essentially devoid of mammals (especially elk and wolves) until the late nineteenth century, when white hunting pressure "pushed" the remnant animals up into the mountains. This claim was effectively refuted by Paul Schullery and Lee Whittlesey in their survey of 168 historical accounts of visits to the Yellowstone Plateau prior to 1882.[13] They found that 90 percent of the remarks relating to wildlife were claims of abundance. As C. C. Clawson wrote, "Elk in bands flew away at sight of us or stood in groups until the crack of the rifle admonished them that they stood in dangerous places."[14]

Notes Upon the Scenic Wonders

C. C. Clawson's responses to the scenic wonders of Yellowstone were atypical. Whereas many visitors to the park would place Old Faithful Geyser and its companion thermal features in the Upper Geyser Basin as the defining, requisite Yellowstone experience, Clawson devoted a scant seven tepid lines to their description—even though they had specifically looped back to see them. Likewise, the majestic Lower Falls of the Yellowstone and its incomparably colored and sculpted Grand Canyon have transfixed millions of visitors with their sublimity. Of the two, Clawson penned a mere eight terse lines! What *did* grip Mr. Clawson?

The first feature to endear itself was the Madison Canyon. Waxed Clawson, "For wild canyons and grand scenery, the Madison River is not equaled by any stream of its size in the mountains." He went on to describe the volcanic palisades which hem this river at its second canyon just outside the park: "The mountains of rock run

thousands of feet in the air, and form picturesque sights compared with the smooth, tame valley in front." Probably not one in a hundred modern tourists stops for a minute's contemplation of the pleasures of this canyon, in their determined pursuit of the geyser basins upstream. Perhaps a leisurely day-long horseback ride through the Madison Canyon, as opposed to a 45-miles-per-hour passage entombed in a steel and glass conveyance, enabled Clawson to deduce that "here is another great field for artists; and photographers and landscape painters will here find food for the camera and easel."

Photo taken by William H. Jackson in 1871 of the Grand Canyon, looking down from over the Lower Falls, west side. YELL 36070. NPS Archives.

Clawson wrote of the varied and sometimes dangerous thermal features of the Lower and Midway geyser basins, but the curiosities which in some would ignite wonderment elicited from Clawson only guidebook descriptions. For exhilaration of spirit the author would have to wait until the party topped the divide between the geyser basins and Yellowstone Lake:

> Sitting on our horses we gazed and gazed in silent wonderment at the outstretched world below. We were beyond the flight of the Muses.…We could not help feeling that we were lifted up BETWEEN HEAVEN AND HELL, for while the seething, sulphurous lakes were on each side and far beneath us, the placid sky hung in grandest beauty above us.[16]

Clawson went on to note that since four great rivers—the Yellowstone, Missouri, Snake, and Green—debouched from the highlands of this massive volcanic plateau, his ken literally encompassed the apex of North America. "This will be one of the most interesting features of Wonderland when Congress shall have set aside one hundred square miles here as A WORLD'S PARK, which it no doubt will."[17]

When Clawson looked upon the vast ultramarine expanse of Yellowstone Lake lying below him to the east, he effused with poetic timbre:

> We were at last rewarded for all the trouble and dangers of the journey, when, from a high hill, on which was an open space in the timber, we looked down and out over the grand and beautiful water, clear as glass of finest finish, lying calm and still as death in the evening sun. The like of Yellowstone Lake has not yet come under the eye of or within the knowledge of civilized man. The curious and marvelous sights that encircle it, the wondrous beauty of the mighty peaks that overshadow it as they stand arrayed in gorgeously painted garments of red and purple and yellow like

> gigantic sentinels guarding the precious treasure entrusted to their care and keeping; its romantic shores, fringed with forests of richest green, which the frosts of winter or the heats of summer cannot fade; the unequaled beauty of its outline—all unite to enveil it in an unnatural, indescribable appearance; unlike any other spot or place seen or heard of—as if not of this world—something spiritual, beyond the reach of pen or tongue. The eye must behold the glory thereof to believe;
>
> *And even then,*
> *Doubting, looks again*.[18]

Clawson concluded his impassioned portrayal of the lake—which he envisioned as the center of a forthcoming national park—by contrasting its present serenity with its past geologic turmoil:

> It is hardly possible to realize that it was once a VOLCANO OF WONDERFUL MAGNITUDE, so great, in fact, that it hurled forth from its terrible maw rivers of lava and mountains of fiery substance, which, intermingling as they fell, formed these richly colored peaks that stand to the south and southeast.[19]

While Yellowstone's magnetic renown has always included its rare geothermal spectacles and plenitude of wildlife, many tourists, like Clawson, leave the reservation thoroughly enthralled with the sublimity of Yellowstone Lake.

The Party's Attitude Toward Native Americans

C. C. Clawson displayed an antagonistic attitude toward Native Americans—the norm among whites in Montana Territory then. His references to them indicate that white people still assumed the Yellowstone headwaters was a prime locale to encounter their darker-skinned enemies. This presumption contradicts the myth propagated by some Yellowstone travelers that Native Americans dreaded and shunned this spirit-haunted highland of geysers, hot springs, and cold. Earliest among such sources was fur trapper Warren Angus Ferris, who visited Yellowstone in 1834 and reported that his Pend d'Oreille Indian companions "were quite appalled, and could not by any means be induced to approach them [the geysers]…they believed them to be supernatural and supposed them to be the production of the Evil Spirit."[20] A careful evaluation of the historical record reveals that the supposed Native American fear of Yellowstone's geysers was complex and, at best, only half true.[21]

But fear of encountering Indians on this 1871 trip was pervasive and well founded. According to Rossiter Raymond, their party numbered only six men because a recent raid by Sioux Indians into the Gallatin Valley had unnerved many would-be participants. "When the critical day arrived, there was an amazing pressure of business in the usually somewhat dull town [Virginia City], which hindered every one of our distinguished friends from starting," Raymond noted sarcastically.[22]

Raymond was perhaps unfairly ridiculing the settlers' fear of Indian attack when traveling far from the mining camps, for Montana in 1871 was still a battleground between the races. Blackfeet depredations had been checked only a year prior by the

Baker Massacre, while the Battle of the Little Bighorn and the Nez Perce War were still five and six years into the future, respectively. As Clawson's narrative demonstrates, precautions against Indian encounters were standard operating procedures then, and for good reason.

Guards were posted every night during the trip to secure the camp against a surprise attack by Indians or a marauding bear. Clawson professed, "In the mountain countries man has three great enemies he is liable at times to meet with, all of which I acknowledge I fear exceedingly, especially at night. They are the rattlesnake, bear, and noble Red Man." He mused that at least an Indian's silent tomahawk to the brain would be a painless and swift deliverance, "for you lose your life without being aware of it." Still, he slept with his head against a tree as a safeguard against having his hair "'snaked' off in the midst of pleasant dreams."[23]

Indian sign was noted on the Madison River near present-day West Yellowstone, where a large grove of quaking aspens was marked with a well-executed deer cut into the bark, presumably to advertise good hunting thereabouts. That same day, "we stopped on the Madison, near where the eight Indians made a camp while on their flight with the twenty-seven head of mules stolen down on the Snake [River] the year before."[24] The most direct contact with Indians occurred outside the park, on the party's homeward ride down the Madison River. Discovering a dozen Indian warriors laying in ambush for them on the opposite bank, the party (reduced to four men by then, since Thrasher and Sawtelle stayed to photograph the Grand Canyon) cinched their animals tightly and galloped toward Virginia City. "On they came like demons, but the water was between us." In a 10-mile race the Yellowstone tourists outdistanced their pursuers. "I shall never forget how nicely we fooled those Indians," bragged Clawson.[25]

The Indian threat was real. In fact, Clawson, whose scalp might well have been lifted by pursuing Indians, was, by the standards of his contemporaries, fairly mild in his damnation of Native Americans. More vitriolic in comparison was the editor of *The New North-West*, who opined two years earlier that the Indian was a "base, bloodthirsty, cruel, treacherous being," whose extermination was the most expedient solution to the racial enmity then gripping the territory.[26]

Another incident revealed both the vividness of Clawson's imagination and the presumed omnipresence of Indians throughout the Yellowstone Plateau. Not far from the shore of Yellowstone Lake, the tourists chanced upon a small, dilapidated log hut with a collapsed roof. While Clawson could entertain the possibility that it was used by white trappers or road agents,

> I am inclined to think that in the first place that homely habitation was none other than a lover's retreat, constructed by some bashful red son of the forest…in anticipation of taking unto himself a dusky partner for life.…There used to be a custom, among the native Americans, for a newly-married couple to take a jaunt of a month to some beautiful lake or river, where the bride would be allowed to accompany her hunter to the fishing and hunting grounds, and take part in the excitement of the chase.[27]

Clawson also conjured up the notion that "the region of the Wonderful Lake is

moreover the 'Happy Hunting Grounds of the Red Man.' It answers his description of it exactly. Here he expects his spirit to wing its way when it leaves the body. A land he pictures in his imagination is abounding in choicest grass for his favorite ponies and fish and game of endless quantity and delicious quality. It is his heaven." By contrast, Clawson imagined that the thermal basins of the Firehole River were the antithetical Indian hell. "On the other side of the great hill, in the Geyser Basin, where the bunch grass is ever short, no fish, game lean, and ponies lank is the 'Unhappy Hunting Grounds,' made ready for his enemies…there their spectral forms, on skeleton cayuses, continually chase, through the alkali swamps, by boiling lakes and sulphurous pits, the fleeing phantom deer."[28] Perhaps Clawson's conjecture of happy and unhappy Indian hunting grounds in the park was based upon unmentioned dialogue with Indians or "common knowledge" among area frontiersmen.

Commercial Uses of Yellowstone

C. C. Clawson viewed the unusual geology of Yellowstone through the lens of a former prospector. At first sight of a thermal area near present-day Madison Junction, with its rivulet of hot water discharge, he lamented, "It is enough to make the heart of a miner ache to see so much clear hot water running to waste when so many banks of good 'pay grit' have to be laid aside during winter on account of frost." Upon observing that geyserite waters precipitate and adhere firmly to submerged objects, Clawson suggested the making of grindstones by throwing round disks of wood into hot springs, but bemoaned that, "freight is rather high at the present to make this branch of business profitable." He also suggested—perhaps facetiously?—the possibility of employing geyser water for embalming. "It is much pleasanter to 'shuffle off this mortal coil' with the thought that you are going to be embalmed, petrified—*turned into stone*—than to crumble back to mother earth." He jested that we would soon see "the ancient Egyptian mode of preserving the dead not only equaled but eclipsed."[30]

Clawson's most fanciful, humorous burst was reserved for the Fountain Paint Pots of the Lower Geyser Basin, which he dubbed "the Cosmetic Fountains." He postulated that the economic value of the oil springs of Wyoming would "sink into insignificance when compared with the everlasting fountains of Cosmetic," the latter of which would enrich the treasuries of Montana. (Did he think the territorial boundaries had been moved? There was agitation among Montanans to re-adjust their territorial boundary to include Yellowstone. Then, and for many years thereafter, access to Yellowstone was possible only through Montana, but the effort was in vain.) On he babbled about this cosmetic mineral deposit:

> But in a year or two the natural production manufactured under the immediate supervision of Dame Nature herself (who is supposed to know what is best for her daughters), will be all the rage. The same quantity that now costs $2.00 can be delivered at your doors for five cents, (half white and half pink) perfumed with Extract of Bumblebee, with a picture of a geyser in full blast on one side of the bottle and on the other the inscription

This is the stuff we long have sought
And wept because we found it not.[31]

Real or imagined commercial uses of Yellowstone were subsumed under the compelling need to declare the newfound wonderland a national park. Throughout his rambling narrative Clawson assumed that Yellowstone would become a pleasuring ground for America and the world. For example, he expected that the shores of Yellowstone Lake would become a resort locale favored by newlyweds, who "wish to get away from the bustle and fuss of home to spend the first sweet month of their new life alone among 'Nature's wild, enchanting bowers,' out of reach of the clatter and bang of the *charivari*."[32] The December 23, 1871, issue of *The New North-West* (three months before the park bill was signed into law) contained an unsigned editorial—strongly bearing the literary fingerprints of C. C. Clawson—describing the wonders of this newly realized "Arcana Inferne." It concluded:

> No soul has permanently shrouded itself from the world within its weird confines: But to it will come in the coming years thousands from every quarter of the globe, to look with awe upon its amazing phenomena, and with pen, pencil, tongue and camera publish its marvels to the enlightened realms. Let this, too, be set apart by Congress as a domain retained unto all mankind, (Indians not taxed, exempted), and let it be esto perpetua.

If this essay was not composed by Clawson, it surely expressed his earnest sentiments. Perhaps this editorial was written by Clawson's superior, James H. Mills, the newspaper's editor and publisher, who also ventured into Yellowstone one year later. Like Clawson, Mills published his narrative serially in *The New North-West*.[33] Its stylistic and ebullient manner equals, if not excels, that of C. C. Clawson.

The Missing Photographs of A. F. Thrasher

Perhaps C. C. Clawson and his "Ride to the Infernal Regions" would have been more than a footnote to the history of Yellowstone had the journey's photographs taken by A. F. Thrasher survived and been widely disseminated. Thrasher's images could have rivaled those of William Henry Jackson, whose national fame was established when his extensive photographic views of Wonderland were displayed to Congress and the public during the debate over the park bill. Clawson's narrative detailed Thrasher's conscientious efforts to photograph Henrys Lake, Yellowstone Lake, and the Grand Canyon of the Yellowstone. (Did he photograph the geyser basins?)

No dilettante, Thrasher had his mule heavily laden with the accoutrements of wet plate photography: fragile glass plates, processing chemicals, portable darkroom, heavy camera, and tripod. Each image required an on-the-spot darkroom session to coat the plate with the light-sensitive emulsion. Little wonder then, that he often entered camp late at night "weary, hungry, irate, but victorious." Cohort Raymond devoted two pages of his memoirs to the indefatigable efforts by Thrasher to "wrastle" with the views. In fact, so "entirely unmanageable" did Thrasher become with his

time-consuming photography that the party split up at the Grand Canyon, with Sawtelle remaining to assist Thrasher, while the other four crossed the Central Plateau to take in the Upper Geyser Basin. Raymond extolled Thrasher's perseverance in "pursuing with tireless steps the spirit of beauty to her remotest hiding-place!"[34]

In the September 23, 1871, issue of *The New North-West*, the following brief item appeared under "Local Brevities:"

> Mr. A. F. Thrasher's outfit collided with a fire near the Geysers: Result, outfit destroyed, save negatives and camera: Sequence, he has returned to complete the series of views.

This cryptic report was corroborated by Raymond: "He got 'burned out' by a forest fire, losing everything *but his negatives* [Raymond's italics] and that after returning to Virginia City, and procuring a new outfit, he posted back again, this time alone, to 'do the rest of that country, or bust.'"[35] Thrasher died within four years of the trip.

Where are Thrasher's prints and negatives of Yellowstone in 1871? As a professional photographer Thrasher must have realized the commercial value of these earliest photographs of Wonderland—pictures which he so painstakingly wrought from the wilds and rigors of the upper Yellowstone—yet none are extant today (except for one purported image described below). The crescendo of interest in Yellowstone's wonders would have created a demand for Thrasher's images in Montana Territory and beyond. Had he printed and distributed a goodly number, some likely would have survived to the present.

One Thrasher picture of Yellowstone potentially exists. According to Mary Horstman, Forest Historian for the Bitterroot National Forest, a county historian in Wabash, Indiana, examined a Thrasher Yellowstone picture in the possession of the elderly widow of Josiah S. Daugherty's grandson. Unfortunately, the print could not be produced when Horstman visited the woman in the late 1980s.

At least one person held expectations that A. F. Thrasher's Yellowstone quest would achieve memorable results—his mother, who, as an 80-year-old resident of Grass Valley, California, wrote the following poem for the *Virginia City Montanian* of March 28, 1872:

News of my wandering son, whose first essay
Through Wonderland its treasure to survey
By fire arrested, were resumed again.
Mid dangers drear from savage beasts and men.
To seek for boiling springs and geysers grand
Amid the perils of that far-off land.
And reproduce them in their bright array
With pencil sharpened by the god of day.

Yellowstone was first photographed in 1871 by four individuals, yet only the images by William Henry Jackson (who accompanied the government's Hayden

Survey) were widely disseminated to the public which so hungered for them. A Chicago photographer named Thomas J. Hine accompanied U.S. Army Captain John W. Barlow's reconnaissance of Yellowstone, but his negatives were destroyed in the Chicago Fire of 1871. Recently, seven Hine prints were identified in the Print Room of the New York Historical Society, including the first known photograph of Old Faithful in eruption. A Bozeman photographer, J. Crissman, also accompanied Barlow, but his pictures were not widely distributed and were often misattributed to others. Three men—Thrasher, Hine, and Crissman—were poised to exploit their presence in Yellowstone on the eve of the park's birth, but fate turned its hand against them.[36]

The First of Many

These first six Yellowstone tourists had much in common with the succeeding multitudes: an appreciation of the unique and awe-inspiring geological phenomena that undergirds the region's appeal; an awareness of the varied wildlife heritage native to the plateau; and a cognizance that Yellowstone's commercial potential would be best managed through the mechanics of public ownership. Most telling, however, was their poignant, emotional response to this place where "the gates of the Infernal Regions were not only ajar but clear off their hinges," as Clawson emphatically phrased it. How fitting it is that Wonderland's first tourist could verbalize the elixir that still permeates the air and imbues itself upon the visitor:

> *Those who may hereafter visit this strange land will bear me out in the assertion that a peculiar sensation takes possession of the visitor which cannot be dispelled, that he feels he is in a land akin to spirit-land. Why this feeling, I am unable to explain; but it being the old pleasure grounds of the aborigines for many ages, and the place designated by them as the eternal abiding place of the spirits of their departed good, as well as the peculiar effect the exceedingly light air (barring the hurricanes) has upon the respiratory organs, the wild and fascinating scenery—all may have something to do with this strange feeling taking possession of the stranger.*[37]

Endnotes

1. See Mary C. Horstman, *Taking Up the Tools: The Early Career of Rossiter Worthington Raymond, 1867–1876* (University of Montana, Master's Thesis, 1989).
2. The Calvin C. Clawson Collection (Manuscript 165) is housed in the Idaho State Historical Society, Boise, Idaho.
3. Rossiter W. Raymond, *Camp and Cabin: Sketches of Life and Travel in the West* (New York: Fords, Howard and Hulbert, 1880), p. 157–159.
4. Raymond, p. 157.
5. Raymond, p. 155, 159.
6. *History of Wabash County, Indiana* (Chicago: John Morris, Printer, 1884).
7. Raymond, p. 159.
8. C. C. Clawson, "A Ride to the Infernal Regions," *The New North-West* (Deer Lodge, Montana Territory), September 30, 1871.
9. Henry Louis Gates, Jr., "Men Behaving Badly," *New Yorker*, August 8, 1997, p. 4.

10. Clawson, January 27, 1872.
11. Raymond, p. 169.
12. Clawson, January 27, 1872.
13. Paul Schullery and Lee Whittlesey, *The Documentary Record of Wolves and Related Wildlife Species in the Yellowstone National Park Area Prior to 1882*, (Yellowstone National Park, Division of Research, 1992).
14. Clawson, May 18, 1872. For an overview of nineteenth century human influences on Yellowstone wildlife, see Paul Schullery, *Searching for Yellowstone: Ecology and Wonder in the Last Wilderness* (Boston and New York: Houghton Mifflin Company, 1997), p. 68–88.
15. Clawson, October 14, 1871 and November 18, 1871.
16. Clawson, January 13, 1872.
17. Clawson, January 13, 1872.
18. Clawson, January 27, 1872.
19. Clawson, January 27, 1872.
20. Warren A. *Ferris, Life in the Rocky Mountains 1830–35* (Salt Lake City: Rocky Mountain Bookshop, 1940), p. 205.
21. See Åke Hultkrantz, "The Fear of Geysers Among Indians of the Yellowstone Park Area" *Lifeways of Intermountain and Plains Montana Indians*, edited by Leslie B. Davis (Bozeman, Montana: Montana State University, 1979); Joel C. Janetski, *Indians of Yellowstone National Park*, (Salt Lake City: University of Utah Press, 1987); and Joseph Weixelman, *The Power to Evoke Wonder: Native Americans and The Geysers of Yellowstone National Park* (privately printed, July 19, 1992).
22. Raymond, p. 154.
23. Clawson, September 16, 1871 and October 14, 1871.
24. Clawson, November 11, 1871.
25. Clawson, June 1, 1872.
26. *The New North-West*, August 27, 1869, p. 2, col. 1 & 2.
27. Clawson, February 10, 1872.
28. Clawson, February 10, 1872.
29. Clawson, November 18, 1871.
30. Clawson, November 25, 1871.
31. Clawson, December 2, 1871.
32. Clawson, February 24, 1872.
33. James H. Mills, "The Grand Rounds. A Fortnight in the National Park" *The New North-West* (Deer Lodge, Montana Territory), September 28–November 30, 1872.
34. Raymond, p. 156–157.
35. Raymond, p. 157.
36. Consult *Montana, the Magazine of Western History*, Summer, 1999, p. 2–37, for an extensive discussion of Yellowstone's earliest photographers.
37. Clawson, May 18, 1872.

Lee Silliman, Powell County Museum and Arts Foundation, Deer Lodge, MT 59722

An Indomitable Spirit: Dr. Caroline McGill

Connie Staudohar

The professional working woman of today heads off to catch a bus with a computer slung over her shoulder and a cardboard coffee cup in her hand. If asked where she was heading she'd likely say, "back to the real world." If we replace the computer with a black medical bag, and the race to the bus with a race to the livery stable, we might ask the same question to Dr. Caroline McGill some eighty years ago, and receive a similar answer. Dr. McGill, like her modern counterpart, grappled with balancing the demands of the "real world" with her need for recreation. She knew she needed both. The "relaxation of the outdoor life" made it possible for McGill to carry on her heavy medical practice.[1] The 320 Ranch in the Gallatin Canyon—just five miles from the northwest corner of Yellowstone Park—became Dr. McGill's counterweight to her life in Butte. If Butte was her workplace, the 320 Ranch was her heart and soul place.

Dr. McGill first viewed the Gallatin Canyon in 1911 from the back of a bobsled. The strands of hair that escaped from under her cap went untucked—her hands lay burrowed inside thick gloves and heavy wool blankets were layered around her from head to toe. As much as anything, she resembled the wrapped and bundled forms of the tubercular patients she had left behind in the Butte hospital. McGill herself had been consumed by the daily rounds of a busy hospital since her arrival in Butte less than a year before. She didn't hesitate when two of her medical colleagues suggested she join them on a hunting trip in the Gallatin Canyon.

In retrospect, it seems serendipitous that Dr. McGill should have toured the Gallatin as her first real excursion away from Butte. In October of 1911, just a month before she set out for the hunting trip, Butte had had the worst snowstorm in its recorded history. Twenty-four inches of snow had fallen in twenty-four hours. The heavy, wet snow had broken the telephone, telegraph, and power lines. For nearly a full week, Butte had been isolated from the rest of the world.[2] That meant that McGill, and the rest of the staff at the Murray Hospital, had had to meet the basic needs of their sick and dying patients without such basic services as lights, heating, or call bells. It had been an exhausting ordeal, and a frightening one. Dr. McGill needed a vacation, and so did the Murray's head surgeon, Dr. Witherspoon. The two gratefully boarded a train and headed for Bozeman where they would meet up with Dr. Safely, their friend from Livingston.

Dr. Safely owned a homestead in the Upper Gallatin near the Yellowstone Park boundary. He planned to build a sanitarium for diabetics there because he thought they would benefit from the fresh air, year-round spring water and good home-

cooking. He knew tuberculars had benefited from their stay at the Michener Camp in the canyon, and had fared well in their walled tents.[3] Now, however, his primary concern was to provide a comfortable respite for his friends. He planned to meet them in Bozeman, board the electric train with them to Salesville (now Gallatin Gateway), transfer to bob sled, and get midway up the canyon to Karst's Ranch that night. It would take almost another full day on the sled before they would reach his homestead at Snowflake Springs.

When the hunting party crossed Buffalo Horn Creek the following day they were told they were getting close to their destination. They were also told that the Buffalo Horn Creek Resort was one of the few active dude ranches in the canyon. Like Dr. Safely, many other canyon residents had informally hosted hunters in the fall and winter. As more people from cities toured Yellowstone National Park, stories of the large elk herds and other plentiful game in the area spread among hunters. Providing board and room for these hunters brought in some much-needed cash. Sam and Josie Wilson, owners of the Buffalo Horn Resort, had started their year-round dude business in 1907. That same year, the Michner Camp in the canyon advertised nationally in *Field and Stream*. These early dude ranches charged $12 a week for room and board and $6 for a horse and saddle.[4] In addition to lodging and hunting, however, the dude ranches offered a sense of peace and quiet. It was this combination—adventure and rest—that appealed to Dr. McGill; she made a note to herself about the Buffalo Horn Resort after she had settled at the Safely homestead.

Dr. McGill spent several days looking for game and exploring the canyon. There appeared to be more hunters than wild game, and although she left empty-handed she felt restored and well cared for. She later noted in her journal that "no sister or mother could have been more respectfully treated," and added that the men "never did overstep the bounds of the greatest dignity and propriety."[5] If propriety had been a concern before the trip, it was not a concern afterwards. McGill's "maiden voyage" in the company of men had assured her that maidens like herself were quite safe.

McGill fit into a certain "New Woman/New Century" stereotype of independence, adventure, and risk.[6] She was born near Ontario, Ohio, in 1879, on a farm her great-grandparents had owned. Her family had little income and in 1885 they moved to a rocky, brush-covered farm in Lebanon, Missouri, in the hopes of bettering themselves. The McGill farm was surrounded by the hardwood forests of the Ozark Mountains. Once her chores were done, Caroline, the second of five children, was free to roam in the woods and along the streams, and was encouraged to learn the name of the birds and flowers. The McGill children were all sent to the local school. Caroline thrived, and by the time she was seventeen was herself teaching grade school in order to save money for a university education.

Caroline entered the University of Missouri in the summer of 1901. At the end of the session, she was asked to stay on to assist with a science class in the fall. It was the chance she had waited for: she would be able to continue her studies at the university and still have a small income. In rapid succession she earned her B.A. in 1904, an M.A. in 1905, and a Ph.D. in Anatomy and Zoology in 1908. She had the added distinction of being the first woman to earn a doctorate from the University of Missouri.

With her heart devoted to science, Dr. McGill embarked on a long journey of career development that spanned roughly the next twenty years of her life. She studied at the University of Chicago with Howard Taylor Ricketts, the well-known scientist who spent his summers in Montana researching the connection between ticks and the deadly illness, Rocky Mountain spotted fever. There was additional study at Woods Hole Marine Biological Laboratory in Massachusetts and she received the Sarah Berliner Scholarship in 1909 for post-doctoral scientific study abroad. She attended the University of Berlin, studied at the Institute of Marine Studies in Naples, Italy, and returned to Germany to study at the Tubingen Institute. Towards the end of her stay in Europe a former Missouri colleague invited her to come to Butte to become the state's first pathologist. Dr. McGill deliberated the offer and spelled out her spirited decision in a postcard to her Mother: "I'll tell you right now I am making the biggest fool mistake to go. But it's all done and I have to let her rip."[7]

Dr. McGill's arrival in Butte on December 31, 1910, forged a period of local identity where she further distinguished herself. She stayed for two years as the resident pathologist at the Murray Hospital before going to Johns Hopkins University to medical school. During this short time, Butte had definitely become her home and Montana her touchstone. McGill returned in 1914 with a medical degree and for the next forty-five years doctored the miners and their families, the well-to-do and the ne'er do well, and just about everyone in between.

Dr. McGill worked tirelessly. Two examples illustrate how demanding a place Butte was to practice medicine. In 1917, a fire in the Speculator Mine claimed the lives of 165 miners—every doctor in Butte was called to the scene and rescue work continued for eight days. Many of the 245 survivors, and members of the rescue crew, were in need of medical treatment and admitted to the Murray Hospital. In 1918, the Spanish flu epidemic caused 1,000 deaths in Silver Bow County alone. Two young nurses at the Murray Hospital contracted influenza while caring for patients and they died within days of each other. For many of her stricken patients, McGill assumed the role of both doctor and nurse throughout the long months that the virus ran its course.[8] Dr. McGill opened a private practice, and in 1919 bought a large building where she maintained her office, her residence, apartments for friends and space to house her growing collection of antiques. If McGill fit the daring "New Woman" image at the turn-of-the-century, she had become an established "modern woman" with a demanding career and need for balance by the 1930s.

Dr. McGill bought her first car in 1918. This second-hand Reo made her long list of house calls easier and allowed her to take drives to the countryside. Eventually, Dr. McGill took an occasional weekend off to head to the river to fish, or the mountains to hunt. In October 1924 she went to the Madison with her friend, Mr. Joe Reau. "Up early," she wrote. "Got 3-spike buck at 5 PM. Next day hunted on top of [mountain]. Scared many deer down, and next AM hunted geese from decoy pit in wheat field. Plenty of geese. Fished in PM & home."[9] She hadn't forgotten the Buffalo Horn Resort and headed there for a weekend in early August of 1930. She mentioned in her journal that she rented a horse and rode alone to Ramshorn Lake where she caught twelve trout. She made it back to Butte by 11:30 that night.[10] After

several visits to the Buffalo Horn over the following several years, Dr. McGill made an offer to buy the entire resort in 1936.

Dr. McGill's thriving medical practice gave her financial freedom. She paid Mrs. Josie Wilson $6,000 in cash for the resort and promised to give her a home there for as long as she wanted. She convinced Susie and Park Taylor, who had managed a ranch on the Madison River, to move to the ranch and operate the cattle and dude operation. In addition to the change in ownership, the resort had changed names. Sam Wilson's father had purchased the adjoining homestead and the combined land added up to 320 acres. The resort became known as the 320 Ranch—McGill referred to it simply as the "320."

While many of us have created a "shadow life, the life that we would live, if and when, if only and when only,"[11] Dr. McGill created a manageable alternative to her urban work life. McGill envisioned the 320 as a place of renewal for herself, her friends and family, and for her convalescing patients. The 320 renewed McGill, and she poured her efforts into renewing the 320. Dr. McGill and the Taylors refurbished the run-down cabins. Old mattresses were restuffed, and McGill's antiques—old clocks, silver teapots, and marble-topped tables—were redistributed among the cabins. Electricity, fueled with a gasoline-fed generator, came to the 320 in 1938—eleven years before an electric line allowed for lights in the rest of the canyon.[12]

McGill took delight in the ranch. On her own, or with her friends, McGill rode horses through the mountains, fished the alpine lakes, and organized hunting parties in the fall. Her journal entries reveal her love of the outdoors, her keen sense of observation, her devotion to her friends, and her pleasure in the life she found in the canyon. "To [the] "320" with Dr. Sarah Graff and her Father," she wrote in June of 1938. She continued with, "To Ramshorn lake with the Graffs fishing. Dog tooth violets, Elk. Full moon." The following day she added, "To Dier place. Mrs. Graff. Mr. Benson. Bought old china and glass."[13] The journal entries always ended with "back to work." Back to the real world.

Even though her work world continued to be demanding, the 320 was not used as a retreat or a place to take refuge. She lived an engaged life in Butte, and an equally engaging life in the Canyon. Her practice in Butte continued to call for her compassion and skill. A partial list of autopsies performed in 1939 in Butte indicate that McGill was involved in cases ranging from death due to criminal abortion to chronic silicosis-related deaths.[14] McGill maintained a professional distance with patients and most colleagues in Butte, but had cherished friendships with two Butte women who also shared her enthusiasm for the 320. Their frequent visits to the ranch forged a link that bound together McGill's more private life in Butte with her outgoing and relaxed role at the 320.

Miss Thula Rodes and Mrs. Elizabeth Lochrie were professional women in need of a break from the "real world" every bit as much as their friend, Dr. McGill. Miss Rodes' friendship with McGill stretched back to their college days in Missouri. It was her older brother, Dr. Charles Rodes, who had asked McGill to come to Butte in the first place. Thula served as Dean of Girls at Butte High School for many years and invited McGill to speak at the Friday afternoon girls' assemblies. McGill discussed personal hygiene and encouraged the girls to take swimming classes, not to learn

to swim but rather to take advantage of the school's showers.[15] McGill purchased a new Buick in 1940 and headed to the 320 with Thula. "Cannot recall such a clear August," McGill noted. "All hay cut, barn full, big stack. Barn dance—500 people. Fine summer."[16]

While Thula shared in some of McGill's social life at the 320, Butte's noted artist, Mrs. Lochrie, spent her time painting and going horseback riding with McGill. "Left late with Mrs. Arthur Lochrie for 320," McGill wrote in September of 1940. Mrs. Lochrie sketched all day the following day, and then she and McGill took a long ride in the mountains. McGill noted the "lovely autumn color" and then the inevitable, "home to Butte."[17]

Just as the 320 Ranch contributed to Dr. McGill's well-being, her own contributions to the Gallatin Canyon became more evident as time went on. She made sure she knew what was going on not only at the ranch, but also in the canyon in general. Just as she had collected antiques and everyday artifacts in earnest when she realized that Butte's unique culture was changing, she began to collect stories from the old-timers in the canyon when she saw how their generation was passing. She carefully recorded these stories in her nearly illegible doctor's scrawl, then later her secretary transcribed them.

McGill invited folks to come to the 320 to share their stories, and also visited them in their homes. If necessary, she wrote to people. One respondent stated "I'm afraid I am not the person for whom you are looking." At the bottom of the page McGill included a note of her own. "I still think it was the same [person]. Try to find out."[18] These collected histories are a window into the past of Gallatin Canyon and the North Entrance of Yellowstone Park, and at the same time, they provide a glimpse into McGill's involvement in the canyon. One story involved Mr. Stanley Davis and his extended family. In addition to learning who married who and where they settled in the canyon, McGill ferreted out the fact that his nephew had been the driver of the bobsled on her first trip to Snowflake Springs. Another nephew had been a patient of hers in Butte. She noted his diagnosis as matter-of-factly as the location his uncle had herded cattle.

Stories about Dr. McGill were widely circulated even though she was reluctant to talk about herself. One incident canyon people loved to repeat was a Good Samaritan story of sorts. On one of McGill's many trips up the canyon she met some women who had run off the road and were stuck. McGill grabbed a shovel from her car and went to work. Soon the car was free and one of the women said to the doctor in awe, "You're Dr. McGill aren't you?" "Yep," replied McGill, "and the best damned shoveler in Gallatin County," at which point she was said to have hopped into her car and drove on.[19]

As well, Dr. McGill cared about the land and the animal populations in the canyon. She left an easement along the riverfront of her property so fisherman could have access. She became a charter member of the Wilderness Association, and attended meetings of the state fish and game department and the forest service whenever they discussed the future of the elk in the canyon. She acquired additional acreage including twelve sections of Holter lands on Taylor Creek in 1941, and the Porcupine Ranch on Porcupine Creek in 1945. In 1950 Dr. McGill agreed to sell this

particular land to the state department of fish and game for use as elk winter range.

The issue of elk management had been a long-standing debate in the canyon stretching back at least to the 1890s when big game limits had first been set. These early limits allowed eight deer, eight sheep, eight goats, two moose, and two elk per hunter. Many hunters came into the Gallatin Canyon to get their elk quota. Concern and debate about the Gallatin Elk Herd continued for the next half-century and McGill's decision to sell her land in the interest of the elk was a sensitive move. This McGill property, along with a few other parcels, became the Porcupine Game Range, a refuge used by park elk in the winter when the deep snows drive them from Yellowstone.[20]

If Dr. McGill's long and productive life is compared to a colorful, complex mosaic crafted piece by piece then it is in the final five years of her life that the tile is completed, and the full image revealed. Her professional life, her antique-collecting hobby, and her beloved ranch all overlapped in the end creating a series of events that afforded McGill the recognition she deserved, while at the same time allowed her to disperse her dearly-held possessions. An honorary doctorate, bestowed on McGill by Montana State College in 1955, recognized McGill's accomplishments in the medical field, and in historic and wilderness preservation. [21] By the time Dr. McGill received her honorary doctorate, she was seriously searching for a public home for her vast private antique collection. Through the cooperation and efforts of President Renne and historian Merrill G. Burlingame, Dr. McGill was allocated three World War II quonset huts on the Montana State College campus to begin a museum.

Dr. McGill had retired from her Butte medical practice in August 1956. By September, hundreds of items were moved from her apartment building in Butte to the quonset huts. After months spent cataloging items, constant cleaning and sorting, and committee meetings, the Quonset Museum opened on February 12, 1957. Within a year the Quonset Museum moved and an old dairy barn became the Museum's new home. Dr. McGill planned to spend time working in the barn museum during the winter just as she had in the quonsets. However, her health failed and most of her time was spent at the 320 where she died on February 4, 1959, at the age of seventy-nine. Dr. McGill did not live to see the evolution of the McGill Museum into the Museum of the Rockies, but her role as founder is recognized by a stately bronze plaque in the facility's main lobby.

Throughout her life Dr. McGill was a personal benefactor to many individuals and causes and her last will substantiated this life-long pattern of quiet generosity. She left land to the Goodriches, the 320 managers, and the option to purchase both the 320 Ranch and the Holter lands on the Taylor Fork. They bought both and the proceeds went to McGill's surviving brother and sister. In addition to the core collection left to the Museum of the Rockies, McGill established a sizable building fund for the museum. Other contributions included monies left to the Gallatin Canyon Women's Club which they used in 1963 to modernize Ophir school, and there was a distribution to some of her close friends from Butte.[22]

Nearly fifty years had passed between Dr. McGill's first trip to the Gallatin Canyon in 1911, and her burial in the small cemetery at Soldier's Chapel in the canyon. A well-balanced life unfolded over those years that embraced both a

demanding professional career, and a rich outdoor life shared with friends and family. From her earliest beginnings on a small farm in the Ozarks, to her years in Butte, and eventual retirement to her beloved 320, Dr. McGill's gifts of scholarship, leadership, and philanthropy resulted in remarkable outcomes for the people of this region.

Endnotes

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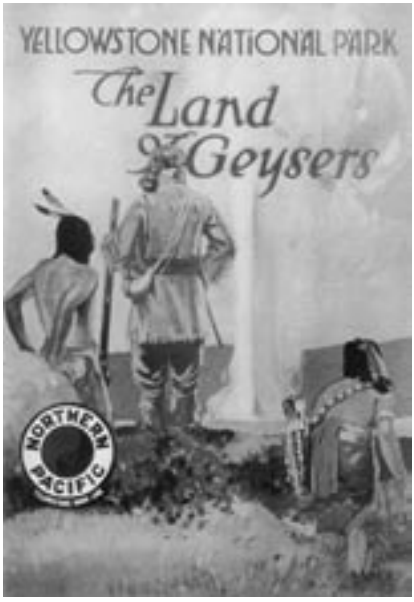
Connie Staudohar, 820 Bald Eagle Drive, Bozeman, MT 59715

Fear or Reverence? Native Americans and the Geysers of Yellowstone

Joseph Owen Weixelman

When two Pend d'Oreille Indians guided trapper Warren Ferris along Yellowstone's Firehole River in 1834, he wanted to see the geysers and hot springs he'd heard about at the Rocky Mountain Rendezvous, an annual gathering of mountain men held under the auspices of the Rocky Mountain Fur Company. He later wrote in his journal:

> I ventured near enough to put my hand into the water of its basin, but withdrew it instantly, for the heat of the water in this immense cauldron, was altogether too great for comfort, and the agitation of the water, the disagreeable effluvium continually exuding, and the hollow unearthly rumbling under the rock on which I stood, so ill accorded with my notions of personal safety, that I retreated back precipitately to a respectful distance. The Indians who were with me, were quite appalled, and could not by any means be induced to approach them. They seemed astonished at my presumption in advancing up to the large one, and when I safely returned, congratulated me on my "narrow escape."— They believed them to be supernatural, and supposed them



Historical representation of Indians' timidity at an erupting geyser. Note the confident stance and lead position of the fur trapper juxtaposed with that of his native companions, possibly portraying the Warren Ferris account. From a park guide entitled "Yellowstone National Park: The Land of Geysers" published in 1917 by the Northern Pacific Railway. Yellowstone museum collection.

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> to be the production of the Evil Spirit. One of them remarked that hell, of which he had heard from the whites, must be in the vicinity.

Ferris's report has often been adduced as evidence that Indians feared Yellowstone's geysers, an assumption that was relayed to early visitors to Yellowstone and became the prevailing view among social scientists. However, hundreds of years before the first Euro-Americans gazed on the Firehole Valley, many American Indians went to the geyser basins to pray, meditate, and bathe. Most native peoples revered the land of Yellowstone and many treated it as sacred in their cosmology. While a sense of fear may have been linked with the geysers and hot springs, the belief that this was the predominant emotion or indicated a primitive intellect is mistaken. Instead, it is more accurate to say that American Indians understood the area to be linked to the powers of their Creator, powers that were difficult to understand and could be dangerous. Such a place had to be properly respected and one could not take a journey there lightly. A different impression of native attitudes toward Yellowstone can be arrived at by deconstructing trapper accounts like those of Ferris and supplementing them with oral histories, archeological evidence, and other sources.

A common problem in Euro-American perceptions of American Indians is a tendency to regard them as a single culture. Native North America can be divided into a dozen cultural regions, each with distinctive economic, political, social, and religious systems. Yellowstone National Park lies near the junction of three of these cultural regions—the Great Basin, the Plateau, and the Great Plains—where wide variations in native perceptions of Yellowstone could occur. Cultural differences may also be found even between bands of the same tribe. If it is misleading to speak of Indian culture as a monolithic entity, it is equally deceptive to speak of an Indian fear of Yellowstone. Different tribes and bands responded to the geysers differently, just as they responded to Euro-Americans differently.

Native Americans in Yellowstone

People have inhabited the Yellowstone region for at least the past 7,500 years. Although archeological evidence has been found of Paleo-Indian presence in the thermal basins, the first written historical record indicates that the native peoples who resided closest to the Yellowstone region at the start of the nineteenth century included the Blackfeet, Crow, Shoshone, and Bannock. The territorial boundary for these tribes was formed by the high mountain ranges that come together there.

The Fort Laramie Treaty of 1851 recognized Blackfeet lands as those to the north and west of the Yellowstone River. As fur trappers ventured into this area, the Blackfeet were possessive of their territory and battled Euro-Americans over the game found there. The same treaty recognized Crow title to lands to the south and east of the Yellowstone River. Fur trapper Edwin Denig identified their lands as including some "boiling springs" in the vicinity of the upper Yellowstone and the Crow warrior, Two Leggings, spoke of a trip there in his youth. As European diseases took their toll on tribal numbers, the Blackfeet slowly departed from the region and ceded their claims to the Yellowstone Valley in the Treaty of 1855. However, when Yellowstone

Map of approximate tribal territories in and around the Yellowstone plateau, circa 1850. Map courtesy Peter Nabokov and Larry Loendorf from Restoring a Presence: A Documentary Overview of Native Americans and Yellowstone National Park, *forthcoming from the University of Oklahoma Press.*

National Park was established in 1872, the extreme northern portion of the park (east of the Yellowstone River in Montana) was actually part of Crow territory until a council in 1883 agreed to cede this mountainous land and move the tribal agency eastward.

The claims of the Shoshone and Bannock, who lived west of the Continental Divide where the terrain was poorly understood by the treaty-makers, were not formally recognized by the Treaty of 1851, but their presence in the region is well-documented. On good terms with each other, the Shoshone and Bannock hunted from central Wyoming to eastern California, entering the Yellowstone region through the forks of the Snake River. The Tukudeka, who became known as the Sheep Eater Indians, lived in the mountainous regions of central and eastern Idaho and northwestern Wyoming. Once regarded as a distinct tribe, most anthropologists now consider them a band of the Shoshone. Other Shoshone bands also named themselves by what they ate: Salmon Eaters (Agaidika), Fish Eaters (Pengwidika), Dove Eaters (Haivodika), and Buffalo Eaters (Kucundika). Although some early writers depicted the Tukudeka as superstitious, poor, and even squalid, Richard Bartlett used Osborne Russell's trapper narrative as evidence that they lived well by aboriginal standards despite their lack of horses. They hunted bighorn sheep, deer,

elk, pronghorn, and bear, and their clothing, hides, and bows were in high demand among other Shoshone bands. The Tukudeka left Yellowstone when, under pressure from Superintendent Philetus Norris, the agent at Fort Washakie sent a party of Shoshone "to escort the Tukudeka to new homes on the Wind River Reservation" in 1879.

The Nez Perce, Flathead, Kalispel, Pend d'Oreille, and Coeur d'Alene were also known to travel to the Yellowstone region regularly. According to Yellow Wolf, one of Chief Joseph's scouts in the Nez Perce War, they were familiar with the Yellowstone country and the "hot smoking springs and the high-shooting water were nothing new" to them. The Assiniboine have traditions of journeying from the plains of northeastern Montana as far as the geyser basins of Yellowstone. There is one mention of the Arapaho and a few that also place Lakota in the region.

Moses Harris, the park's first acting superintendent during the period of army administration, tried to prevent Bannock hunting parties from entering the region during the 1880s, but they continued to hunt in areas around the park into the 1890s. In 1896, in the case of *Ward v. Race Horse*, the Supreme Court found that native hunting rights no longer existed in the region. By the end of the nineteenth century, native peoples were seldom seen in Yellowstone.

Origins of the Frightened Indians Story

The Euro-American belief that Indians were frightened by Yellowstone's geysers fit in with the stereotype of Indians as "savages" who were scared of natural phenomena such as lightning, thunder, volcanoes, or even spouting waters. The explorers and trappers who heard of Yellowstone's wonders from Indians or entered the region with Indian guides generally did so without any appreciation for native religious beliefs; as was the accepted view among Euro-Americans at the time, Indians were regarded as pagans and heathens. According to George Horse Capture, deputy assistant director of the National Museum of the American Indian, mountain men wandered through the region "carrying few possessions, but a lot of cultural baggage."

Therefore, it is necessary to question the primary sources on which historians rely. Euro-American chroniclers seldom named their sources or the tribal affiliations of the Indians mentioned, or indicated how they obtained their information. George Horse Capture told me that although trappers depicted Indians as wild and without rules, it was the trappers who often came West to live away from the rules of their society, while native tribes lived in complex cultures with well-developed, albeit unwritten, laws. Anthropologists have also demonstrated the ordered nature of American Indian life in numerous studies.

The first reference to the possibility that Indians feared the Yellowstone region appears in the expedition journals of William Clark. Under the heading, "Notes of information I believe correct," Clark included information he received in 1808 from George Drouillard, another fur trader. It contains the following text:

> [A]t the head of this river the Indians give an account that very frequently there is a loud nois [*sic*] heard like thunder which makes the earth tremble—they state that

> they seldom go there because their children cannot sleep at night for this nois and conceive it possessed of spirits who are averse that men should be near them.

Although Drouillard's report indicates that these Indians avoided the area, he explained that they did so because of their belief that Yellowstone was home to spirits they did not wish to upset. He does not directly state that they were frightened by these spirits, but implies that they respected them.

Daniel Potts, Joe Meek, and Osborne Russell, who were among the first trappers to enter the Yellowstone area, all left written accounts of the thermal basins, and Russell stayed with a Tukudeka encampment, but none of them commented on native beliefs about Yellowstone. The most renowned trapper associated with Yellowstone, Jim Bridger, repeated the story that the geysers frightened the Indians, but he was notorious for embellishing his tales with artful fabrications of petrified forests containing petrified birds singing petrified songs and rivers that ran so fast the friction heated them. The Jesuit missionary, Pierre-Jean DeSmet, never visited the Yellowstone region, but he drew a map for the Fort Laramie Treaty Council with Bridger's help, and that may explain why he wrote, shortly after attending the treaty conference:

> The hunters and Indians speak of it with a superstitious fear, and consider it the abode of evil spirits, that is to say, a kind of hell. Indians seldom approach it without offering some sacrifice, or at least without presenting the calumet of peace to the turbulent spirits, that they may be propitious. They declare that the subterranean noises proceed from the forging of warlike weapons: each eruption of earth is in their eyes, the result of a combat between the infernal spirits.

This anecdotal myth seems to derive more from the pagan Greeks than with American Indians. Although the Indians DeSmet was referring to had no indigenous knowledge of metallurgy or weapons forging, Bridger had once worked as an apprentice to a blacksmith in St. Louis, and would have heard such stories from other smiths. He received no other education, was reputed to have an excellent memory, and was said to be superstitious himself.

Subsequent exploring parties readily accepted the idea that Indians feared the geysers, but their sources were nameless mountain men. David Folsom, in the Folsom-Cook-Peterson exploring party of 1869, heard from trappers that Indians believed the region to be the abode of evil spirits. Nathaniel P. Langford, who helped organize the 1870 Washburn expedition, met Bridger in 1866 and believed some of his tales of spouting geysers might be true. He makes no note of talking with Indians, but later wrote in his expedition journal, "The Indians approach [the Yellowstone region] under the fear of a superstition originating in the volcanic forces surrounding it." Likewise, Lt. Gustavus Doane, who accompanied the Washburn expedition, doesn't mention his source, but noted in his journal that "[t]he larger tribes never enter this basin, restrained by superstitious ideas in connection with the thermal springs."

After Norris became park superintendent in 1877, he repeatedly referred to

the Indians' "superstitious awe of the hissing springs, sulphur basins, and spouting geysers" in his annual reports to the Secretary of the Interior. When the Nez Perce retreated through Yellowstone during the War of 1877, Norris believed they chose this route out of desperation and because they had "acquired sufficient civilization and Christianity to at least overpower their pagan superstitious fear of *earthly* fire-hole basins and brimstone pits." However, the Indians who fled from Oregon and Idaho under Chief Joseph, Little Bird, and Looking Glass were the most traditional Nez Perce bands in following native religious practices.

Harry Norton's 1873 guidebook on Yellowstone stated that "there exists among [Indians] an unconquerable superstition that the great Manitou here displays his anger towards his red children." Thirteen years later, in *Through the Yellowstone Park on Horseback*, George Wingate repeated Norris's description of the Indian fear of geysers almost verbatim. Hiram Chittenden, who wrote the first history of Yellowstone in 1895, found it strange that "no knowledge of that country seems to have been derived from the Indians." However, he believed that Indians avoided the region for practical reasons, because if they had superstitions about it, there would have been "well authenticated Indian traditions of so marvelous a country."

Frontispiece for the book entitled, The Story of Man in Yellowstone *by Merrill D. Beal, published in 1949 by Caxton Printers, Ltd. Depicting an unknown fur trapper taken aback by an erupting geyser. His particular emotional reaction—fear? awe? surprise?–can't be known with certainty either.*

Twentieth-Century Views of Indians in Yellowstone

An assumption that Indians were frightened of Yellowstone had become prevalent by the 1930s. A 1929 book written by Superintendent Horace Albright with Frank Taylor suggested that Indians both feared the geysers and found the land to be inaccessible and of little utility. The most recent validation for the idea that the Indians feared the geysers appears in the work of Åke Hultkrantz, the Swedish historian who is largely responsible for its widespread acceptance among anthropologists. In a 1954 article in *Ethnos*, Hultkrantz maintained that the Indians' fear of going to Yellowstone was so strong it constituted a religious-emotional taboo that could be overcome only in times of distress. He regarded their reticence in providing information about the region as evidence of an Indian belief that even mentioning the names of the places

where geysers existed was dangerous. The *Ethnos* article later became a chapter in Hultkrantz's 1981 book, *Belief and Worship in Native North America*.

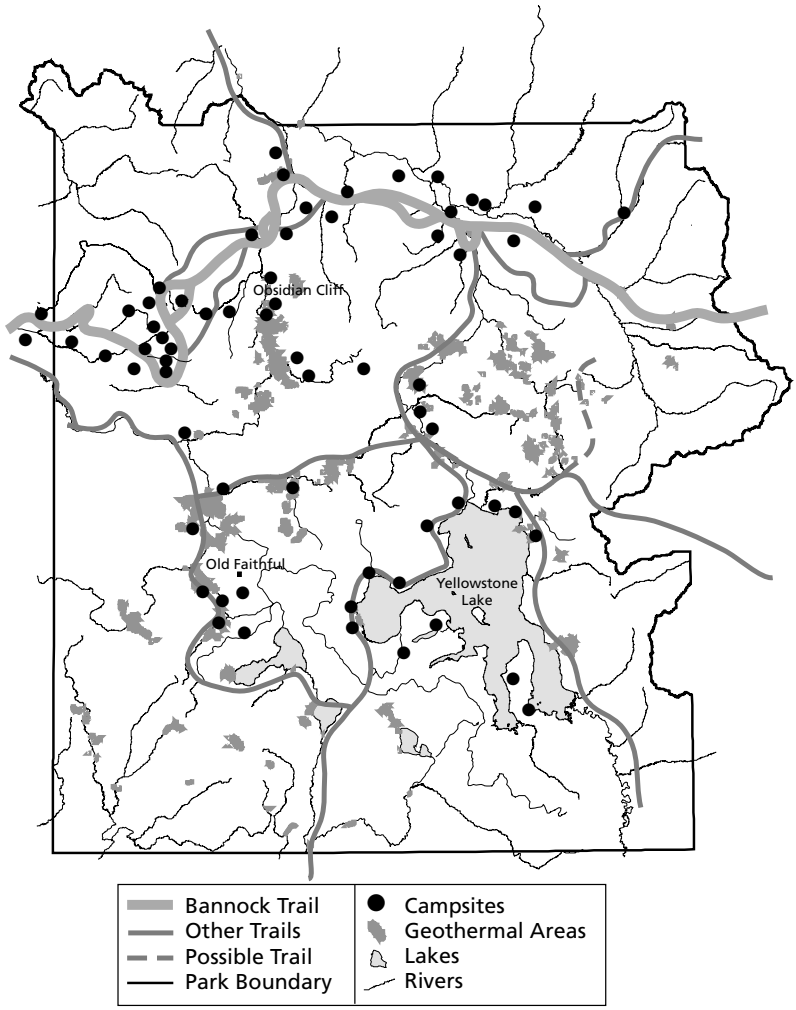
Hultkrantz based his research on sources which, by his own admission, are not rich, being mostly Shoshone. These sources include: (1) the accounts of early trappers and explorers, primarily DeSmet and Ferris; (2) official reports regarding the exploration and establishment of the park, particularly those of Lt. Doane, Superintendent Norris, and General Phillip Sheridan; (3) later non-official documents, including books on the "Sheepeaters" and a letter from the superintendent of Wind River Agency; and (4) notes from his fieldwork among Shoshone on the Wind River Reservation between 1948 and 1958.

While Indian fear of the Yellowstone region continued to be mentioned in guidebooks into the 1980s, some historians following Chittenden doubted this interpretation. Since the late 1940s archeologists have located lithic scatters, timbered lodges (or wickiups), and other debris indicating aboriginal campsites throughout Yellowstone, including thermal areas at the Norris, Midway, and Lower geyser basins. (In the early years of the park, many arrowheads and artifacts were removed or purchased by visitors as souvenirs.) Of the more than 400 former Indian campsites that have been located in the park, more than 40 are near areas of thermal activity. Archeologist Carling Malouf, who identified occupation sites around Mammoth, along the Firehole River, and behind the Old Faithful Inn, rejected the "Indian fear" hypothesis in 1958. Writing in 1974, historian Aubrey Haines believed that the Indians who possessed a fear of geysers were only those "whose contact with whites had developed a conception of an underworld."

Hultkrantz did revise his argument in 1979, taking into account archeological evidence that seemed to contradict his belief that the geysers were taboo to the Indians, but he maintained his original thesis while downplaying native fear of "the less dramatic hot springs." Though somewhat skeptical, anthropologist Joel Janetski repeated most of Hultkrantz's thesis in his 1987 book on the Indians of Yellowstone.

What the Indians Knew

Chittenden and Hultkrantz were among those who based their conclusions about Indians in Yellowstone on a perception that while the Indians gave geographical information to explorers, they did not mention Yellowstone's wonders. More recently, however, historians have found evidence of how Indians shared their knowledge with Euro-Americans that suggests otherwise. In 1805, the Governor of Louisiana Territory, James Wilkinson, learned about the Yellowstone headwaters and a "volcano" nearby from a map drawn on a buffalo hide by an unidentified Indian. Sometime after his return to St. Louis in 1806, Meriwether Lewis wrote that, according to Indian sources, the Yellowstone River had "a considerable fall…within the mountains but at what distance from it's source we never could learn." While reconnoitering the route for a road from Fort Walla Walla to Fort Benton in 1863, Capt. John Mullan learned from Indians of the existence of "an infinite number of hot springs at the headwaters of the Missouri, Columbia, and Yellowstone rivers, and



Yellowstone map depicts Native American trails and campsites, and their proximities to the park's geothermal areas. Map courtesy J. Weixelman, geothermal data provided by Yellowstone's Spatial Analysis Center, and digital treatment by Tami Blackford.

that hot geysers, similar to those in California, existed at the head of the Yellowstone." George Harvey Bacon, a Montana prospector, went to the Upper Geyser Basin with "a friendly band of Indians" in 1865. That same year, Father Francis Kuppens visited the sights of Yellowstone, including its geysers, in the company of Blackfeet.

Hultkrantz claimed that Indians avoided the thermal basins and few Indian trails went there, but despite its relatively severe climate and demanding topography, the Yellowstone region actually had more trails than other parts of Wyoming. Like Indian trails elsewhere, they followed the river valleys and therefore came close to the geysers

and hot springs at West Thumb, Mud Volcano, and in the Firehole Valley. Many of these English names associated with Yellowstone today are not exactly enticing, yet Hultkrantz regarded Indian names for Yellowstone as evidence of their fear, stating that such names were "soberly descriptive" and did not reveal their emotional attitude toward the region.

The Shoshone referred to the Yellowstone region as the place where "Water-keeps-on-coming-out." According to legend, the Blackfeet name for the area, "Many Smokes," comes from the fact that when they first saw the steam from the geysers, they thought it was smoke from an enemy camp. Other recorded Indian names for Yellowstone include "Burning Mountain" and "Summit of the World." But these names for the Yellowstone region are not noticeably different from those used by American Indians elsewhere. The Wyandot name for the Missouri River translates as "muddy water" and their name for the Kansas City, Missouri, site translates as "the point where rock projects into the Muddy Water." The Cheyenne called the Smoky Hill the "Bunch of Trees River" and the Solomon River, "Turkey Creek." Closer to Yellowstone, the Crow called the Stillwater River, "Buffalo Jumps Over the Bank River" and the Clarks Fork of the Yellowstone, "Rotten Sun Dance Lodge River." The National Park Service uses Blackfeet names for places within Glacier National Park including "Chief Mountain" and "Two Medicine Lake."

The Bannock Trail

Heavy snowfall kept the Yellowstone area inaccessible much of the year, game was more plentiful at lower elevations, and the mountains made travel difficult. Yet in the 1840s, after the buffalo were exterminated from the Snake River plains, the Bannock developed an old trail adjacent to hot springs at Mammoth and near the Yellowstone River crossing into a major thoroughfare to reach the buffalo ranges of Montana and Wyoming. By crossing over the mountains perpendicular to the river valleys, the trail avoided war parties of Blackfeet and Lakota on the plains, providing greater safety than other routes to the Bighorn Basin and Powder River country. Scouting and hunting parties could access the plains and the valleys to check on the position of both the buffalo and their enemies while the rest of the tribe stayed secure in the mountains. Estimated by Haines to be 200 miles long, it came to be known as the Bannock Trail, but it was also used by the Northern Shoshone, Nez Perce, Kootenai, Salish, Pend d'Oreille, and Crow, and is still visible in places today. The fact that tribes used the Bannock Trail to avoid contact with enemies would suggest that the Yellowstone region was to be feared less than their enemies.

Wayne Replogle, a Yellowstone naturalist who explored the Bannock Trail more than anyone else in the twentieth century, referred to it as a "great aboriginal highway." He saw the frequent splitting and rejoining of alternative trail routes as evidence that the trail was used by a variety of groups of people for a variety of reasons under varying weather conditions. The Euro-American explorers who entered Yellowstone always used Indian trails. Both the Folsom and Washburn parties used the Bannock Trail. As described by Lt. Doane:

Joseph Weixelman on the Bannock Trail in 1998. The trail is still visible in places today. Photo courtesy J. Weixelman.

> Passing over this high rolling prairie for several miles, we struck at length a heavy Indian trail leading up the river, and finding a small colt abandoned on the range, we knew that they [a party of Crow Indians] were but a short distance ahead of us.… Descending from the plateau through a steep ravine into the valley, and skirting for a distance of two miles a swampy flat, we came to the first warm spring found on the route.…

What the Indians Say

ELDERS FROM SEVERAL TRIBES have preserved the history and traditions of their people concerning the Yellowstone region. Because more than a hundred years have passed since these tribes were forced to move to lands far from Yellowstone, there are discontinuities in the record. The army had to order some tribes, like the Bannock, to stay out of Yellowstone, creating an enmity that has persisted. I found that my efforts to obtain oral histories were hampered by previous research conducted by anthropologists and historians who did not respect tribal customs and did not receive approval from the elders for what they wrote. As a result, many tribal cultural committees were no longer willing to cooperate with researchers.

Although the accuracy of oral histories may be questioned, especially when three generations separate the sources from the attitudes under investigation, there are good reasons to give them as much credence as has been accorded the reports of early nineteenth century fur trappers. First, the information collected pertains to overall attitudes and values surrounding Yellowstone rather than specific dates or places. One

is likely to remember the impressions one's grandparents leave more accurately than specific events. Second, these tribal elders are familiar with the culture in question and with using oral traditions. In some cases, they could infer attitudes from their knowledge of what their ancestors believed. For example, Oliver Archdale could explain that if the Assiniboine had feared Yellowstone, they would have gone there to test themselves, given his understanding of the culture of which he is a part. Although it is possible that their closeness to their culture might make them want to present it in the most flattering way, the same is equally true when using accounts written by non-Indians.

Finally, information gathered through an oral history may be considered particularly reliable when it is corroborated by another, independently given interview. For example, George Kicking Woman, a respected elder and religious leader of the Blackfeet nation, reported in 1992 that the Yellowstone region was sacred to the Shoshones without knowing that Haman Wise, who was a descendant of both the Wind River Shoshone and the Bannock, had made the same point in 1991. The fact that the Shoshone and Blackfeet are traditional enemies and Kicking Woman had nothing to gain by his statement added to the credibility of Wise's claim.

What we can learn from these oral histories is that different tribes used Yellowstone in different ways. Like Hultkrantz's sources, Wise spoke of both the sacred nature of the geyser basins for the Shoshone and Bannock, and the practical use of the hot springs for bathing. However, unlike Hultkrantz, Wise claimed that the park's thermal wonders did not frighten the Shoshone or the Bannock. "The Indians wasn't scared of it. This was a valuable place for them. This was more of a spiritual [place]. It was something cherished by them…" Wise understood the connotation that "fear" has for Euro-Americans and felt certain that such fear was not a part of his people's response to the region. Yet, stressing the sacred nature of the region, he insinuated that there were practices that had to be followed to demonstrate the proper respect. Without such practices, one would be in danger of showing disrespect and paying the consequences.

The Indian use of hot springs for bathing and their construction of tubs to hold the water has been documented elsewhere in the West. According to geologist George Marler, Indians were responsible for diverting Tangled Creek to create a reservoir at Tank Spring (also called Ranger Pool or Old Bath Lake) in the Lower Geyser Basin. In 1973 he reported that "the degree of mineral deposition [and] the fact that the pond was used for bathing in the 1880s, strongly suggests that it had its origin prior to 1870." Although other archeologists have disputed his claim, Marler considered this basin, which has a diameter of 60 feet, one of Yellowstone's "most important archeological sites."

One of Hultkrantz's sources told the story of Nakok, a Shoshone who went to Yellowstone to hunt; when "they arrived at the steaming waters…undressed and bathed, and came back clean." Wise, who was appointed by the Wind River Reservation Tribal Council "to represent the Eastern Shoshone Tribe concerning all Traditional, Cultur[al], Spiritual, Ceremonial & Sacred sites, etc," explained, "This is a natural Jacuzzi for us.…It's healthy.…There is a lot of value to these springs." He mentioned that the Shoshone and Bannock used mud from the mudpots to

Max Big Man and his daughter, Myrtle, of the Crow Tribe, in front of Giant Geyser, 1933. In the 1920s and '30s, Max made presentations to park visitors about how the Crow lived "in the old days." NPS photo.

clean and purify the skin much as mud packs are used in health resorts today. The Shoshone at Coso Hot Springs in California were also known to use hot mud for baths. Chief White Hawk, who had fled with Chief Joseph across the park in 1877, told park naturalist William Kearns in 1935 that the Nez Perce were not scared of the geysers. According to Kearns, White Hawk "implied that the Indians used them for cooking." Stories among the Crow suggest that they did the same, and might have drunk geyser water to promote good health.

Some tribes may have gathered pigments for paints from the minerals in the thermal areas. One Yellowstone guide remembered the Indians of the region "got most of their colors from the Mammoth Paint Pots." Walter McClintock, who wrote extensively on the Blackfeet, recorded that they obtained pigment for yellow paint from "a place on the Yellowstone River near some warm springs." The Shoshone soaked the horns of bighorn sheep in the hot water until they were malleable enough to be shaped. This was perhaps the technique used by the Tukudeka to make horn bows. James Beckwourth related that the Crow used the hot springs in a similar way to straighten buffalo and elk horns.

Yellowstone as Sacred Land

MANY TRIBES REGARDED THE LANDS that became Yellowstone National Park as sacred. A Nez Perce historian, Adeline Fredin, recalled her grandparents telling about a long trip to Yellowstone to pray, bathe, and sweat. According to Fredin's letter, "it was one place where the Great Spirit existed and we could bathe the body and spirit directly." She said that the "geysers/hot springs sites were a ceremonial and religious part in our history" and the Nez Perce went to Yellowstone to purify their bodies and souls.

One of Hultkrantz's sources told him that "the Indians prayed to the geysers because there were spirits inside them." Another said that his grandfather, Tavonasia, and his band "raised their tents close to the Firehole Geyser Basin…The men themselves bathed in the geysers whilst they directed their prayers to the spirits." They approached the geysers, hot springs, and thermal features with an attitude of reverence and prayed to the spirits present for assistance on vision quests.

According to ethnographic accounts, a vision quest is a special rite for many tribes in which the Indians go alone to the wilderness to pray and fast, asking assistance from the Spirit World. They believe that if the petitioner is sincere and respectful, the Spirit World may bestow a vision or dream carrying the power of the spirit benefactor. Referred to as one's "medicine," this may include the power to heal or to foresee future events, or strength in war. Like Hultkrantz's sources, Wise identified Yellowstone as an area the Shoshone and Bannock used for vision questing; he said that Yellowstone's thermal basins contained especially powerful spirits in Shoshone cosmology. These spirits were revered, and one would be careful not to insult them. They were powerful, but also potentially helpful. Deference and respect were important.

For example, even when just passing through the region, the Shoshone and Bannock offered their pipes in prayer, and they left gifts when petitioning or thanking the spirit world. Wise explained that these gifts were objects of value such as tobacco that was left on the ground or smoked. This information clarifies the passage in DeSmet's letter that refers to "the calumet of peace to the turbulent spirits" presented by the Indians. Arrowheads were left beside or in a hot spring, Wise noted, "to receive the value of this spring." This is a possible explanation for an arrowhead that Marler found while cleaning a hot spring in the Firehole Geyser Basin in 1959. (The spring is now known as Arrowhead Spring.)

Unidentified Native American family at the Upper Geyser Basin, circa 1930. NPS photo.

The Blackfeet did not come to Yellowstone to vision quest or fast because they preferred the region surrounding Glacier National Park and the Two Medicine wilderness. However, George Kicking Woman maintained that "the Blackfeet don't bother things like that, if they think they're sacred to them people, they won't bother them." Knowing it was sacred to others, the Blackfeet respected Yellowstone, and when traveling through the region, they stopped to offer their pipes in prayer or leave tobacco. Kicking Woman noted that prayers were especially said for a safe journey on the dangerous trip.

Chief Plenty-Coups of the Crow told of a medicine man, The Fringe, who received his power from a hot spring. Located in the Bighorn Basin, this was probably the large spring at Thermopolis. On the third day of a vision quest, The Fringe disappeared on an island in the spring; later he related that his spirit guide took him to his home below where he received instruction. After that, when the Crow passed this spring, they dropped in beads or something pretty for "the dream father" of The Fringe, and they may have approached Yellowstone in a similar spirit in the nineteenth century. During his ethnographic overview of Yellowstone National Park, Peter Nabokov uncovered evidence that The Fringe also came to Yellowstone to fast.

More distant tribes shared the perception of Yellowstone as a sacred place. Stories that place the Assiniboine in the Yellowstone region also mention prayer and the offering of the pipe. According to legend, Walking Bull, a noted Assiniboine chief, was mystified by the geysers when he came upon them during a personal trek. In a 1991 interview, Otto Cantrell, also known as Chief Bluebird, said that he believed Walking Bull would have sought the geysers' meaning with prayer, because the Assiniboine believe all things to have meaning, but only the Creator can reveal it.

There are stories relating how native peoples set aside their animosities around hot springs in Apache and Ute territory, as well as in Yellowstone. Although this practice may have been more honored in the breach, the belief that intertribal warfare was not supposed to be brought to regions containing hot springs supports the idea that Yellowstone was sacred land to Native Americans. Fredin asserted that at Yellowstone hostilities were left outside the area. Wise spoke of Yellowstone as a neutral ground and contended that as they came for purposes other than warfare, tribes never fought each other here. The Haynes 1890 guidebook mentions the legend that Obsidian Cliff was neutral ground to all Rocky Mountain Indians. Although Native Americans and trappers did fight in the park, only one account exists of a battle between tribes. It is supposed to have taken place on Three Rivers Peak, away from the geyser basins, and the account cannot be verified.

In Mircea Eliade's book, *The Sacred and the Profane: The Nature of Religion,* the French historian of religions observed that "for religious man, nature is never only 'natural': it is always fraught with a religious value…it spontaneously reveals the many aspects of the sacred." According to Kevin Locke, a Lakota Baha'i well-versed in the oral traditions of his people, "the pre-eminence of the Yellowstone basin as a site of particular spiritual potency invoking awe, wonderment and spiritual upliftment for thousands of years is indisputable." Although his claim might trouble historians demanding documentation in the European tradition, knowing the ways of his people, Locke could see no other explanation. And this sense of awe and inspiration

has also been found among Euro-Americans who have visited Yellowstone. Thomas Moran, the landscape painter who accompanied the Hayden expedition, captured this wonderment in paintings and sketches that many find inspiring today.

Keeping these insights in mind, the reaction of the Pend d'Oreille to the geysers in 1834 reported by Warren Ferris may be interpreted as a spiritual response, not fear. When he arrived there with the Indians, Ferris was reckless in his enthusiasm to explore, given the dangers posed by the thin crust covering the geyser basins. Thus, historians should construe the attitude of the Pend d'Oreille as wisdom and reverence. Ferris did not say that they were afraid of the geysers, but that they found his actions "appalling." Because geysers and hot springs were sacred, they may have considered Ferris's wantonly approaching them offensive. Many see Ferris's account, according to which one of the Indians "remarked that hell, of which he had heard from the whites, must be in the vicinity," as evidence that Indians believed geysers were the abode of evil spirits. A careful reading of his quote, however, reveals that this was not a native belief. It shows that the Pend d'Oreille had learned the term "hell" from Euro-Americans and applied it here as a way to communicate their thoughts to a non-Indian.

What emerges concerning Indian attitudes toward Yellowstone's geysers is a complex world view. What is clear is that the thermal wonders of Yellowstone did not terrify all, or even most, American Indians. At least some, and perhaps many, American Indians revered the region and treated it as they did other sacred lands. Euro-Americans originated the idea that Indians "feared" Yellowstone and it must be dispelled to understand the true nature of Yellowstone's Indian past. First and foremost, many Native Americans treated Yellowstone as a special region, a sacred land. They approached the geysers with reverence and respect, but this did not preclude them from using the hot waters for utilitarian purposes. They came to pray and to seek inspiration to guide them through life. As an area of profound mystery and inspiration, Yellowstone was a special place to its first visitors—as it is to thousands of visitors today.

Bibliographic Essay—For Further Reading

THE SOURCES CONSULTED for this study were numerous. Unfortunately, space constraints did not allow for comprehensive footnotes. The following sources were consulted in general and the editors of *Yellowstone Science* can be contacted for the citation to any specific reference.

Of course, any study of Yellowstone's history must begin with Aubrey L. Haines' classic two volume history entitled *The Yellowstone Story: A History of Our First National Park* (Yellowstone National Park: Yellowstone Library and Museum Association, 1977). His earlier study, *Yellowstone National Park, Its Exploration and Establishment* (Washington D.C.: National Park Service, 1974), was also extremely useful. A historiography of Yellowstone history must include Hiram Martin Chittenden's *The Yellowstone National Park*, edited by Richard A. Bartlett (Norman: Oklahoma University Press, 1964) and other histories consulted included Eugene Sayre Topping, *The Chronicles of the Yellowstone: An Accurate, Comprehensive History* (St. Paul: Pioneer Press Co., 1888), James M. Hamilton, *History of Yellowstone National Park* (Previous to 1895) (Yellowstone Park: Typed by Yellowstone Library and Museum Association, c. 1933), William Turrentine Jackson, *The Early Exploration and Founding of*

Yellowstone National Park (Austin: University of Texas, June 1940), and Merrill D. Beal, *The Story of Man in Yellowstone* (Caldwell, Idaho: Caxton Printers, 1949). Most of these historians repeated the assertion that Indians feared Yellowstone's thermal wonders, but the more recent ones, including Aubrey Haines, questioned its accuracy.

The interpretation that Indians feared the geysers was championed by Åke Hultkrantz in "The Indians and the Wonders of Yellowstone: A Study of the Interrelations of Religion, Nature and Culture" *Ethnos 1* (1954). This article later became a chapter in *Belief and Worship in Native North America*, edited by Christopher Vecsey (Syracuse: Syracuse University Press, 1981). He divided the Indians who utilized the resources of the Yellowstone region into three major cultural types and this analysis can be found in "The Indians in Yellowstone Park," *Annals of Wyoming* 29: 3 (Oct. 1957). Hultkrantz based his research on sources which, by his own admission, are not rich or diverse, coming mostly from the Shoshone. His analysis of the sources appears in "The Fear of Geysers Among Indians of the Yellowstone Park Area," in *Lifeways of Intermountain and Plains Montana Indians*, edited by Leslie B. Davis, (Bozeman: Montana State University, 1979).

Other writers who have written on Indians in Yellowstone include Joel C. Janetski, with his popular book *Indians of Yellowstone Park* (Salt Lake City: University of Utah Press, 1987) and the comprehensive report by Peter Nabokov and Larry Loendorf. This last study took four years to complete and this article's author assisted them where he could. The study took place in the mid-1990s and their report will go a long way in correcting what is known about the use of Yellowstone National Park by native peoples. Their results were reported by Nabokov in "Reintroducing the Indian: Observations of a Yellowstone Amateur," *The Aubrey L. Haines Lecture* at the Fourth Biennial Conference on the Greater Yellowstone Ecosystem, *People and Place: The Human Experience in Greater Yellowstone*, Mammoth Hot Springs, on Oct. 13, 1997. In addition, the draft of their report, *American Indians and Yellowstone National Park: A Documentary Overview*, has been accepted for publication by the University of Oklahoma Press.

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The Folsom-Cook Exploration of the Upper Yellowstone in the Year 1869 (St. Paul: n.p., 1894), Nathaniel Pitt Langford, *The Discovery of Yellowstone Park: Journal of the Washburn Expedition to the Yellowstone and Firehole Rivers in the Year 1870* (Lincoln: University of Nebraska Press, 1972), Lt. Gustavus Cheyney Doane, "Official Report of the Washburn-Langford-Doane Expedition into the Upper Yellowstone in 1870," (Collection 492, Burlingame Special Collections, Renne Library, Montana State University, Bozeman), and Ferdinand V. Hayden, "The Hot Springs and Geysers of the Yellowstone and Firehole Rivers." *The American Journal of Science and Arts* (February 1872).

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And most importantly, oral histories were collected from the Shoshone, the Blackfeet, and the Assiniboine between September 1991 and January 1992. Copies of these oral histories have been deposited with the Yellowstone Research Library in Mammoth. Other tribal cultural preservation officers, historians, and archivists assisted me through letters and phone interviews. Copies of these letters and notes have also been donated to the Yellowstone Research Library.

Joseph Owen Weixelman, The University of New Mexico, Department of History MSC06 3760, 1 University of New Mexico, Albuquerque, NM 87131-0001

Part 2

Accommodating Yellowstone Visitors

From Fire to Fun, and Back Again: The Changing Cultural Landscape of Yellowstone's Upper Geyser Basin

Karl Byrand

More than geothermal processes have forged Yellowstone's Upper Geyser Basin. A continually changing American culture, the national park idea, and even marketing ploys have also shaped this once wild and remote landscape, located in the park's southwest quadrant and serving as home to Old Faithful Geyser. For my graduate work in the Department of Earth Sciences at Montana State University, I looked at the evolution of this particular landscape in the context of changes in American culture. The purpose of this work was to investigate how humans responded to this landscape through time, as influenced by how the landscape was developed and promoted by park managers and concessioners. The Yellowstone archives at Mammoth Hot Springs provided a wealth of source materials, such as National Park Service correspondence, travel brochures, narratives, maps, and photographs, which aided in documenting the evolution of this unique and much admired landscape.

From the time the first crude wagon road reached its fuming landscape, the Upper Geyser Basin was on its way to becoming a pocket of urbanity. Over time, an estimated 1,000 different human structures (including tent platforms, cabins, privies, stores, and hotels) have appeared—and mostly disappeared—reflecting transformations in the external influences on the basin. As it changed, so did the way its agents promoted it. In turn, the basin's visitors have discovered experiences different from those who came before them to see this steaming landscape that spreads out along the Firehole River.

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Early Years: Marketing Nature's Oddities, 1872–1903

During the park's first three decades, the development of the Upper Geyser Basin's cultural landscape was galvanized by the superintendency of the ambitious Philetus Norris, the introduction of the U.S. Army and its Corps of Engineers to the park, the appropriation of regular—although modest—funds from Congress, and the concessioners who set up shop there.

In the summer of 1878, motivated by the threat of Indian raids similar to those of the previous summer, Superintendent Norris led a crew of men to hastily construct a road leading west and then south out of Mammoth Hot Springs. Norris's road met up with a one-year-old military road from the park's west entrance; from there, he put through a spur to the Upper Geyser Basin. Just 30 days after the road crew left Mammoth, the first vehicle was able to reach the basin's geysers.

The following year, Norris was confident that Indian raids were no longer likely and concentrated on improving the appreciation of and access to the park's natural offerings. At the basin, he established a log cabin to serve as an outpost for the exploration of a route to Yellowstone Lake and to allow observers to remain in the basin for the winter, sketch the thermal features, and obtain valuable information regarding their winter activities. In 1885, a larger cabin was established as a home for the assistant superintendent. A year later, when the army became the official overseer of the park, this cabin became part of its facilities in the basin.

In 1883, concessioners began establishing businesses in the Upper Geyser Basin; like the park administrators, they recognized the basin's scenic value and the visitation it could draw. For them, the basin was financially promising because of the 153 miles of road that by 1881 connected the Upper Geyser Basin not only to Mammoth Hot Springs and the park's west entrance, but also to Tower Junction, Yellowstone Lake, and Yellowstone Falls. These entrepreneurs, working under the approval of the Department of the Interior (though sometimes violating federal restrictions) established two tent camps, a hotel/lunch station, a Haynes photo shop, and a general store near the basin's thermal cones by 1903.

Recognizing the potential impact on the landscape, Congress passed the Sundry Civil Bill of 1883, which prohibited concessioners from locating facilities within one-quarter mile of any geyser in the park. This limitation was not intended to protect the park's physical landscape from human impact, but to prevent concessioners from monopolizing the visual landscape of the park's wondrous features (i.e., blocking the view of Old Faithful as well as other geysers). However, the law was not fully enforced. The Yellowstone Park Improvement Company trespassed beyond the quarter-mile limit in 1885 by establishing a hotel near Old Faithful Geyser. Because of protests by the Department of the Interior, which realized that the location was the only suitable one for a hotel of that size in the basin, in 1894 the law was superseded by the Hayes Act, which decreased the limit to one-eighth of a mile.

Known as "the Shack," the hotel became notorious for its poor accommodations, and complaints brought about its closing to overnight guests during the 1893 season. It remained open for lunch and, after it burned down in 1894, was replaced by a similar facility, but the Upper Geyser Basin had no lodging facilities until tents were

The Shack Hotel, a predecessor of the Old Faithful Inn, 1889. NPS photo.

established in 1900 or 1901 (the records are unclear).

Between 1872 and 1903 the basin's boiling and steaming features were the only selling points to entice visitors, with the concessioners taking care to publicize their proximity to these fantastic features. When a 1903 Shaw and Powell Camping Company brochure touted the Upper Geyser Basin as "the most interesting geyser formation in the park," it explained that visitors could "camp for the night within sight of Old Faithful Geyser." The Wylie Camping Company facility, according to its brochure, was in a grove next to "Riverside and Giant Geysers."

Concessioners promoted the basin as a unique thermal landscape that would provide an experience never before encountered, and they used the advantageous location of their facilities to attract visitors. Northern Pacific Railroad literature of 1888 bragged that "after a little time spent in this basin, the visitor is almost certain to conclude that he has at length reached the climax of the wonders of the park." A Yellowstone Park Association brochure circa 1902 reported that "Old Faithful is the star feature, not only of the Upper Basin, but of the Yellowstone Park."

The purpose of a visit to the Upper Geyser Basin was to experience its erupting geysers, steaming pools, and bubbling hot pots. The visitors, however, did more than sightsee; as mentioned in journal and diary entries, they used the thermal features of the Upper Geyser Basin to wash their clothes and boil eggs and potatoes. Many also took to scrawling their signatures in the soft silicate formations of the geyser cones. In 1887, author Owen Wister reported that one could see "the names of asses…written in pencil" on Old Faithful's cone. With no other diversions offered, many visitors entertained themselves by throwing umbrellas and the like into geysers to watch them hurl out with the next eruption. More than one curious visitor was burned by peering into the geyser cones.

The visitors' main purpose for venturing into the Upper Geyser Basin was to enter a thermal landscape that they could interact with and be amused by. During the early twentieth century, however, attitudes regarding how the geyser basin should

be enjoyed underwent a major shift that both affected and was affected by changes to the landscape itself.

Creating a Landscape of Nonthermal Curiosities, 1904–1940

The Upper Geyser Basin became a landscape of curiosities in addition to those offered by its natural features. Most notable of the human constructs is the Old Faithful Inn, which opened to guests in 1904 at the site of the former Shack Hotel. Like its geyser namesake, it soon became an obligatory stop for many a visitor to the park, whether or not they intended to stay there overnight.

Incorporating rustic construction materials from local sources, it was architect Robert Reamer's attempt to create a grand overnight facility that harmonized with the surrounding landscape. In addition to modern conveniences such as electric lights and baths, it offered interior balconies with gnarled, knotted, wooden railings surrounding an 85-foot-high lobby, a 14-square-foot chimney, and a wrought-iron clock with a 20-foot-long pendulum. The inn's popularity grew so rapidly that in 1913 the original 140 guest rooms were augmented by an east wing that added more than 100 rooms. In 1927, the addition of a west wing expanded the inn by more than 150 rooms.

Most of the other landscape alterations that occurred in the basin during this period came after the establishment of the National Park Service in 1916, and many were a direct result of the belief (as set forth in the legislation that established the park service) that public lands should have a dual purpose of preservation and use. To gain support for the national parks, early park service managers sought to increase the parks' usability and cater to as many types of visitors as possible through improvements in interpretive and concessioner facilities. To foster appreciation and preservation of the natural features, the park service employed rangers to interpret the parks' landscapes for visitors as well as to enforce laws protecting them.

However, visitor use was often at odds with protection, as in the debate that began in 1911 over whether to restrict visitors to traveling in Yellowstone only by horse. In 1915 the Department of the Interior settled the matter by deciding to permit the use of a new transportation convenience, the automobile. This soon increased access to the park, and thereby its use and abuse. Annual visitation to the park nearly tripled during the next decade, from about 52,000 in 1915 to 154,000 in 1925.

Since the Upper Geyser Basin was the most highly visited area of Yellowstone, both the park service and concessioners built numerous interpretive and comfort facilities there to cater to the increased visitation. By 1932, the landscape near the geyser cones sported a museum, an amphitheater, interpretive signs, two gas stations, two Hamilton stores, a Haynes photo shop, and a large campground.

Two groups of Yellowstone Park Camps Company cabins, which numbered approximately 400 by 1940, contributed heavily to the cluttered feeling of the landscape. One cluster was located just east of Old Faithful Geyser behind the Old Faithful Lodge (completed in 1928 on the former site of the Shaw and Powell Camping Company office and dining room), and the other was south of the geyser

The first cars arrive at Old Faithful Wylie Camp, 1915. NPS photo.

behind the Yellowstone Park Lodge and Camps Company's cafeteria (built in 1927), and the Hamilton Store (completed in 1930). These rustic one- to four-room cabins on narrow lanes created a small, albeit strange-looking town.

When advertising its offerings, the Yellowstone Park Hotel Company (successor to the Yellowstone Park Association in controlling the hotel concession) vaunted not only the creature comforts of its human facilities, but also those of the basin's bear-feeding ground, which was established in 1919. One of many such attractions in the park during this period, the basin's bear-feeding ground was located behind the automobile camp and housekeeping cabin area, less than one-half mile from the Old Faithful Inn. A hotel company brochure from circa 1920 stated that visitors could "photograph a wild bear and eat a course dinner in the same hour."

The bear-feeding ground consisted of a wire barricade strung between trees and posts, wooden benches for the human visitors, a shallow ditch "to keep people from going beyond the danger line," and an armed ranger in case things got out of hand. At a feeding platform on which the bears could dine, the sign read, "LUNCH COUNTER FOR BEARS ONLY." While visitors watched the bears eat, interpretive rangers lectured about bear behavior and natural history. Because of the number of bears and the lectures, the park's bear-feeding areas became "one of the most interesting features of the park to the majority of tourists," according to Superintendent Horace Albright's 1919 annual report.

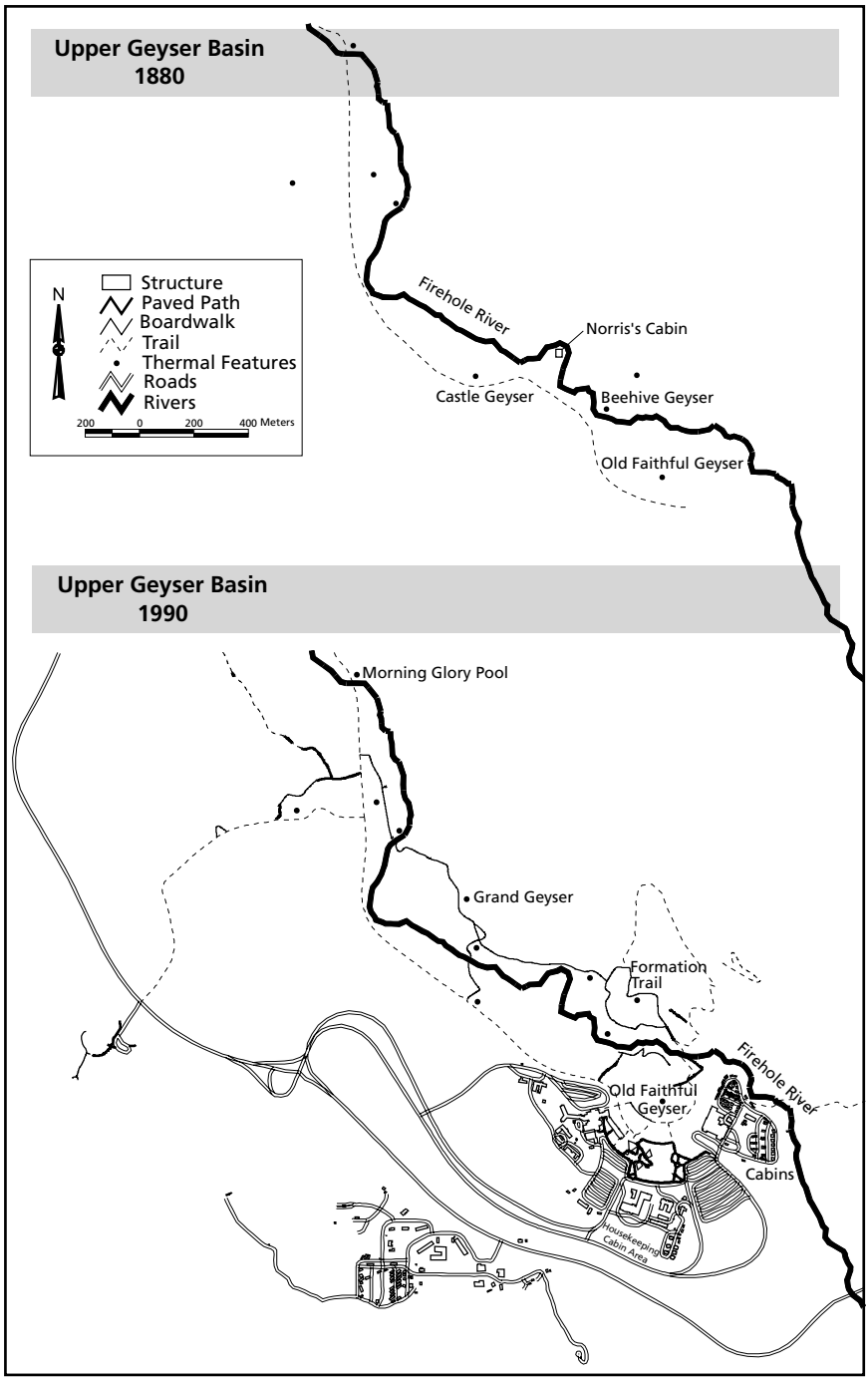
In 1936, however, the bear-feeding grounds were closed except for the one at Otter Creek. The park service had determined that the grounds—which were, in actuality, dumps—not only produced bad odors, but also encouraged bears to roam around visitors, employees, and facilities. (The first recorded basin visitor death at the paws of a bear did not occur until 1942. However, while the basin's feeding area was still in operation, two black bears chased each other through the wire barricade and the seating area, posing a threat to a crowd of spectators.)

Above: Ranger Philip Martindale giving an interpretive bear lecture on horseback in 1931. The lunch counter was closed in 1936 due to public and bear health and safety concerns.

A closeup of the "lunch counter" in 1923. NPS photos.

The *Haynes Guides* during this period increasingly promoted the basin's cultural landscape. They displayed photographs of the facilities and visitors enjoying their amenities by engaging in recreational activities such as swimming, dancing, and horseback riding. The guides' map of the basin showed human features such as the Old Faithful Inn and the Old Faithful Lodge alongside the more prominent thermal features. The *Haynes Guides* were also the first to describe the basin's human and natural features in terms of distances on an automobile odometer, giving visitors an almost foot-by-foot estimate of how far they were from the next feature of interest.

The transformation of the basin's cultural landscape during this time created a marked change in the typical visitor experience. Instead of being drawn to this area of Yellowstone only for the peculiarity of its natural wonders, visitors now sought out a recreational experience complete with dance halls, horseback riding, scheduled bear feedings, and geyser baths. The latter amenity was fed by runoff from nearby thermal springs. Established by Henry Brothers in 1914, this bathing facility began as a 5,000-square-foot plunge. In 1933 Charles A. Hamilton (owner of the park's Hamilton stores) bought Brothers' bathhouse and radically remodeled the structure by converting it into an enormous log building with a stone base. Within this facility was a 25-foot-tall lifeguard tower with a rope swing for rescuing swimmers (there would be three drownings here) and a skylight constructed from two-inch-thick



A map of the Upper Geyser Basin, 1880 and 1990. Maps courtesy of Yellowstone's Spatial Analysis Center.

glass. This facility remained part of the basin's landscape until 1950, when it was closed for public health reasons.

Because of the National Park Service's philosophy of use between 1916 and 1940, the basin's human and natural worlds became increasingly separated. While in the Upper Geyser Basin, visitors may no longer have felt that they were in the "wilderness," but in a resort town that happened to lie within a national park.

Promoting Visual Consumption, 1941–1990

The Upper Geyser Basin's facilities, like those in many parks, fell into disrepair during World War II because of a reduction in funding and staffing. After the war, park roads and structures were strained by a deluge of travelers who were eager to shake off the fear, suffering, and restrictions that war had brought by heading out to enjoy America's scenic wonders. Although Yellowstone had heretofore been visited by persons of all classes (albeit those of the poorer and working classes tended to come from nearby states), the park began experiencing, along with the rest of the nation, a boom in the size and influence of the middle class; these visitors were increasingly mobile and ready to spend their newfound disposable income.

The National Park Service launched Mission 66 as a 10-year program to bring the parks up to par by its fiftieth anniversary in 1966. The goal was to both accommodate the increased visitation and reduce its impact by adding and improving roads and overnight facilities, eliminating camping in high-impact areas, encouraging the use of the park's backcountry, and offering educational programs about bears. The Upper Geyser Basin, however, was not affected by Mission 66 until the late 1960s. This lag reflected the basin's cultural history and the park service's belief that much of the development in the Upper Geyser Basin encroached on a sensitive thermal area. To correct past development and lessen the impact of increased visitation to the basin, the park service drastically reduced the number of structures, redirected automobile traffic via the development of a cloverleaf bypass, and constructed an intricate system of trails and boardwalks that would direct human movement.

By providing mostly self-guided interpretation explaining these changes, the park service hoped to engender a greater appreciation of the basin as a place to visually consume the landscape's wonders, not to disport as if at a resort, zoo, or amusement park. As such, the basin's physical and interpretive landscapes changed to reflect this goal, as did the promotional literature of the time. To spread out visitation so as to reduce its impact, and perhaps to fill up visitors' time that was once spent soaking in the geyser baths or watching bears being fed, park service literature highlighted not only Old Faithful Geyser and the Upper Geyser Basin's trails, but also promoted other nearby trails and thermal features.

Keying in on this trend, concessioners also began to promote the basin as a wild landscape. In addition to photographs of its facilities, a 1972 Yellowstone Park Company brochure depicted images of wildlife with text explaining the importance of not approaching or feeding wild animals. Another brochure described the Upper Geyser Basin not as a resort, but as a "rustic village [that had] sprouted in the wilderness surrounding Old Faithful Geyser." Even the Haynes Guides reduced the

depiction of visitors engaged in diversionary activities in the basin's facilities. For example, the guides had no photographs of visitors riding horseback or swimming in the geyser baths from 1940 to 1972. The removal of the pool in 1951 accounts for the lack of photos of swimmers after that year, but throughout this period visitors could rent saddle horses in the basin. The lack of such pictorial promotion seems to reflect the new emphasis on visitors having more of a sightseeing experience, and less of a resort one.

Although the park service's and concessioners' efforts improved the appreciation and preservation of the Upper Geyser Basin's thermal landscape, they also to some degree kept the visitor experience a homogenized one. Visitors all left their vehicles in the same consolidated parking lot, walked the same trail to the visitor center, and saw the same interpretive film. They read the same interpretive pamphlet, and most flocked in one direction around the geyser basin, with only a few choosing to gander in a circuit opposite the crowds.

Throughout the 1970s and 1980s, the promotion of the wild aspect of this landscape increased as a result of changes in park service philosophy, management, and funding. Groups that during the 1960s amid environmental circles had championed the belief that park development and preservation were incompatible found an ear with the Ford and Carter administrations, who directed the parks toward a philosophy of less development. The establishment of the Office of Management and Budget in July 1970 reinforced this philosophy when it took control of, and subsequently reduced funding for park development.

The impact of these events at the national level became visible on the Upper Geyser Basin's landscape. Yellowstone's administrators attempted to reshape the park to fit this increasingly environmental philosophy through the park's 1973 *Master Plan* and the 1984 *Old Faithful Development Concept Plan*, which called for making facilities adjacent to the basin for day use only. By leaving specific areas untouched by human development, such as the basin's thermal features, winter wildlife habitat, and the Firehole River, the park sought to continue to reduce the congestion and physical/visual impact on the basin's landscape while considering the value of the basin's cultural resources. Buildings such as the Old Faithful Inn and the Old Faithful Lodge, which were on or proposed for the National Register of Historic Places, were valued for their unique architectural and historical significance, but more than half of the camper cabins (some 155 in all) were eliminated in the 1980s. Almost all of the new development between 1973 and 1990, such as employee housing and maintenance buildings, took place away from the geyser cones in the utility area, hidden from the visitors' view.

As intended, these landscape changes affected visitor experiences. The thermal features continued to be promoted, but now there was a stronger emphasis on the basin's other natural aspects. For example, a 1973 Yellowstone Park Company brochure urged the visitor to "look for wildlife" while walking along the basin's boardwalk, and a 1983 brochure by the hotel concessioner, Trans World Association, advertised that "elk and bison wander through the geyser area, enchanting photographers."

With the addition of interpretive ecology walks and visitor center displays revealing the damage that humans had caused to the basin's thermal features in the

past, the park service attempted to teach visitors the value of the basin as a natural landscape where they could have a fulfilling visit without engaging in diversionary pastimes that stand apart from observing the geyser basin, i.e., dancing or swimming. Instead, recreations such as geyser gazing, photography, and bird watching were encouraged. The result was a return to activities more akin to those enjoyed by many of the park's first visitors, but without the previous destructive interactions with the geysers like washing clothes and inscribing names.

Welcoming Visitors to Yellowstone's "Warm Winter Heart," 1973–1990

When the Snow Lodge was built in 1972, it contributed to a whole new visitor experience by providing a comfortable base from which to observe the basin's thermal features during the winter. With its addition, the park service hoped to reduce some of the impact of visitation by spreading it out over four seasons.

The park service and concessioners promoted this visitor experience somewhat differently than that of the summer, calling the basin "the warm winter heart" of Yellowstone. Here visitors could have an enjoyable day viewing the thermal features and wildlife via snowshoes, cross-country skis, or snowmobiles; afterward, they could relax in the warm environs of the Snow Lodge. A 1975 Yellowstone Park Company brochure lured visitors by saying "a friendly fireplace invites you, your family, and friends to drop worldly cares." A 1980 Trans World Association brochure reported that "a crackling fire beckons you to relax with family and friends while you relive a day of fun in the snow."

Overall, the park service and concessioners promoted the Upper Geyser Basin's wintertime landscape as a place where visitors could engage in simple pleasures of the natural world, participating in an experience that reflected the park values of the period. The promotion of the park's wintertime landscape was so successful that winter visitation increased from more than 69,000 during the 1974–75 season to more than 118,000 during the 1989–90 season.

Seeking to Protect a Sensitive Ecosystem

Once sought only during Yellowstone's brief summer for its "fire"—that of an extraordinary thermal landscape—the Upper Geyser Basin became known for a variety of recreational activities provided by the park and its concessioners, and later because of its connections to a feral terrain. Then during the early 1970s, the Upper Geyser Basin opened to winter visitors, offering a new season for remarkable experiences. Park managers began promoting a visitor experience that was again focused on the thermal environment of this landscape, but which also advocated sensitivity for its ecology. Today's visitors are apt to learn how the basin's hot pools are home to resilient microorganisms whose applications in medicine and technology are under investigation; one such life form has proven essential for unlocking the mysteries of DNA.

Many people have worked to achieve ecosystem protection and enhancement in

Yellowstone's "Warm Winter Heart" at Old Faithful, 1991. NPS photo.

the Greater Yellowstone Area, hoping to safeguard the Upper Geyser Basin's fragile landscape from visitors and impacts other than boardwalks, guardrails, and warning signs. For example, federal legislation introduced in 1991 sought to limit parties from tapping into underground thermal reservoirs that lie outside the park. Although the only known reservoirs were well to the west or north of the Upper Geyser Basin, the bill was entitled the Old Faithful Protection Act—exemplifying how this icon has become the centerpiece of a landscape that endures both thermal outbursts and the consequences of being loved, even revered, by humans.

Although the act did not pass, the park service has continued limiting development within the boundaries of the Upper Geyser Basin. Two new buildings have been constructed in the basin (a new ranger station in 1996 and a new Snow Lodge in 1998), but they were intended to consolidate some of the existing park service and concessioner facilities. Moreover, park administrators sought to provide both buildings with an architectural style more in harmony with the surrounding natural landscape than those constructed in the basin during the late 1960s and early 1970s.

The 300 visitors who came to the park in 1872 had a multi-day trek on foot or by horse and wagon to get to the Upper Geyser Basin from Mammoth Hot Springs, but those who visit today need only drive a few hours. Accessible to even the largest of recreational vehicles, the basin has become the most visited destination in Yellowstone. Each year, millions of people from around the world arrive to stride on its boardwalks, gawk at its thermal splendors, scrutinize the vista for any signs of wildlife, and peruse its shops for souvenirs. Moreover, technology is making it possible for more people to view the Upper Geyser Basin's wonders without ever entering Yellowstone. IMAX theater presentations called "Yellowstone" and "Grizzlies, Geysers, and Grandeur" have played as far away as Washington, D.C. Will these six-story-high shows become an established, customary way for people to experience Yellowstone? Or will they motivate viewers to become real-life visitors?

The Upper Geyser Basin has served in several roles: geologic wonder, tourist attraction, the heart of Yellowstone, a sacred hallmark of America, and pitstop. If

the past serves as an accurate predictor, we should expect the future to bring more changes to the cultural landscape of the Upper Geyser Basin. How these alterations affect the physical environment and our perspective of it remains to be seen, but their evolution should provide interesting material for future geographical study.

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Karl Byrand, Assistant Professor of Geography, Department of Geography and Geology, University of Wisconsin-Sheboygan, One University Drive, Sheboygan, WI 53081-4789

The Heart of the Park: The Historical Archeology of Tourism in the Lower Geyser Basin, 1872–1917

William J. Hunt, Jr.

Abstract

Touring and tourism evolved rapidly after the establishment of Yellowstone National Park. At the onset, tourists were largely on their own, moving through the park in small groups over crude trails and roads. This "rough and ready" tourism changed rapidly, however, with changes in the infrastructure supporting the tour business. Major alterations in the touring fabric included establishment of small, crude hotels in the early 1880s, construction and maintenance of roads, and establishment of transportation services. Throughout this early period, touring was largely restricted to those living in the region or wealthy individuals from "the East" or "the Continent." The arrival of the railroad opened Yellowstone National Park to a mass audience and made the park available to a much broader range of tourists. By the 1890s, the tourist industry had become a big, multifaceted business providing a variety of services to specialized audiences. Lodging services, for instance, ranged from permanent camps with bare amenities to luxury hotels with hot and cold running water, electricity, and a variety of exotic entertainment. Throughout this era, the Lower Geyser Basin played a central role in the experience of the tourist. This is reflected in a number of historical archeological sites scattered along the length of the basin reflecting the evolution of the tourist business. These sites include a tourist town, humble and grandiose hotels, permanent camps, a range of roads and creek fords, as well the military sites reflecting the park's early administrative history. The central role played by the basin was shattered in 1915 when the newly formed National Park Service allowed automobile travel in the park. The independence and faster speed of travel afforded by the automobile transformed Yellowstone touring once more. The most pronounced result was the almost immediate abandonment of tourist service facilities in the Lower Geyser Basin. By 1927, virtually all traces of the prominent and flourishing tourist businesses that had once existed had been eradicated. All that remains today, are archeological sites; humble and ghostly reflections of Yellowstone's early touring grandeur.

Introduction

In its early years, Yellowstone was a remote wilderness visited by only tens or hundreds per year. During this period, Yellowstone tourists traveled a roadless

expanse in search of an intimate and unblemished commune with nature. Within two decades, though, that park experience was transformed. Tall stages traversed crude and dusty roads, introducing thousands of tourists each year to an area so fantastic it became generally known as "Wonderland." Now, 125 years since its creation, Yellowstone is a world-class tourist Mecca with a *daily* crush of tens of thousands and an annual visitation in the millions.

As the park passed through these transformations, its attractions and tourist routes witnessed equally dramatic changes. Mammoth Hot Springs, Upper Geyser Basin, Yellowstone Lake, and Grand Canyon have always been focal points. For the first fifty years of the park's existence, however, the Lower Geyser Basin (Figure 1) was of similar or perhaps even of greater importance. This broad valley of meadows, streams, and scattered hot springs is largely bypassed by the modern tourist. Nevertheless, it once stood at the heart of the Yellowstone touring experience anchoring one end of the only easy route between the geyser fields on the west side of the park to the spectacular vistas of the Lake and Canyon areas to the east. Further, limitations of horse-powered transportation as well as the basin's abundant grass and water made it an excellent tourist stopping point. As a result, the Lower Geyser Basin became the first area deep inside the park to experience commercial development.

Figure 1. Location of the Lower Geyser Basin in Yellowstone National Park.

By the mid-1880s, it was a focal point of virtually every tourist's park experience. Its significance was somewhat diminished in 1891 with construction of a road from the Upper Geyser Basin to Yellowstone Lake. It wasn't until 1915, however, that the basin lost its status entirely as a tourist center. That year, automobiles were allowed in the park. Autos dramatically shortened travel time between tour focal points. Simultaneously, the newly created National Park Service consolidated Yellowstone's concession businesses. The competing Upper Geyser Basin's tourist facilities were given priority. Concessions in the Lower Geyser Basin were abandoned and torn down, their locations quickly passing into obscurity.

Identifying Historic Site Significance

From our vantage point at the end of the twentieth century, it might seem that all that remains of Yellowstone's early historic era are the few memories of tourists and officials preserved in scattered archives as photographs, journals, and business records. However, the land itself remembers those past events, its memory taking the form of artificial changes to the countryside. The evolution of Yellowstone tourism is reflected in the park's landscape—shallow ruts or gaps in the trees indicate former routes of timeworn pack trails and wagon roads; scatters of cans and bottles identify sites of bygone camp grounds; vague depressions expose locations of long gone and forgotten buildings. In essence, we are talking about the "right stuff" for an historical archeologist like myself.

Unfortunately, the importance of historical archeological resources in Yellowstone is often unrecognized. Perhaps somewhat surprisingly, a major contributor to this problem has been the archeological community itself. Archeologists have generally been unable to identify and cogently explain the significance of Yellowstone's sites in terms that non-archeologists can appreciate. This is particularly true of the park's many historic dumps, a type of site which is often visually displeasing but contains an incredible amount of information about previous park occupants (Hunt 1994a, 1994b:25).

Of course, assessment of site significance is based upon recognition of an appropriate historic context within which the site's existence and function can be interpreted. Until recently, historical archeologists have struggled to find an appropriate context to apply to Yellowstone's sites. The reasons for this are complex but figuring prominently in the problem are the relatively immense scale of the study area (3,472 square miles) coupled with an extremely diverse archeological record. This has been compounded by projects which have typically been of extremely short duration, have small budgets, and are narrow in scope. As a result, Yellowstone has been subjected to a constantly changing field of investigators who have had little time to become familiar with the park and regional history.

With the advent of the Federal Lands Highway Program in the late 1980s, this situation improved. The program's goal has been to repair, upgrade, and reconstruct Yellowstone's 329 miles of damaged highways over the next 20 years. The planning process is complex, however, with the process involving a plethora of federal, state, and local agencies. The bureaucratic complexity of the project spawned concern for

communication gaps and that the confusion resulting from poor communication could impede or obstruct the highway program's cultural resource planning process.

To reduce that possibility, the National Park Service, the State Historic Preservation Offices of Wyoming and Montana, and the Advisory Council on Historic Preservation signed a programmatic agreement outlining the responsibilities of each agency in that process (National Park Service 1993). Yellowstone National Park was obliged to develop an archeological treatment plan. The Midwest Archeological Center assisted the park in accomplishing this task.

The treatment plan (Hunt 1993a) addresses historical archeological sites from the perspective of an historic context which is not only elemental to the national park system but also has potential for broad application outside the system. The context is actually identified in Yellowstone National Park's 1872 enabling legislation; that is, as "a public park or pleasureing-ground for the benefit and enjoyment of the people" (National Park Service 1933). In essence, Yellowstone is directly tied to a cultural phenomenon known as "tourism." Consequently, most historic sites within and near the boundaries of the park can be studied, assessed, and interpreted from the context of tourism.

Although unprecedented as a subject of historical archeological inquiry, tourism has been a topic of anthropological inquiry for more than thirty years and its appeal to the discipline is both basic and quite natural (Bodine 1981, Crick 1989, Nash 1981). It has been suggested that tourism represents the single largest movement of human populations outside wartime and is therefore a powerful force for culture contact and change (Crick 1989:309–310). Further, the form and goals of tourism are not only culturally determined but they also shift through time and from one culture to the next (Graburn 1989:28). As archeology has directed the greater portion of its research toward issues of culture change, tourism would seem a natural and entirely valid subject for archeological inquiry.

Tourism Model

THE MODEL OF TOURISM developed for Yellowstone draws upon the unique history of the national park while borrowing heavily from concepts and terminology in the anthropological literature. It also uses a broad definition of tourism in order to maximize its applicability to the greatest number of sites. In essence, tourism is considered that activity characterized by travel, conspicuous consumption, and pursuit of other than normal (secular) activities (Graburn 1989, Robinson 1979, Smith 1981, Turner and Turner 1978).

Economically, tourism can be characterized as marginal, extremely dynamic, and multidimensional. It is marginal in that it is a service industry with no tangible product to export; its work force is largely engaged in tertiary occupations like catering, travel agencies, and so on; and it is often characterized by seasonal unemployment and minimal wages. Tourism is dynamic because it is basically an enterprise governed by fashion. As a result, tourist businesses must be able to adjust quickly to new conditions in order to survive over the long term. Finally, tourism is multidimensional in that it is composed of many spatially separate but nevertheless

interdependent elements such as airlines, hotel, restaurants, tour operators, etc. The economic performance of these elements may be quite different from one another with any weak link in the system adversely affecting the otherwise economically healthy elements (Crick 1989:334; Robinson 1979:xxxi, 40).

The structural composition of tourism may be of particular interest to archeologists because tourist activity is reflected in the physical environment via historical sites. This physical environment is composed of at least three interacting sectors; the tourist, the external facilitator, and the internal facilitator (Crick 1989; Nash 1981; Robinson 1989).

The most critical sector of the three is obviously the *tourist*. Tourist behavior can be seen as cyclic with individuals moving physically and ideologically from the "ordinary" to the "extraordinary" and back again. This process brings the tourist in contact with structures established expressly to facilitate their movement through this cycle.

The tourist is a natural focal point for Yellowstone as the park would certainly not exist without them. Tourists affect the park in a variety of ways. Their attitudes and perceptions can affect the form and roles of park management directly via comments and complaints to the management as well as more subtly through the political process. Tourists more directly influence the park's tour infrastructures. The form and strength of that influence varies according to each tourist population's mix of economic status, age and sex composition, and availability of leisure time. These variables, for example, restrict and define locations visited, season of tour, length of stay, and range of tourist expectations. These factors in turn influence the quality and types of tourist support facilities and entertainment available.

Historically, tourist populations at Yellowstone have changed dramatically, often within a very short time frame (see Haines 1977). For the first decade or so after the park was created, primitive transportation and support facilities operated to restrict the tourist population largely to people living near the park and a few very rich from the East and the Continent. Travel assistance was uniformly absent, each group having to be self-sufficient throughout their tour; i.e., there were no restaurants, hotels, or transportation services. After the late 1870s, transportation routes constructed to and through the park provided ever greater access to Yellowstone. This increase in access escalated the number of tourists visiting from distant areas. Socioeconomic conditions of the time were such that the composition of this population was largely restricted to the upper middle and upper classes. Consequently, tourist accommodations improved rapidly with the addition of several luxury hotels to meet the expectations of that group.

By the 1890s, transportation and socioeconomic improvements brought greater numbers of the middle class to Yellowstone. This was paralleled by the introduction of lower priced lodges and permanent camps with the mix of accommodations. The introduction of the automobile to Yellowstone in 1915 completed the process of democratizing Yellowstone touring. The touring population quickly came to be dominated by the working and middle classes and free automobile camps were introduced to the park to meet that group's lodging needs. Tourist support facilities became more democratic as a result providing a diversity of hotels, restaurants,

campgrounds, and activities suitable to every sector of the tourist populace (Graburn 1989:30–31; Haines 1977:Chapter 22; Robinson 1979:19–20). Immediately after World War II, the transformation of park tourism had been completed. The railroads dropped out of the tourist transportation business and the large hoteliers were reduced to lesser roles in the overall range of tourist support facilities.

These changes in tourist demography should be evidenced in Yellowstone's archeological record as:

a. fluctuations in the ratios of various kinds of lodging ranging from informal and formal campsites to luxury hotels;
b. variations in accommodation formality and site plan; and
c. changes in quantity and diversity of foodstuffs and products available to the tourist as demonstrated by artifacts deposited in occupational sites and associated refuse areas.

A second sector in the structure of tourism, the *external facilitator sector*, is composed of agencies outside the tour center. These agencies identify and promote the center as a place to visit, provide support and supply services to tourists while in route to and from the center, and provide the materials necessary for the operation of internal facilitators (see below). Examples of external facilitators include tour agencies, railroads, hotels, stage and bus lines, restaurants, etc. Elements of this sector can only be indirectly represented archeologically at Yellowstone as its components exist by definition outside park boundaries. Nevertheless, many organizations and their influence will be represented in the variety and volume of materials delivered to the park and ultimately deposited in the living areas and park dumps.

The third sector of tourism, and the one most evident in the archeological record, is the *internal facilitator*. This sector incorporates organizations providing physical support and services to the tourist within a tour center. At Yellowstone, the sector includes elements of park management, support and supply, and transportation, all of which are directly represented in the park's historic sites and overlap to a considerable degree in function.

Park management at Yellowstone has a number of basic responsibilities which it must fulfill. Primary among these are: (a) the construction and maintenance of internal access routes (roads and trails); (b) park protection and law enforcement; and (c) regulation of concessions. Since the establishment of the National Park Service in 1916, management has also been responsible for (d) interpretation and (e) providing camping facilities. At Yellowstone, sites associated with management are related to the military, fish hatcheries, museums and road side kiosks, poacher's cabins, automobile camps, and so on.

The second element of the internal facilitator sector, internal transportation, is intimately connected to the park management, the creators of transportation routes. It is equally connected to the internal support and supply businesses which own vehicles and promote transportation through the park. This element is of extreme importance for the mode of transportation controls the scale and character of tourism at Yellowstone (see Culpin 1994:Chapters I-VII; Haines 1977:Chapters 9 and 17).

Internal transportation is composed of two technological entities, routes and vehicles. These entities determine the length, location, and form of individual

routes; type of conveyance; rapidity of movement; and degree of access to the park's attractions. In addition, the internal transportation element is the primary entity influencing the number and location of tourist accommodations and other support facilities in the park. Sites at Yellowstone associated with internal transportation include road camps, garbage dumps, wagon roads, automobile roads, boat docks, equestrian and pedestrian trails, bridges, quarries, stage stations, barns and corrals, storage structures, water tanks, blacksmith shops, gasoline stations, and so on.

Internal support and supply, the third internal facilitator sector element, is the purview of the park concessionaire. This element is highly dependent upon and constrained by all of the other sectors and sector elements. For example, concessionaires require governmental approval and licensing to operate in the park. They are also dependent upon park management to identify and make accessible those attractions which draw the public to the vacation area. The companies must then provide support facilities for the tourist. Support facilities are necessarily founded on at least two additional factors which are at least in part beyond the control of the concessionaires; i.e., the internal transportation system and the types of facilities expected by tourists. The type of internal transportation available restricts the concessionaire's choices with regard to location of hotels, luncheon facilities, stores, etc. We have already noted that the range of facilities and services offered to the touring public varies according to that population's demographic mix. Finally, the successful concessions entity must also be able to recognize and address the changing demands of tourists by closely following the fashion trends of the industry and making appropriate changes in the tourist support facilities. Sites at Yellowstone National Park most directly related to the internal facilitator sector are hotels of various kinds, tent camps, dams and water rams, garbage dumps, storage buildings, restaurants, bathhouses, employee housing, stores, logging camps, etc.

Tourism Archeology in the Lower Geyser Basin

Recently, an opportunity arose for an archeological investigation of historic tourist sites in the "heart of the park," the Lower Geyser Basin. This came as a by-product of Yellowstone's program to repair and rebuild its deteriorated road system. Park managers knew construction could impact irreplaceable archeological resources in or next to the roads' right-of-way. Until our fieldwork, however, there was little information available to help managers identify and protect significant resources through the construction.

From 1992 through 1995, small teams of archeologists from the National Park Service's Midwest Archeological Center (MWAC) examined the periphery of the Grand Loop Road from Madison Junction to Biscuit Basin (Figure 2). The objectives were to (a) locate and document all archeological sites within proposed construction corridor alternatives and former quarry areas along the routes which might be reopened for construction fill; (b) determine the sites' cultural and temporal affiliations; and finally, (c) determine the significance of each site with respect to park and regional history (Hartley et al. 1993; Hunt 1993b). Ultimately, thirty new archeological sites were recorded. Among other things, much new information

Figure 2. Midwest Archeological Center survey team, on Fountain Flat, Lower Geyser Basin, in 1993 (NPS-Midwest Archeological Center Archives).

was acquired in the process about Yellowstone National Park history and the Lower Geyser Basin's important role in park tourism.

At least twelve sites in the Lower Geyser Basin relate most directly to Yellowstone's tourism history (Hunt 1997). These include six historic roads, three hotel complexes, a bathhouse, an early historic camp, and a permanent camp. Four military sites associated with park management are also known but will not be discussed here.

Highways and Byways

ROADS, THEIR QUALITY AND ROUTES, CHANNEL THE TOURISTS through the park and provide access to its myriad wonders. In many ways, the history of Yellowstone National Park's first decades is basically a history of road construction.

Elements of six historic roads have been identified in the Lower Geyser Basin by the MWAC team and others which span the gamut from early horse and wagon travel to the onset of automobile transport. One of the very earliest roads into the park was the Virginia City and National Park Free Road. This crude road was commissioned in 1873 by citizens of Virginia City to promote the town's tourist business and followed the Madison and Firehole rivers to the Lower Geyser Basin. In 1880, Yellowstone National Park's second superintendent, Philetus W. Norris relocated the eastern end of the road to an easier route over the Madison Plateau. Although the route of the Virginia City and National Park Free Road remains unrecorded to date, it is still used occasionally by hikers and appears on some modern maps as the Old Fountain Pack Trail.

Within a few years of Virginia City's road venture, a second crude road was built linking the Lower Geyser Basin with Hayden Valley (Figure 3). This was created in August of 1877 to allow passage of Maj. Gen. O. O. Howard's wagons and troops as they pursued Chief Joseph and the Nez Perce through the park. Howard's road followed and improved upon an even older trail which ran from the forks of the Firehole to the Yellowstone River. In 1878–1879, Norris directed his road crews to

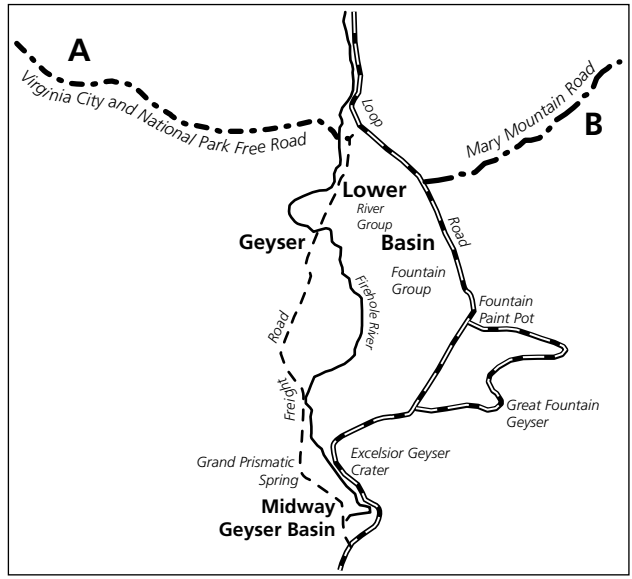

Figure 3. Lower Geyser Basin and surrounding area. The terminus of the Virginia City and National Park Free Road (A) enters the north end of basin from the west. The Mary Mountain Road (B) enters the basin from the east (from U.S.G.S., 7.5' Lower Geyser Basin quadrangle).

upgrade Howard's Road somewhat and, in 1883, the road was further improved by First Lt. Dan C. Kingman of the U.S. Army Corps of Engineers. The route came to be known as the Mary Mountain Road and for twenty years it served as the primary tourist route between the west and central portions of the park. When the Corps of Engineers completed a section of the Loop Road from the Upper Geyser Basin to the West Thumb of Yellowstone Lake in 1891, Mary Mountain Road was virtually abandoned. We recorded the west end of Mary Mountain Road as site 48YE781. It still serves the touring public today as the Mary Mountain (hiking) Trail.

One year after Howard's troops passed through the park, Superintendent Norris built his first road from Mammoth Hot Springs to Nez Perce Creek in the Lower Geyser Basin. Mary Culpin indicates that Norris originally intended to use the park's first appropriation of $10,000 to build facilities at Mammoth Hot Springs. The preceding year's passage of the Nez Perce through the park and a perceived threat of a Bannock Indian uprising caused Norris to change his mind. The purpose of the new road, other than assisting tourists through the park, was to provide a route to allow soldiers from Fort Ellis to move through the park to Henrys Lake in Idaho or Virginia City in Montana. Subsequently, Norris's crew extended the road to the Middle (now Midway) Geyser Basin (Culpin 1994:7, 220).

In 1993, we identified a deeply cut ford across Nez Perce Creek. Comparison of its location with a route depicted on an 1878 revision of Ferdinand Hayden's map (Culpin 1994) suggest the ford was an element of the Norris Road. We recorded the ford and road segments leading from it as site 48YE772 (Figure 4). Historic records in the Yellowstone archives and hundreds of artifacts on the south side of the ford further suggest the locality's use as a camp ground until at least the 1930s. The segment is significant as an element of the first tourist road through the park and because of its association with Norris, a monumental personality in park history.

Figure 4. Norris Road ford across Nez Perce Creek (NPS-Midwest Archeological Center Archives).

Figure 5. A wagon road probably built by Lt. Dan Kingman in 1885, later incorporated into Chittenden's Loop Road (NPS-Midwest Archeological Center Archives).

Our survey took us through a portion of the Lower Geyser Basin known as Fountain Flats. We also recorded a faint and very narrow, raised wagon road segment as site 48YE785 (Figure 5). This road first appears on an 1892 Corps of Engineers map. It appears to have been constructed as a shortcut to the Norris Road probably by Lt. Dan Kingman in 1885. Lt. Hiram Chittenden improved this segment as a part of the Grand Loop Road past the Fountain Hotel, a facility opened for business in 1891.

Entering the Lower Geyser Basin from the north, the modern traveler soon encounters a paved road branching off to the right. This road, recorded as site 48YE774 (Figure 6), was also built under the direction of Lt. Kingman in 1885 as an improved route over the winding Norris Road. It considerably shortened travel time to the Upper Geyser Basin and its straight route through flat meadows and woodland earned it the name "Park Avenue." This road served for years as a primary tourist route through the Lower Geyser Basin. With completion of Hiram Chittenden's new road through the Lower Geyser Basin in 1895, tourists tended to by-pass the less scenic road. Freighters continued to use the shorter route, however, to supply the tourist businesses in the Upper and Lower geyser basins. It then became known as the Fountain Flat Freight Road, a name which has stuck to this day. It now serves as

Figure 6. The modern entrance to Fountain Flat Freight Road at the north end of the Lower Geyser Basin, a route more commonly known to 1880s–1890s tourists as "Park Avenue" (NPS-Midwest Archeological Center Archives).

Figure 7. Wagon road from the Fountain Hotel to hot springs and geysers in the Firehole Lake area (above) and turn-of-the-century travel down a similar Yellowstone road (right) (NPS-Midwest Archeological Center Archives).

a summer bicycle trail and a winter snow buggy route between the Upper and Lower geyser basins.

While surveying in the southeastern portion of the Lower Geyser Basin, our team of archeologists noted a linear clearing and wagon ruts through the lodgepole pines (Figure 7). Recorded as site 48YE789, the road's general heading suggests it served as a secondary road to take tourists from the Fountain Hotel to hot springs and geysers in the Firehole Lake area. If so, it may be an early version if not the original route of Firehole Lake Drive and would have been in use from some time in the early 1890s through to at least World War I when automobiles were allowed in the park.

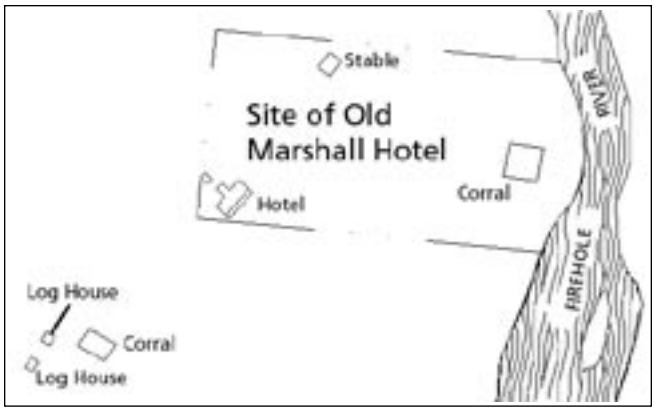

Figure 8. Map of the Marshall Hotel west of Firehole River, 1885 (courtesy Yellowstone National Park Archives).

Hotels and Bathhouses

By the time late-nineteenth-century tourists arrived at the Lower Geyser Basin, they were often exhausted from a hard day's wagon or stage travel over Yellowstone's dusty, rutted roadways. Though tourists had to camp in the basin out of necessity through the 1870s, travelers often desired lodging facilities. Starting in 1880 and continuing through 1917, tourists' desires were addressed with three increasingly elaborate hotel complexes located in areas that, to the uneducated eye, appear to be pristine meadows today.

One of the more significant hotels in Yellowstone history is Marshall's mail station and hotel. Built by George Marshall and his wife in 1880 on the west side of the Firehole River, the Marshall Hotel provided the first commercial lodging in the park interior. Today, only a few depressions mark former locations of the hotel's log buildings and corral. An 1885 map of the area (Figure 8) shows the number of buildings remaining at that site one year after its abandonment. The secluded location of the site has prevented public visitation for the most part and the site is preserved intact. It awaits an archeological crew to formally record it, however.

In 1884, Marshall built a larger hotel on the other side of the Firehole River in partnership with G. G. Henderson. This second Marshall Hotel, a frame structure, was ultimately surrounded by a number of log and frame buildings. Although it was probably as uncomfortable as the original hotel, the new hotel could house seventy-five guests between its canvas walls. In 1885, the complex was purchased by G. G. Henderson and H. Klamer and renamed the Firehole Hotel. A map drawn that year (Figure 9) and an undated photograph of the hotel complex (Figure 10) suggests it may have appeared similar to a small frontier town; a precursor of modern tourist communities in and around Yellowstone today. In 1886, the hotel was sold to the Yellowstone Park Association (YPA) which continued to operate it through 1891. That year, the YPA completed construction of the most luxurious hotel built in the park to that time, the Fountain Hotel. The new hotel was built to replace the crude Marshall-Firehole Hotel and was located a few miles to the south near the Fountain Paint Pots. Though many of the Marshall-Firehole Hotel's log structures were

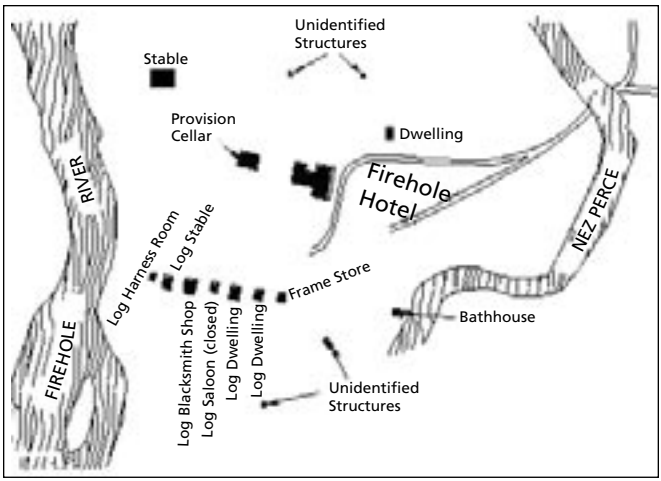

Figure 9. Map in the 1885 plan of the Marshall/ Firehole Hotel east of the Firehole River (courtesy Yellowstone National Park Archives).

removed during the decade that followed, the Army used some of the frame buildings for years afterwards as a part of its Lower Geyser Basin summer encampment.

Today, the archeological elements of the Marshall-Firehole Hotel are almost invisible and, prior to our archeological survey, some had concluded that the site had been destroyed by a large barrow pit and construction of Fountain Flat Drive. Nevertheless, a brief examination of the hotel site revealed historic artifacts both on and below the ground surface across a large flat west of the barrow pit. These included such objects as window and bottle glass, eating utensils and dinnerware (Figure 11), fasteners, cartridges, buttons, and other miscellaneous items. We also noted a number of very shallow depressions which we interpreted as past building locations. We therefore recorded and mapped the site as 48YE773.

Laying the 1885 map on top of our archeological map, we could determine the relationships of the archeological features with the positions of the historical structures. We found the location of the Marshall-Firehole Hotel had certainly been impacted by excavation of the barrow pit although remnants of the west half may still be intact. Further, the greater portion of the rest of the site remains intact as well. One of the three vague surface depressions near the center of the site correlates exactly with the hotel's 1885 provision cellar. Similarly, stone piers and wood joists

Figure 10. Late 1880s view of the Marshall/Firehole Hotel (courtesy Yellowstone National Park Archives).

embedded in the meadow's tall grass proved to be the remnants of the hotel's stable. Brick rubble and a rectangular pit at the edge of Hygeia Spring (Figure 12) mark the position of the bathhouse and its geyserite tub. Our archeological team also noticed concentrations of cut nails and window glass at the south margin of the site. When these objects' positions were plotted on the combined map of archeological historic features, we found they were associated with the hotel's blacksmith shop, saloon, and two log dwellings. There were no remains identified at the position of a log harness room, a log stable, the 1885 bathhouse, and a log house southwest of Hygeia Spring and it is assumed that all remnants of these structures have been destroyed. The barrow pit apparently destroyed the remains of a dwelling as well.

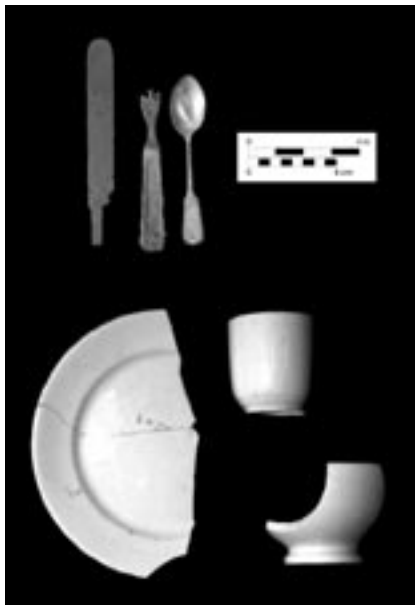

Figure 11. Eating utensils (top) and dinnerware (bottom) from the Marshall/ Firehole Hotel site (NPS-Midwest Archeological Center Archives).

Although there were a number of correlations between archeological features and structures illustrated on the 1885 map, several archeological features are without counterpart on that map. Among these are depressions of post-1885 structures, corral fence posts, a cold water pipeline, a wooden pipe which carried hot water from Hygeia Spring, and wagon fords across Nez Perce Creek and the Firehole River. We included a well-known historic feature at the site in the documentation; that is the grave of Mattie Culver, wife of Yellowstone Park Association winter caretaker E. C. Culver, who died at the Firehole Hotel in 1888.

Figure 12. Geyserite bathtub at Hygeia Spring, Marshall/Firehole Hotel site (NPS-Midwest Archeological Center Archives).

One interesting aspect of the archeological project was to demonstrate the role serendipity sometimes plays in this kind of research. It was only by chance that we recovered a clue as to where the hotel site's barrow pit fill had been redeposited. While mapping an old road segment about one mile north of the site, near the south entrance of a small picnic area, one of my crew discovered a broken brass plate at the shoulder of the current highway. This reads "Y.P.A. LOWER GEYSER BASIN HOTEL" (Figure 13). From this discovery, I concluded the road was constructed on the fill from the Marshall-Firehole Hotel site and it is likely that this entire segment of road bed contains many artifacts relating to that structure.

The Fountain Hotel (Figure 14), the last hotel to serve tourists in the Lower Geyser Basin, was built by the YPA north of Fountain Paint Pots in 1890 to replace the Marshall-Firehole Hotel. It opened in time for the 1891 tourist season as the earliest first-class hotel in the park interior. It was a huge building and could accommodate 350 guests. It had its own steam-powered generator, electrical lighting, and steam heat. The Fountain is also notable as the only hotel in the park to ever have natural hot water baths.

Figure 13. Brass plaque from the Y.P.A. (Yellowstone Park Association) Lower Geyser Basin (Marshall/Firehole) Hotel (NPS-Midwest Archeological Center Archives).

We recorded the Fountain Hotel site as 48YE786 (Figure 15). In contrast to the Marshall-Firehole Hotel complex, which encompassed about thirteen acres, the Fountain Hotel site complex extends over at least a square mile. This extensive area incorporates a broad array of cultural features. The main hotel's intact foundations reflect the large size of the two-story hotel structure which incorporated the steam engine room,

Figure 14. Haynes postcard of the Fountain Hotel (courtesy Yellowstone National Park Archives).

Figure 15. A Midwest Archeological Center crewmember recording one of Fountain Hotel's surviving foundations (NPS-Midwest Archeological Center Archives).

laundry building, and a one-story ice house. Aside from the hotel foundations, we also identified the remains of nine smaller structures, concrete piers for a 1916 water tank (Figure 16), two cold water pipelines, hot water pipes of metal and of wood to nearby Gentian and Leather Hot Springs, a footbridge, segments of two historic roads, and numerous dumpsites. Among the trees and grasslands of the site were concentrations of brick, parts of the hotel's steam engine, dinnerware, etched window glass, bottle glass, and elements related to construction, lighting, furniture, and door decorations.

With construction of Old Faithful Inn in 1903, the hotel's popularity waned somewhat. It wasn't until 1917 when the recently created National Park Service reorganized park concessions (two years after automobiles entered the park) that the Fountain Hotel was closed. Nevertheless, the pile continued to stand as an empty shell until it was razed in 1927.

Although the hotels in the Lower Geyser Basin included bathhouses as part of their amenities, an attempt to provide bathhouses for the public was made about the time the first hotel in the basin was built. One of the most significant sites in the park, Queen's Laundry Bathhouse, was recorded at the west margin of the basin as 48YE8 by a group of archeologists on holiday in 1988. Remnants of this small log building (Figure 17) are located at the hot springs of the same name. Construction of this structure was initiated in 1881 by Superintendent Norris to serve as a public bathhouse. It thus has the dubious distinction of being the first building in the park to be constructed using public funds. The bathhouse was never completed, however, as Norris was removed from his superintendency for political reasons. It has nevertheless continued to stand for almost 125 years as a monument to Norris, the logs used in its construction preserved by hot spring minerals.

Camping and Campgrounds

FINALLY, THERE ARE TWO SIGNIFICANT TOURIST CAMPS in the Lower Geyser Basin. While their locations are known, they have not yet been recorded as archeological sites. The earliest is the Cowan party campsite. This is one of a handful of such sites in the park

Figure 16. Concrete supports for the Fountain Hotel's water tower (NPS-Midwest Archeological Center Archives).

Figure 17. Queen's Laundry Bathhouse, built by Superintendent Norris in 1881 (NPS-Midwest Archeological Center Archives).

whose locations are known with certainty and they reflect the rough conditions the first park tourists had to face. Despite this, the site has a more important historic significance for it is the location marking a compelling 1877 drama of frontier tourists in conflict with Nez Perce warriors. That year, Chief Joseph's band of Nez Perce fled westward from their homeland in Oregon in a desperate bid for Canada and freedom. They passed through Yellowstone on the way, entering from the west and exiting to the east, in a two-week visit that created quite a bit of excitement for the park's tourists. After encountering the George Cowan party in the south end of the Lower Geyser Basin on August 24, the Nez Perce took the campers prisoner. Although two of the party were shot and wounded, they later recovered from their wounds. The remaining tourists were released shortly thereafter.

The Cowan party campsite has never been formally recorded. Nevertheless, the late park historian and ranger Aubrey Haines is credited with locating this site in a point of trees near the Firehole River. He staked the site of the camp in 1962 as based on the substantiation of Jack Ellis Haynes, who had been present in 1902 when the Cowans identified the site for Hiram Chittenden. Haines marked the site on the copy of Hague, *Atlas,* Geology Sheet XX, in the Yellowstone National Park Research Library, Mammoth, Wyoming (Green 2000).

Figure 18. One of Shaw and Powell Camping Company's tent camps (Yellowstone National Park Archives).

A later campsite reflects more congenial camping conditions which were available to tourists in Yellowstone after the turn of the century. In 1893, William Wallace Wylie established the first camping company. The goal of the Wylie Camping Company and similar companies that followed was to provide visitors of lower and medium income with low-cost package tours through the park. Lodging was in the form of tent camps established at more-or-less permanent locations along the tour routes. One of Wylie's successors was the Shaw and Powell Camping Company. Established in 1913, Shaw and Powell operated until 1916 when camping concessions were merged. One of Shaw and Powell's five permanent camps was located on Nez Perce Creek east of the Nez Perce Bridge (Figure 18). Though it remains unrecorded to date, company records in the Yellowstone National Park Archives at Mammoth indicate the Nez Perce Camp minimally contained a log building housing a kitchen, dining room, and social assembly hall; roads; rows of sleeping tents; as well as corrals and stables. It is likely that outhouses and small artifact dumps occur as well.

Conclusions

In sum, the Lower Geyser Basin is an area rich with the past. For almost fifty years, it was literally the center of the tourist experience and, as such, served the traveler and growing Yellowstone tourist industry in many ways. My archeological crews surveyed only a small portion of the Lower Geyser Basin but found a wealth of physical evidence for early Yellowstone tourism. When data from these sites are combined with information from historical documents, we find that many historic sites in the basin reflect an era of rapid change from 1872 through 1917. Change brought a diversity of tourist experience through this time. For early visitors, travel through the park involved hardship and sometimes danger. Later tourists could take advantage of hotels and prepared meals after a hot and dusty day's journey. In many ways the tourist experience of the late nineteenth and early twentieth centuries was far different from most visitors' experience today. Inevitably, however, the trip was made worthwhile then as now by the wondrous majesty of nature at Yellowstone National Park.

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William J. Hunt, Jr., NPS-Midwest Archeological Center, Federal Bldg., Room 474, 100 Centennial Mall No., Lincoln, NE 68508

The National Park as Museological Space

Thomas Patin

"Nature's Masterpiece" from Wonderland, *1903 (Special Collections Division, University of Washington Libraries, negative number 18562).*

In the early nineteenth century, American cultural elites were in the habit of comparing American culture to European culture. They felt an "embarrassment" of a comparative lack of a national cultural identity based on a long and established artistic, architectural, and literary heritage.[1] Nevertheless, it was obvious that what America lacked in cultural treasures it more than made up for in natural wonders. A perceived missing national tradition found a substitute in the American landscape. By the middle of the nineteenth century, cultural nationalists took pride in the fact that the western environment, especially places like Yosemite, Yellowstone, and the Grand Canyon in Arizona, were unparalleled. Scenery began to be understood as a form of cultural redemption (see photo at left).[2]

But this redemption could only be accomplished if parts of the natural world could be converted into cultural heritage. How was such a conversion possible? Only figuratively, of course. This conversion has been carried out through the use of a number of extraordinarily effective rhetorical devices. These devices have been so effective that they have become invisible. I am thinking here especially of conventions of landscape painting and techniques of museum display that allowed for the natural world to be presented as a natural culture. My primary concern is with the various techniques borrowed from museums and used again in the presentation of nature in the national parks. Using Yellowstone as an example, I want to suggest that national parks are essentially museological institutions, not because they preserve and conserve, but because they employ many of the techniques of display, exhibition, and presentation that have been used by museums to regulate the bodies and organize

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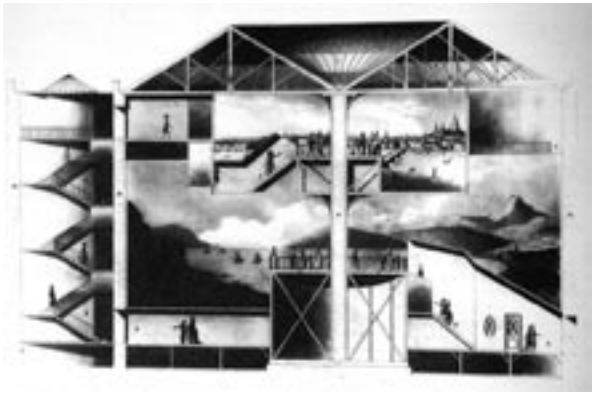
the vision of visitors. Such a strategy produces a so-called "vignette of America," insinuates the museum into the wilderness, produces specific understandings of the natural world, and furthers the idea that natural wonders are part of America's *cultural* heritage.[3]

When F. V. Hayden returned from his expedition to the Yellowstone region in 1871, he arranged for an exhibition of a number of specimens at the Smithsonian Institution in Washington, D.C. These "specimens" included photographs by William Henry Jackson and sketches by Thomas Moran. These images are more than decoration or pretty scenery. They are more like samples of a nation's heritage. In the same way, the geological specimens on exhibit were more than rocks. In the Smithsonian, the nation's curiosity cabinet, the watercolor sketches, photographs, and geological specimens worked in a supportive interrelationship. Natural fact was claimed as cultural heritage through the aesthetic conventions bound up in landscape painting and in the exhibition of geological samples. At the same time, culturally specific aesthetic preferences were presented as natural fact, since the exhibition and depictions of the natural world seemed to echo art and culture.

Of course, nature cannot be enclosed within a museum, no matter how many rocks, photographs, and paintings are used to represent it. It is possible, though, to enclose nature—so to speak—within the logic of the museum by presenting nature through conventional exhibition techniques. In other words, if you can't bring nature into the museum, bring the museum into nature. There are many general similarities between the ways that museums and galleries present their objects of display and the ways the parks present nature to visitors. Most museums and national parks have grand or otherwise extraordinary entrances. Both institutions use roads, trails, directional signs, architectural elements, or other means of traffic control. Views and vistas are commonly framed by landscaping or architectural elements. In both parks and museums we find an abundance of signs and text panels explaining the importance of particular items on exhibit. Finally, restaurants and shops are abundant in both places, complete with a selection of reproductions of the contents. Rather than gloss over these similarities, however, I would like to be more historically specific and examine two typical nineteenth-century methods of display, the cyclorama and the moving panorama.

In the cyclorama, viewers stand on a raised circular viewing platform in the center of a circular exhibition space and look at a dimly lit 360-degree landscape painting. These huge paintings are often housed in their own circular buildings. Cycloramas are very similar in principle to

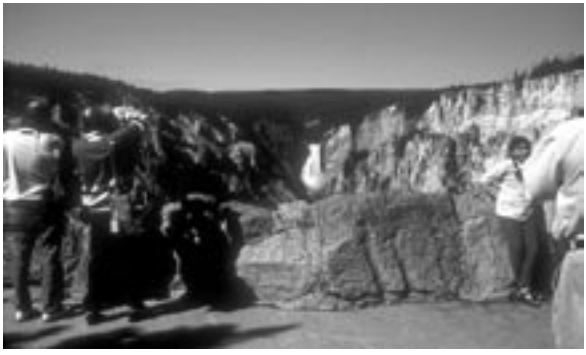


A two-layer panorama, London 1798.

the IMAX theatre we are all familiar with today, except they completely surround the viewer. Cycloramas were once popular forms of entertainment, numbering around 400 in Europe and America in the late 1800s, with visitation numbers between 1872 and 1885 reaching 200,000 per year.[5] Cyclorama exhibits were considered to be extraordinarily realistic, as well as morally instructive.[6] Many visitors to cycloramas have described the sensation of being transported to those places depicted in them, such as Niagara Falls, the Alps, volcanic eruptions, or the Holy Land.

The moving panorama combines the cyclorama with the control of vision used in dioramas, another popular mode of viewing scenes in the mid-nineteenth century. The moving panorama requires viewers to sit as an audience facing one direction as the painted scenery passes before them in the form of a theatrical backdrop stretched between two rolls of canvas.[7] Henry Lewis' *Mammoth Panorama of the Mississippi River*, 1849 was painted on 45,000 square feet of canvas and toured several cities in the East and Midwest. The unrolling of this painting took several hours, and quasi-scientific commentaries, anecdotal material, and piano music accompanied the images.[8] Despite the obvious artificiality, panoramic presentations have been generally held to be completely convincing.[9] In fact, some nineteenth-century visitors reported experiencing dizziness and sea-sickness.[10]

What I would like to suggest is that the cyclorama as an exhibition technique has been insinuated into nature in the form of the overlook, the viewcut, and some visitor centers in the national parks, while the moving panorama has been incorporated into the parks as roadways. One early tourist to the Grand Canyon in Arizona explicitly likened his experience on the south rim to standing in the middle of a cyclorama looking at a well-executed painting of mountains and gorges.[11] In a similar fashion, the windows and "reflectoscopes" at the Indian Watchtower at Desert View, designed by Santa Fe Railroad's architect Mary Colter in 1932, condense, simplify, and separate sections of the canyon for viewing as if they were framed pictures.[12] According to historians Marta Weigle and Kathleen Howard, a controlled access to the rim and the regulation of vision were crucial components of the "viewing apparatus" set into place at Grand Canyon by the Santa Fe Railroad and the Fred Harvey Company.[13]



Tourists at the Grand Canyon of the Yellowstone, Artist Point overlook. Photos in this article taken by author unless otherwise noted.

In Yellowstone, the cycloramic exhibition technique is also found at overlooks, viewing platforms, and viewcuts at roadside turnouts. As early as 1897, platforms and sidings were built for tourists to use to get out of coaches or other vehicles at different points on regularly traveled routes.[14] Starting about 1910, "vista cuts" began to

Top: Thomas Moran's Grand Canyon of the Yellowstone*, 1872 (National Museum of American Art, Smithsonian Institution) and the viewing platform at Tower Fall.*

be made along roads, such as one on the West Thumb to Old Faithful road that allows for a view of Duck Lake, and another east of Mammoth Hot Springs used to view Wraith Falls.[15] The Civilian Conservation Corps continued such work into the 1930s, clearing stumps and dead trees, building more guardrails, and creating more turnouts, viewcuts, and exhibit shelters like the one at Obsidian Cliff.[16] The construction of turnouts and viewcuts along the roadways continued since the late 1950s. There are numerous turnouts and viewcuts in the park, of course, but ones that have historically exemplified the cycloramic function include those at the Grand Canyon of the Yellowstone, such as Artist Point and Inspiration Point.

Some of the overlooks allow for a nearly 360-degree view of the canyon and its surroundings. The view is an elevated one, allowing for a view of the depths of the canyon, as well as some of the landscape above the rim. There are, of course many other examples in the park.

As a digression, it is interesting to note how the view beheld by visitors to the canyon is similar to that depicted in Thomas Moran's painting of the canyon. Moran even provides two "staffage figures" or "surrogate viewers," which act as stand-ins for the viewers of the picture, allowing viewers an imaginary immediacy and presenting an idea of the scale of the scenery. The overlooks at the canyon explicitly repeat the view depicted by Moran and beheld by his figures. This happens elsewhere in the park, most obviously at Tower Fall. At Tower Fall, the viewing platform is an excellent

Roadside turnout at Shoshone Point, between Old Faithful and West Thumb, near DeLacy picnic area.

example of cycloramic presentation, and there is a reproduction of a Moran painting with two surrogate viewers in it looking at the falls.

There are also numerous roadside turnouts that are examples of both cycloramas and large-format panoramic paintings, such as the one at Shoshone Point, between Old Faithful and West Thumb, near DeLacy picnic area.

It presents the Tetons to the south and the view is framed by trees to either side (the stumps of trees cleared for the view are visible if you look for them.) It is obvious from the design of the parking lot and the arched rock wall where the view is best appreciated, and, if viewers stand in the prescribed spot, they are offered a framed view of natural beauty as if in a picture painted from an elevated point. The point of view made available from such a design produces what art historian Albert Boime has described as the "magisterial gaze." To Boime, this viewpoint embodies the exaltation of the nineteenth-century American cultural elite before an unlimited horizon that they identified with the "manifest destiny" of the American nation.[17] In the parks, the magisterial gaze is reenacted millions of times each year. The elevated position of the park visitor allows for a commanding view of the land, a land that—once seen, claimed, and surveyed—can become part of a nation's heritage.

The convention of the cyclorama continues to be implemented in national park construction, especially in visitor centers and viewing platforms. In addition to an actual cyclorama painting installed in its own building at Gettysburg, there is a viewing tower at Clingman's Dome in Great Smoky Mountains National Park that presents a completely cycloramic viewing opportunity. My own favorite example of an explicitly cycloramic presentation is atop the Mission 66-era Henry M. Jackson Memorial Visitor Center at Mount Rainier National Park. In a large, circular viewing room, a 360-degree view of dramatic mountainous scenery is provided. The room includes benches, handrails, viewing scopes, and information panels. Some items in the scenery are nearby, such as some small trees, rocks, and shrubs, and in some instances frame the view and help to break up the seemingly unlimited view into smaller segments. These smaller and more immediate objects also serve to set the remainder of the scenery into a spatial relationship with the viewers and the visitor center.

The moving panorama has been repeated in Yellowstone and in most of the national parks in the form of the road system. In the early years of Yellowstone tourism,

the Northern Pacific Railroad (NPRR) suggested in their promotion literature a sequence for park visitors: Mammoth, Obsidian Cliff, Norris Geyser Basin, Gibbon Canyon, Gibbon Falls, Lower and Upper geyser basins, Yellowstone Lake, and the Grand Canyon of the Yellowstone.[18] Businessman Nathaniel Langford also proposed roads in the figure-eight system similar to the Northern Pacific Railroad scheme and similar to what we now have in the park. Early park superintendent Philetus Norris was concerned with providing visitors with scenic and interesting views along the roads of the park and built the road around the base of Bunsen Peak to provide views of Gardner Canyon.[19] I don't want to suggest that building a kind of moving panorama was the explicit intention of early park promoters and administrators, only that the moving panorama and the road system performed similar functions: to make available to visitors, or viewers, a sequential presentation of designated wonders and natural beauty.

Since the 1950s, however, the project of exhibiting natural wonders has been more explicit. In 1958, National Park Service Director Conrad Wirth issued his *Handbook of Standards for National Park and Parkway Roads*, in which he stated that the purpose of roads in the national park system was "to give the public…leisurely access to scenic and other features. Thus [the roads] become principal facilities for presenting and interpreting the inspiration values of a park.…"[21] Wirth also instructed that roads be fitted to the terrain, and that shoulder widths allow for turnouts and overlooks at frequent intervals. The current systemwide road rebuilding program provides an opportunity to explore a more self-conscious implementation of exhibition techniques in the park.

The cyclorama has been reconstituted in the form of turnouts, viewcuts, observation platforms, and visitor centers, while the moving panorama has been repeated in the parks as roads. To a greater or lesser extent, these techniques have had the effect of regulating the vision of park visitors and managing their physical relationship to natural wonders. Park visitors have been put into positions not unlike visitors to museums and galleries exhibiting art and other objects. These techniques, along with many other important conventions, have been, in my opinion, crucial to the successful conversion of natural wonders into cultural heritage. This is constantly suggested in the repeated references to national parks and wilderness areas as "treasures" and as our "national heritage," terms more commonly used for works of art in museums.

Sign along road near Lake Yellowstone.

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Thomas Patin, School of Art, Ohio University, Athens, OH 45701

Architecture of Yellowstone: A Microcosm of American Design

Rodd L. Wheaton

The idea of Yellowstone National Park—the preservation of exotic wilderness—was a noble experiment in 1872. Preserving nature and then interpreting it to the park visitors over the last 125 years has manifested itself in many management strategies. The few employees hired by the Department of the Interior, then the U.S. Army cavalrymen, and, after 1916, the rangers of the National Park Service needed shelter; hence, the need for architecture. Whether for the purpose of administration, employee housing, maintenance, or visitor accommodation, the architecture of Yellowstone has proven that construction in the wilderness can be as exotic as the landscape itself and as varied as the whims of those in charge. Indeed, the architecture of America's first national park continues to be as experimental as the park idea.

Many factors contributed to Yellowstone's search for an architectural theme. In 1872, the park was remote and the choice of building materials was generally limited to using what was readily available—logs. James McCartney, who was encamped in the park just prior to its designation, built his earliest visitor accommodation, McCartney's Hotel, in the true pioneer spirit. This structure was soon equaled by the construction of Philetus Norris' so-called "blockhouse," built atop Capitol Hill in 1878 when it became painfully obvious that a governmental presence was needed to match that of the first concessioner and also to handle vandals and poachers in the new park. Designed to serve as a lookout point from which the park administration could protect itself from the (real or imagined) threat of attack by local American Indian tribes, it is no coincidence that the blockhouse was built on the highest point of ground above the Mammoth Terraces, and that it had a pioneer defensiveness design. Norris's struggle to manage the park

The burled logs of Old Faithful's Lower Hamilton Store epitomize the Stick style. NPS photo.

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during this era led directly to the U.S. Army taking over management to battle the insurgents and usurpers of park lands. The army's effort began from the newly established Camp Sheridan, constructed below Capitol Hill at the base of the lower terraces at Mammoth Hot Springs.

Beyond management difficulties, the search for an architectural style had begun. The Northern Pacific Railroad, which spanned Montana, reached Cinnabar with a spur line by September 1883. The direct result of this event was the introduction of new architectural styles to Yellowstone National Park. The park's pioneer era faded with the advent of the Queen Anne style that had rapidly reached its zenith in Montana mining communities such as Helena and Butte. In Yellowstone the style spread throughout the park and found its culmination in the National Hotel, constructed in 1882 and 1883 at Mammoth. The Queen Anne style, often co-mingled with the Eastlake style, also manifested itself in an early version of the Lake Hotel in 1889. It used strips of wood for decorative purposes, and is also seen in the much later Tower Junction residence, originally built in 1926 as a road camp dormitory. At Fort Yellowstone, the successor to Camp Sheridan, the U.S. Army also was experimenting with the Queen Anne style in the development of new structures such as the Officers' Row duplexes. Here the style is characterized less by an animated and turreted skyline than by steeply pitched roofs and eyebrow dormer windows. The porch bracketing and the steep roof of the now-demolished Haynes House at Mammoth also carried the style into the early twentieth century.

Elsewhere in the country, nearly hand-in-hand with the Queen Anne, the architectural style of the Richardsonian Romanesque symbolized power and dominance through stone masonry. It wasn't until 1903 that this style entered Yellowstone, with the construction of the Roosevelt Arch at the North Entrance to the park. Possibly designed by resident "wonder boy" architect of the park, Robert C. Reamer (of whom we shall soon read more), and by U.S. Engineer Hiram Chittenden, the structure announced the park with an adaptation of a triumphal arch—symbolizing the triumph over the natural environment.

Like the two earlier eclectic styles of the 1880s and 1890s, the aptly named Stick style represented the idea that diagonal bracing can be construed as architectural ornament. One of the earliest forms is the use of burls and gnarled poles and logs for diagonal bracing on the Lower Hamilton Store at Old Faithful. The building, constructed in 1894 and rusticated in the 1920s, represents the epitome of the Stick style masquerading as rustic in an early attempt to blend it with the natural environment. At this early date the park concessioners were searching for an architectural theme that would, in the 1920s and 1930s, be extended into the post-Stick style of vertical and diagonal log applications, such as were seen in the now-demolished Old Faithful Cafeteria and in the surviving Lake Yellowstone fish hatchery structures.

When the structural form is hidden behind shingled surfaces, we have the Shingle style, and Yellowstone boasts one of the most original Shingle style buildings in the United States. The Old Faithful Inn, designed by Robert C. Reamer and constructed during the winter of 1903–1904, took the Shingle style to a new height—nearly 100 feet to the ridge. It wrapped the structure in a veneer of elegant

The Shingle-style Old Faithful Inn combines Adirondack rusticity with Queen Anne animation. NPS photo.

shingle patterns and applied East Coast Adirondacks-style rusticity. In addition, Reamer, while certainly under the influence of the Queen Anne style, provided an animated skyline by cleverly contorting a basically symmetrical building with crazy quilt detailing. Similar emphasis on shingled wall surfaces for a rustic atmosphere is experienced at the Lake Store, begun in 1919. The formality of the octagonal towered structure is barely masked by the use of shingles and a stone masonry fireplace shaft to provide an air of rusticity.

From Pioneer-Rustic to Classic Structures

THE ECLECTICISM OF THE LATE NINETEENTH CENTURY and early twentieth century was reflected in the search for an appropriate architectural style in the park. Standard American late-nineteenth-century conventions such as have been described thus far could easily be adapted to the rustic wilderness, as was demonstrated by the Old Faithful Inn. However, the architectural design conventions of America after the great World's Columbian Exposition of 1893 in Chicago also suggested the power of classicism in all of its variant forms, derived from eighteenth century American Georgian architecture. The neo-classicist Colonial Revival was reflected in the remodeling of the Lake Hotel in 1922 and 1923, when three Ionic porticoes were added to the facade. This classicism, complete with its egg-and-dart moldings, clearly expressed the American ideal of subjugation of nature in the style of Greece and Rome, rather than the blending with nature. Reamer, ever the resourceful architect, also designed the new wing for the National Hotel—now the main wing of the Mammoth Hotel—in the Neo-classical style by applying columnar orders to window frames and cornices.

The U.S. Army, taking its cue from the concessioner's structures and responding to the fact that Fort Yellowstone was the second-most-visited military post in the United States, embarked on its own expansion program of upgrading their facilities. Of a pure Colonial Revival Style, the Commissary Building (today called the Canteen, housing offices and a federal credit union), built in 1905, has a templed facade with a major fan-lighted entranceway, all derived from classical detailing. Similar design

inspiration entered into the detailing of the Bachelor Officers' Quarters of 1909 (now the Albright Visitor Center) and the Cavalry Barracks also of 1909 (the current park headquarters building). These stone masonry structures are redolent in their airs of classicism and hence suggest the authority of government.

On a more local scale, and at a more intimate level, the Colonial Cottage, a derivative of the classical style seen in the urbanization of cities across the West, also is well represented in the development of the park's architecture. The U.S. Commissioner's residence (still today occupied by the resident park magistrate) represents an example in stone masonry to match nearby Fort Yellowstone. In the backcountry, the U.S. Army built the Bechler River Soldier Station complex of 1910 in this style. Well beyond the bounds of the central offices, classicism prevailed over the flora and fauna.

Like the rest of the nation, the park lurched forward, searching for an architectural style and exploring any number of Academic styles—those attempting to suggest the triumphs of other civilizations. The U.S. Army, not content with just imitating the architecture of democracy, evidently felt in 1913 that not only was the Gothic style appropriate for a religious edifice, the post chapel, but that it would also help Fort Yellowstone equal its architectural rival, West Point. The chapel set the tone into the early twentieth century for additional architectural stylistic adventures.

Experimenting with International Styles

As early as 1903 the U.S. Engineer's Office, designed by the Minnesota Twin Cities architectural firm Reed and Stemm, was designed in a vaguely Chinese style. Indeed, the upward curve of the green tile roof eaves has caused the building ever since to be referred to as the "Pagoda." Later, Reamer set a French tone with the inclusion of a Mansard roof on the west wing of the Old Faithful Inn in 1927. This provided a decided incongruity on his landmark building. France again entered the Yellowstone scene with the construction in 1939 of the United States Post Office at Mammoth. The French style was tempered only by the inclusion of sculptural elements representing pieces of the local environment (such as the bears that flank the front porch).

The international search for an appropriate style extended to England. With the construction of the half-timbered 1936 Mammoth apartment building, a Works Progress Administration (WPA) project, one can wonder: Was the exposed half timbering meant to be English Rustic? As examples of other early American architecture with European antecedents, one could refer to the William Nichols House at Mammoth (south of the current gas station) as Dutch Colonial with its gambrel roof.

Back to Nature

While America searched for an architectural theme, one style was emerging that lent itself exceptionally well to Yellowstone's environment, simply because nature was the inspiration. The first inkling of nature as a value in architectural design came with

the work of Frank Lloyd Wright. His early works in and around Chicago were referred to as the Prairie style because of their response to the flat, horizontal qualities of the prairie. Wright's masterpiece, the Robie House of 1907, was surely an inspiration for Robert Reamer's Harry Child's residence, built in 1908 at Mammoth. All of the horizontal design elements of a Wrightian structure are evidenced in the Child's residence (also called the Executive House); all that is missing is the prairie. Reamer was so enraptured by this new design inspiration that he employed the Prairie style in the construction of the Canyon Hotel in 1910. The same horizontal design elements spread over the structure as it sprawled up the hillside on the site of the current horse stables. It enclosed magnificent interior spaces that made much use of the geometry of the structural elements spanning enormous spaces. Sadly, the demolition of this building (it was sold for salvage in 1959 but accidentally burned in 1960) is one of the great architectural losses in Yellowstone National Park.

One of the interesting adjuncts of early-twentieth-century architecture which took nature as an inspiration was the Arts and Crafts movement that swept the industrialized world. In Yellowstone, this ideal of handmade or "back-to-nature" is exemplified in the 1908 construction of the Norris Soldier Station, designed by none other than Robert Reamer. Reamer chose the local material, logs, but inventively massed them into a bungalow-like structure that served the Army's backcountry patrol efforts. This bungalow form, an offshoot of the Arts and Crafts style, was also the design inspiration for Reamer's Mammoth Hotel Cottages, built in 1938.

In 1929, Reamer designed the Upper Hamilton Store in the Old Faithful area. This building reflects the ideals of the Arts and Crafts movement, particularly in the elegant handling of the stone masonry piers of the porticoes. It is interesting to speculate on the design origins of this building when the record indicates that a Spanish-style store was originally designed for this site. However, then-Superintendent Horace Albright objected and requested a concrete log building patterned after the Awahnee Hotel in Yosemite, which was designed by Gilbert Stanley Underwood, who had also designed the 1927 stone masonry and log elevations of the Old Faithful Lodge.

The Arts and Crafts movement is reflected in the logs and stone masonry of Old Faithful's Upper Hamilton Store. NPS photo.

The Arts and Crafts style of the concessioner buildings was further enhanced with the introduction of another residence at Mammoth in 1927 that utilized shingles and heavy timbers. Simultaneously, the National Park Service was beginning to realize that there just might be a theme drifting in the wind when Dan Hull designed the 1922 community building at Lake Yellowstone. This octagonal log structure with its projecting wings not only pushed the envelope in environmental design, but also offered an interesting beginning to the idea of interpretation in the park by attracting the visitors to fireside chats around the central fireplace. This idea of rustic buildings for a national park had been akindle for several years when the National Park Service designed, in 1923, a standard log ranger station that was to find its way to several parks, including Yellowstone at the Fishing Bridge area. It represented the style of Neo-Rustic Revival, which was based on the concept of hearth and home.

The Rise of "Parkitecture"

ALL OF THESE NEW RUSTIC IDEAS were combined in the works of Herbert Maier, who designed four museums that were financed by the Laura Spelman Rockefeller Foundation. In addition to providing interpretation at key locations, the museums, three of which remain, launched the style which is now referred to as "Parkitecture." Maier's brilliant Norris Museum, which serves as the gateway to the Porcelain Geyser Basin, set the pace in the use of stone masonry and log construction. Built in 1929, this museum helped define the park service's six principles of what rustic buildings should be in a rustic environment.[1] One principle is that buildings should be in harmony with the natural surroundings and should be secondary to the landscape rather than primary, as in a city or town. Two, all buildings in any one area should be in harmony—that is, similar materials should be used in the design, roof slopes should be about the same, and type of roof should be similar. Three, horizontal lines should predominate in National Park Service buildings, rather that vertical, which is found more in cities. Maier's design for the Madison Museum, also built in 1929, reflects principle number four: it is advisable to avoid rigid, straight lines when possible, creating the feeling that the work was executed by pioneer craftsmen. This

The Norris Museum exemplifies "Parkitecture," and helped define ideals of rusticity in the national parks. NPS photo.

applies to log ends, ironwork, hardware, and other design aspects. The construction of Lake Museum near Fishing Bridge in 1930–31 exemplified the fifth principle: stone work, log work, and heavy timber work should be in scale, providing a well-balanced design. And, six, in some cases it is necessary to make the stone work and log work a little oversize so that large rock outcroppings and large trees do not dwarf the buildings, giving the impression of underscale.

Maier's designs set the tone for the 1930s decade of the Works Progress Administration and the Civilian Conservation Corps (CCC). Notable examples in Yellowstone emulated the six principles in design and provided the introduction of a unifying theme beyond park headquarters at Mammoth. By 1931, interpretation of various sites along the Grand Loop Road were supported by elegant kiosks such as the one that still exists at Obsidian Cliff. Ranger stations, including the 1922 structure at West Yellowstone, used locally obtained materials (logs) to integrate buildings with their surroundings. Structures such as the Northeast Entrance Station, designed by the National Park Service Branch of Plans and Design in 1935, eloquently evoked a sense of entry into a special natural area. The log work of this structure was equaled in a master stroke by the buttressed crowning of the adjacent residence, built in 1936. Carefully chisel-pointed as a suggestion of pioneer work, the projecting crowns sweep to the roof eaves. Logs can have elegance, too.

Going Modern

While the Arts and Crafts style flourished and mellowed into Parkitecture away from headquarters, new buildings, at Mammoth in particular, got a new look. Modernism arrived direct from the centers of Art Deco and Art Moderne, particularly where there was a ready access to terracotta, which lent itself easily to the use of fluting, chevrons, and geometric shapes. Everything was soon "up-to-date" at Mammoth with the reconstruction of the fire-damaged hulk of the old National Hotel. The remains of the hotel were redesigned in the Art Deco style in 1936 by the Yellowstone master of all styles, Robert C. Reamer. Reamer clad the hotel structure in stucco, fluted columns, and cast-composition rosette blocks. The new style was fully expressed by foliate iron work.

At Gardiner, near the North Entrance to the park, the concessioner built warehouses in an adaptation of the Art Moderne style, a streamlined version of Art Deco. The warehouses, designed by Link and Haire of Helena, Montana, expressed the solidity of the style in concrete. Conversely, the Moderne style is represented in frame construction at the 1928–29 Haynes headquarters building (today's Hamilton Nature Store) at Mammoth, designed by Fred Willson of Bozeman, Montana. Here, planes of shingling without ornament echoed the new styles of modernism. This was in stark contrast to the development of rustic buildings in the heart of the park that were the glory of the WPA-CCC days, all of which came to an end with the advent of World War II.

The war years halted construction throughout the nation. Yellowstone was no exception; gasoline was rationed, the hotels closed until the end of war, trains were commandeered for military rather than passenger use, and the overall effect was a

The Canyon Visitor Center was built in the Modern style during the Mission 66 period. NPS photo.

decline in tourism and maintenance. Even after the war, interest in reopening the facilities lagged.

The rise of a new touring public prompted some refurbishing by 1950, but mostly it demonstrated how woefully inadequate the park facilities were to meet travelers' needs. Visitors had changed in the interim. They drove their own cars, demanded more interpretation of resources, and sought better accommodations. Yellowstone, like most of the national parks, was ill-prepared for the second half of the twentieth century. To meet the needs of a new public, the Mission 66 program for new construction was initiated in 1956 to remedy deficiencies in park facilities by 1966. The new program was unabashedly responsive to modernism in order to "fast track" the massive construction effort.

In Yellowstone this new modernism led directly to the construction of developed areas such as at Bridge Bay which, in a modern sense, took on a contemporary look of a fishing village. The visitor center at Canyon employed slump block as a new, vaguely rustic building material that defined a stylistic progression to a watered-down version of the Miesian style based on the ideas of architect Mies van der Rohe. A new visitor center replaced Herbert Maier's old Rustic-style visitor center at Old Faithful. Its Expressionistic-style roof structure floats over a Formalist-style facade. In an effort

Postmodernism came to Yellowstone with the Grant Village development (dining room pictured). NPS photo.

to blend tortured modernism into a compatible whole, the architect clad the surfaces with shingles in homage to Old Faithful Inn and produced a building caught in a time warp. The struggle for a new park style continued through the Mission 66 building boom only to go dormant when the money ran out by the end of the 1960s.

By the mid-1970s the park's older hotels were derelict and the situation launched a new era of upgrading the facilities. A new park architecture emerged that set the stage for a few early attempts at design compatibility, though some now seem heavy handed, such as the boldly expressed modern style stair towers on the Old Faithful Inn. Perhaps one can now view these as a Deconstructionist style when viewed in contrast to the earlier structure. The search for a compatible modern style spilled over into the design of the modular Mammoth dormitory adjacent to Mammoth Hotel. Here the modern style is masked by gabled roofs and rough-sawn siding used to "relate" a large sprawling building to a park environment.

Subsequently, the Post-Modern style moved into the park through the architecture of Spenser and Associates of Palo Alto, California, with the design of new visitor facilities at Grant Village. The dining room building is characterized by a massive roof, multi-mullioned windows, and shingling. The registration building was designed in a more sculptural form, but the architects continued to masquerade the buildings as traditional rustic with the use of shingle cladding. An idea of natural buildings in a natural environment was once again in the germinating stage. These buildings are grand statements in the Yellowstone search for a style, but unfortunately fell short in unifying the building collection of Grant Village.

Back to the Future

THE PARK AND ITS CONCESSIONERS' STRUGGLES for architectural identity focused on marketing their own history. As a consequence, since the early 1980s, the park hotel facilities have been and are being rehabilitated following the trends of the country, incorporating input from the National Park Service, its concessioner partners, and independently contracted cultural resource professionals and architects. This rehabilitation movement has given rise to the last architectural style of the twentieth century: Neo-Traditionalist—the mark of the 1990s. The park service has followed

The new Old Faithful Snow Lodge is typical of 1990s neo-traditionalism. NPS photo.

suit and taken a further step with the construction of new log buildings at various areas in the park to capture a style of Neo-Rustic Revival. Buildings such as the South Entrance Ranger Station exemplify this trend of attempting to recapture a unique park experience. At strategic points, park management has made a statement that Yellowstone is a special place with special architecture. This idea is best illustrated by the construction of the new Old Faithful Snow Lodge, designed by A & E Architects of Billings, Montana. In combining the best of Old Faithful Inn and Old Faithful Lodge, the architects have clearly expressed the idea that any new building in Yellowstone should be subordinate to its historic neighbors, as infill within a historic district. The new Snow Lodge stands out in this context, yet is surely to someday join the ranks of its exalted neighbors as a National Historic Landmark.

The Snow Lodge demonstrates that the twentieth century struggle for a Yellowstone style has been brought to a conclusion. There is no one park style but, like America as a whole, the richness of the fabric that characterizes the architecture at once unites the park with the rest of the country and also makes it a very special place.

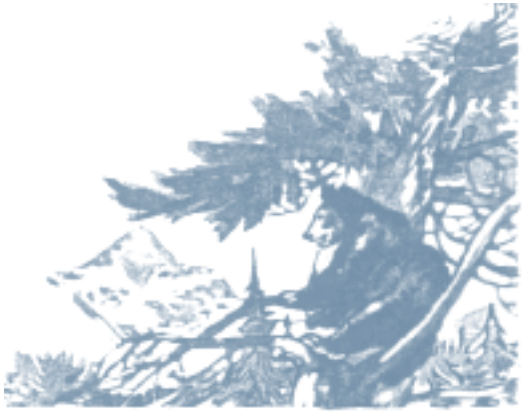
Notes

1. Thomas C. Vint, "Report on the Building Program from Allotments of the Public Works Administration," National Park Service Western Division, 1933–1937, compiled by Edward A. Nickel, pp. 12–13.

Rodd L. Wheaton, National Park Service, P.O. Box 25287, Lakewood, CO 80225-6287

Part 3

Researchers and Resource Managers



Preserving the Beasts of Waste and Desolation: Theodore Roosevelt and Predator Control in Yellowstone

Jeremy Johnston

The early history of wildlife management in places like Yellowstone is often assumed to have been based on a consensus that predators such as wolves, coyotes, and mountain lions should be killed. Although President Theodore Roosevelt sought to curtail the slaughter of predators in Yellowstone in the early 1900s, his role in park policy is often misinterpreted, and he has been portrayed as both a hero and a villain. This confusion is the result of not only a divergence of opinions on predator control, but Roosevelt's own writings and changing views. In his book *The Wilderness Hunter*, which detailed his experiences in the Dakota Badlands during the 1880s, Roosevelt referred to wolves as "the beasts of waste and desolation."[1] In this same book, Roosevelt depicted cougars as "bloodthirsty" and "cowardly" predators with a "desire for bloodshed which they lack the courage to realize."[2] Yet despite his depiction of predators as destroyers of cattle and wildlife, Roosevelt was a careful student of predators and their natural behavior. As he spent more time studying predators in their natural setting, his attitudes toward their role in nature began to change, so much so that by 1908 he ordered predator control of Yellowstone's cougars be stopped in order to allow these predator populations to curtail growing elk populations. This change in Roosevelt's perspective toward Yellowstone's predator population was influenced by several factors, including his goal of establishing a wildlife reserve in Yellowstone, his personal interest in hunting, and his increased understanding of the role of predators in an ecosystem.

Roosevelt's Defense of Yellowstone as a Wildlife Sanctuary

Theodore Roosevelt's interest in natural history began at a very early age. At eight, young Roosevelt viewed a dead seal in a New York marketplace. "That seal filled me with every possible feeling of romance and adventure," Roosevelt later reminisced.[3] The young Roosevelt returned to the market to measure and weigh the seal. Eventually, he obtained the seal's skull, and began a natural history collection that would continue to grow throughout his life. In 1872, shortly after the creation

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of Yellowstone National Park, Theodore Roosevelt received a rifle and taxidermy lessons from his father for his birthday. These gifts would further his studies in natural history as well as introduce the young man to the sport of hunting. Roosevelt continued to pursue his natural history studies into his college years, when he initially sought a degree in natural history before deciding on law as a field of study. Despite this change in career goals, Roosevelt continued to study wildlife throughout his life.

Hunting would also play in important role in Theodore Roosevelt's life, not just for the collecting of natural specimens for study, but for recreational enjoyment as well. Roosevelt best summed up his feelings towards the sport of hunting in the preface to *The Wilderness Hunter*:

> In hunting, the finding and killing of the game is after all but a part of the whole. The free, self-reliant, adventurous life, with its rugged and stalwart democracy; the wild surroundings, the grand beauty of the scenery, the chance to study the ways and habits of the woodland creatures—all these unite to give the career of the wilderness hunter its peculiar charm. The chase is among the best of all national pastimes; it cultivates that vigorous manliness for the lack of which in a nation, as in an individual, the possession of no other qualities can possibly atone.[4]

This great interest in hunting and natural history would eventually lead Roosevelt into the American West.

Roosevelt first visited the West in 1883, when he arrived for a bison hunt in the Dakota Badlands. After successfully completing his hunt, Roosevelt invested in a cattle ranch, marking the beginning of his close connection with the West. Roosevelt returned the next year to investigate his ranching operations and escape the grief and hardship caused by the deaths of both his first wife, Alice, and his mother. Roosevelt spent several of the following years herding cattle and having a number of adventures which included fighting drunken assailants and capturing thieves who stole his boat. Hunting also occupied a great amount of his time during these years. Roosevelt hunted a variety of animals throughout the Badlands and into Wyoming and Montana, and continued to spend much of his time at his ranch until the winter of 1886–1887 wiped out most of his cattle herd. In later years he occasionally returned to the ranch, using it as a base for hunting excursions and other sightseeing trips. From there, Roosevelt embarked on two trips into Yellowstone National Park in the 1890s. His experiences and observations from these trips formed the basis for many of his wildlife management policies in Yellowstone National Park.[5]

Roosevelt's interest in the American West soon focused on Yellowstone and the threats to its wildlife posed by railroad development proposals and poaching. He became aware of these problems in 1885 when he met with George Bird Grinnell, editor of *Forest and Stream*, then the leading natural history magazine in North America, and a founder of the Audubon Society. Grinnell had led a campaign to protect Yellowstone's ungulates from market hunting and commercial development ever since his first visit to Yellowstone in 1875. Roosevelt wanted Grinnell to explain some negative remarks he printed in a review of *Hunting Trips of a Ranchman*, Roosevelt's first book describing his western adventures. Grinnell had given the

An editorial cartoon's depiction of Roosevelt's 1903 Yellowstone visit. Note the mountain lion perched outside the window. From the Anaconda Standard.

book an overall favorable review, but noted that Roosevelt tended to generalize his observations of wildlife and had relied on some tenuous sources for information. During the meeting, Grinnell defended his remarks pertaining to Roosevelt's book, and Roosevelt realized the validity of Grinnell's arguments. Along the way, the two men realized their shared interests in hunting and the West and became good friends. Soon after, they founded the Boone and Crockett Club, an organization that, among other goals, worked to defend Yellowstone and its wildlife. Using *Forest and Stream* as its mouthpiece, the Boone and Crockett Club criticized poaching and proposals for railroad developments within Yellowstone. This publicity helped result in the passage of the Lacey Act of 1894, which established Yellowstone's first efficient judicial system, making it possible to punish poachers for their illegal activities. The Boone and Crockett Club also stopped efforts to complete a railroad through the northern section of Yellowstone. When railroad developers wanted to decrease the park's boundaries, publicity generated by the Boone and Crockett Club created a public outcry to "save Yellowstone."[6]

Through his efforts with Grinnell, Roosevelt began to envision the park as a sanctuary and breeding ground for wildlife. Roosevelt hoped that if the park's wildlife were protected, their populations would dramatically increase and spread to the surrounding regions. This would ensure the continuation of hunting, his favorite pastime, outside the park's boundaries. It would also alleviate his fear that

as settlement increased, the West would become a series of private game reserves creating a situation where only the rich could hunt. As his political career progressed to the presidency of the United States, Roosevelt found himself in a position where he could achieve these goals by micro-managing Yellowstone's wildlife policies.

Roosevelt and Yellowstone's Predators

Although the hunting of many ungulate species ended in 1883 by a directive of the Secretary of the Interior, park officials continued killing predators throughout the end of the nineteenth century and into the early twentieth century. Many conservationists of the day, including Roosevelt, believed limiting predation would increase ungulate populations, allowing them to recover from the results of the intensive market hunting that occurred in the park before the ban on hunting.[7]

Roosevelt's support of predator control was not just the result of an altruistic conservationist urge. His own desire to hunt cougars in Yellowstone was also a factor. On December 17, 1901, Roosevelt wrote to Yellowstone's acting superintendent, Major John Pitcher, asking "what is the practice about killing mountain lions? If I get into the Park next June I should greatly like to have a hunt after some of them—that is, on the supposition that they are 'varmints' and are not protected."[8] Going on a cougar hunt in Yellowstone also would provide Roosevelt with an opportunity for him to get reacquainted with his friend and hunting guide, John B. Goff.

Hunting Mountain Lions

Roosevelt had first met John B. Goff in January 1901. Shortly after Roosevelt was elected vice president, Goff guided him on his first cougar hunt using hounds, in Colorado. Although cougars greatly interested Roosevelt, he had seen very few of them in wild. His knowledge of the animal had come mostly from the tales of outdoorsmen he met in the Badlands.[9]

During his hunt with Goff, Roosevelt thoroughly enjoyed himself and learned much about cougars.

After leaving his position in Yellowstone, Goff continued to hunt cougars in the Shoshone National Forest, east of Yellowstone National Park's boundary, where he was photographed circa 1907 with his dogs and a recent kill. Photo courtesy of the Park County, Wyoming, Historical Archives.

Fourteen cougars were killed during the trip, twelve of them by Roosevelt alone. If this sounds like senseless slaughter, it should be remembered that in a time before high-tech film and advanced scientific methods were used to study wild animals, hunting was one of the only available ways to closely examine wildlife. Roosevelt's narrative of the hunt, found in *Outdoor Pastimes of an American Hunter*, published in 1905, was "the first reasonably full and trustworthy life history of the cougar as regards its most essential details."[10] Clinton Hart Merriam, director of the Division of Biological Survey, agreed with Roosevelt. After receiving cougar skulls from the hunt, he wrote Roosevelt that "your series of skulls from Colorado is incomparably the largest, most complete, and most valuable series ever brought together from any single locality, and will be of inestimable value in determining the amount of individual variation."[11] The 1901 hunt not only provided specimens for classification; Roosevelt gained a better understanding of the predation habits of cougars, learned about their diet by examining stomach contents, and dispelled the myth of cougars being man-killers. This information formed the basis for Roosevelt's decisions regarding predator control in Yellowstone.[12]

Roosevelt planned to return to Colorado for a second hunt with Goff for bear in 1903, but his plans never came to fruition. Philip B. Stewart from Colorado Springs, a close friend who had accompanied Roosevelt on the 1901 cougar hunt, took on the task of organizing the hunt, but one obstacle after another confounded his plans. First, Goff was wounded by an over-eager tourist he was guiding on a hunt. Roosevelt expressed his frustration to Stewart in a letter, "I hope he beat the 'tourist' who inflicted the wound severely."[13] Goff recovered rapidly, and promised enough cougar to keep Roosevelt satisfied, but on January 22, 1903, Roosevelt wrote Stewart to cancel the hunt. "Many things are conspiring to make it unlikely that I can go," he complained.[14] Instead, Roosevelt scheduled a grand tour of the western states for the spring of 1903, with one stop at Yellowstone.

Roosevelt continued hoping for another hunt with Goff. Shortly after canceling the hunt in Colorado, Roosevelt wrote Stewart about the possibility of sending Goff from Colorado to meet him in Yellowstone. By bringing Goff to Yellowstone, Roosevelt would be able to meet two objectives: controlling predators within the park and enjoying a hunt. "The park authorities say they would like Johnny Goff to be up there with his dogs on trial for the business of killing out some of the mountain lions," Roosevelt wrote to Stewart, "then if things went right, I might get a week with him myself."[15] But his plan began to unravel when Secretary of War Elihu Root noted that Roosevelt's public image might be tarnished if he killed any animals within the park.[16] Root most likely felt that a hunt in Yellowstone National Park, where hunting by the general public was forbidden, would appear to be self-serving, and no less than a misuse of presidential authority. If the public got wind of Roosevelt ordering his hunting guide to Yellowstone, it could create a minor scandal.

Roosevelt attempted to resolve the issue by writing Major John Pitcher, "Secretary Root is afraid that a false impression might get out if I killed anything in the Park, even though it was killed, as of course would be the case, strictly under Park regulations…Now I have thought of this: Would it be possible, starting from within the Park, to go just outside the border and kill any mountain lions?"[17] Roosevelt

President Theodore Roosevelt (left) in camp near Tower, Yellowstone National Park, with John Burroughs (right), April 1903. NPS photo.

then requested Pitcher to send out scouts to find a suitable area, and concluded the letter by asking if he had requested any hounds for the purpose of killing predators.[18] Roosevelt wanted to be sure that if Goff could not reach Yellowstone for some reason, he would still be able to hunt cougars outside of the park boundaries by using the government's pack of dogs. Pitcher's response is not known, but it appears he did submit an application for three hounds. Roosevelt ordered Secretary of the Interior Ethan Hitchcock to send Pitcher an additional three dogs to supplement the pack. On March 2, Roosevelt ordered Pitcher to put the dogs through a trial run. "We must be dead sure we get our mountain lion," noted Roosevelt.[19]

Pitcher wrote a report to the president on the hunting possibilities, noting that his scouts had located "the fresh tracks of ten mountain lions, close to the point where we propose to make our camp."[20] He also noted that the park's buffalo keeper, C. J. "Buffalo" Jones, had captured a live lion while feeding some bighorn sheep in the area. Pitcher reported that the dogs would soon arrive in the park from Texas, and that kennels awaited them. Perhaps trying to alleviate the president's fears about public opinion, Pitcher wrote, "Now these lions have simply got to be thinned out, and if you will lend us a hand in the matter, you will be of great help to us and no one can offer any reasonable objection to your doing so."[21]

With Pitcher's assistance, Roosevelt eagerly anticipated his trip to Yellowstone, with a side-trip outside the park to kill some cougars. Roosevelt's plans took another turn on March 21, however, when Pitcher informed the president that only four of the eight dogs had arrived, and they were untrained. Buffalo Jones was attempting to train them using his captured cougar. Pitcher also noted that he had telegraphed Mr.

Poole, the dog supplier, and informed him that he needed the other four dogs, two of which must be trained or else the contract would be voided. Poole telegraphed back that four more dogs were being shipped to the park. Pitcher requested John Goff's address in order to contact him if the four new dogs were unsuitable.[22]

Upon learning of the problem with the dogs, Roosevelt wrote back to Pitcher to cancel the hunt and comment, "Having had experience in the past with individuals who sold hounds, I am not in the least surprised at your news."[23] Roosevelt wrote that "an untrained hound is worse than useless. Such a pack will run deer or elk in the place of lion, and will be a perfect curse to the Park."[24] He also noted that bringing Goff up to the park would be unacceptable. "The more I have thought it over…[Goff] coming up would cause a great deal of talk."[25] He concluded the letter by noting that seeing the game of the park would be exciting enough but that, on the off chance the hounds were trained in time, he would attempt to hunt cougar.[26]

On April 8, 1903, Theodore Roosevelt arrived in Yellowstone National Park for his long anticipated visit. Famed naturalist and writer John Burroughs accompanied Roosevelt during his visit, which lasted for over two weeks. During this time, Roosevelt and Burroughs spent most of their time studying the park's wildlife. Roosevelt fired only one shot within the park. Using a tree for a target, he tested a new revolver, only to have the spent shell fly back, cutting his cheek. The only animal Roosevelt killed during his trip was one mouse. With hope of discovering a new species of mice, Roosevelt caught his prey by throwing his hat over the mouse to entrap the small creature. He spent the evening skinning the mouse and treating the small pelt for shipment to the U.S. Biological Survey to see if it was a new species. It was not, but was a species previously unknown to the park area. John Burroughs worried newspapers might misprint the word "mouse" in their articles as "moose" and create a controversy for the president.[27]

Roosevelt's preparations for a cougar hunt came back to haunt him during his visit. Buffalo Jones decided to take matters into his own hands by bringing the government's pack of hounds to the presidential camp for a quick cougar hunt. Upon Jones' arrival at the camp, Roosevelt instructed Pitcher to order Jones and the hounds back to Mammoth Hot Springs. John W. Meldrum, the judge of Yellowstone's court who tried to warn Jones not to bother the president, later recalled, "I met [Jones] down at the Post Office shortly after he came in and said, 'Hello Jones, I thought you were out with the President.' Jones was so mad that he never said a word."[28]

Predator Control in Yellowstone

During the president's visit in April 1903, he had substantial time to study Yellowstone's wildlife. His perspective on predators began to change, especially after he witnessed the conditions of the elk herds. He saw many elk along the way to his campsite on the Yellowstone River near the Black Canyon of the Yellowstone, and noted that they "were certainly more numerous than when I was last through the Park twelve years before."[29] With the help of Pitcher and their guide Elwood Hofer, who had also guided Roosevelt during his 1891 visit to the Yellowstone area, Roosevelt counted 3,000 head of elk in one sitting. He also noticed many elk carcasses lying

on the ground. He paid close attention to what had caused their deaths. Two were killed by "scab," and some by cougars, but most had died of starvation—the result, Roosevelt believed, of overpopulation. Roosevelt assumed the numbers to be too high on the basis of what he had witnessed during his visits in 1890 and 1891. Certainly, the elk numbers would have increased throughout the 1890s due to the cessation of market hunting within Yellowstone and increased power to prosecute poachers under the Lacey Act. In addition to decreased hunting, the destruction of the wolves and other natural predators in this time period would have decreased predation, allowing for a greater increase in elk numbers.

Roosevelt now began to defend the cougars' presence in the park: "As the elk were evidently rather too numerous for the feed," he later wrote in the account of his trip, "I do not think the cougars were doing any damage."[30] Roosevelt began to worry that the elk herds would meet the same fate as his North Dakota cattle herds had in the disastrous winter of 1886–1887; that they would deplete the range, leaving little if any winter feed, and leading to starvation for themselves and other wildlife. To prevent this from occurring, Roosevelt believed the elk herds needed to be thinned down, and that predators were needed to fulfill this function in place of human hunters. Roosevelt now realized that predators such as cougars were an important part of the Yellowstone ecosystem. This was a rare opinion for the time period, especially from a former western rancher. Roosevelt believed the winter die-offs were an effective method of population control of elk numbers, but he considered it to be too inhumane. Instead, his background in range management focused him on establishing a balance between elk numbers and what he considered to be efficient feed on the range.

Although Roosevelt wrongly believed that cougars alone could keep down the elk numbers, he still feared that cougar predation would destroy other wildlife populations such as deer and bighorn sheep. He worried most about cougars because he thought coyotes and wolves were not as dangerous to the ungulate herds. By that time, wolves would have been too low in numbers to have had much of an impact on the ungulate herds, and Roosevelt dismissed coyotes as formidable predators. "Although there are plenty of coyotes in the Park, there are no big wolves," he noted, "and save for very infrequent poachers the

"Head of Cougar Shot Sept., 1889" by J. Carter Beard, from Roosevelt's The Wilderness Hunter. *This illustration shows how mountain lions were depicted in the past—as bloodthirsty killers.*

Photo by Bob Wiesner

only enemy of…all game, is the cougar."[31] Based on this belief, Roosevelt began to advocate a limited predator control program for the cougar population. Major Pitcher assigned Buffalo Jones the responsibility for controlling cougars with the government's new hounds. However, Jones soon ran into a conflict with park military officials and resigned his position. When notified of Jones's resignation, Roosevelt knew just the man for the job—his former hunting guide, John B. Goff.

In the spring of 1905, during a bear hunt with Goff, Roosevelt wrote to Major Pitcher; A. A. Anderson, the Yellowstone Forest Reserve inspector; and Ethan A. Hitchcock, Secretary of the Interior, requesting that Goff be "given all the privileges that can be given for killing lion within or without the park."[32] Goff left for Yellowstone in June, expecting the job of thinning out the Yellowstone cougar population to take four years.[33]

Roosevelt's instructions to Goff indicated his newly selective approach to predator control. "Of course you can not afford to let the cougar exist in the neighborhood of where the deer and sheep are," Roosevelt wrote Goff in May 1906, "but any cougar that are found off where there are practically nothing but elk, I should think it a good plan to leave them alone."[34] Unfortunately, Roosevelt failed to realize that after years of steady hunting, Yellowstone's cougar population had already been fairly well exterminated. Goff's son Byron later recalled, "Roosevelt was misinformed about the lion situation."[35] John Goff soon discovered that few cougars existed in the park, and he resigned after less than a year of service.

Shortly before Goff left the park, Roosevelt began to realize that the cougar population had become dangerously low. After receiving a letter from Goff, Roosevelt responded, "I am sorry to hear about the elk having had such a bad winter, but just as I have said, there are so many elk that they have begun to be too plentiful in

the park, and personally I should be sorry to see all the cougar killed off."[36] These fears regarding the rising elk populations and loss of predator populations caused Roosevelt to rescind his predator control policies against the cougar populations. In a 1908 letter to Superintendent S. B. M. Young, Major Pitcher's replacement, Roosevelt ordered an end to the killing of cougars in the park:

> I do not think any more cougars should be killed in the park. Game is abundant. We want to profit by what has happened in the English preserves, where it proved to be bad for the grouse itself to kill off all the peregrine falcons and all the other birds of prey. It may be advisable, in case the ranks of the deer and antelope right around the Springs should be too heavily killed out, to kill some cougars there, but in the rest of the park I certainly would not kill any of them. On the contrary, they ought to be let alone.[37]

Although hundreds of coyotes continued to be killed while Roosevelt was in office, cougars were left alone in Yellowstone after his directive was received. The pack of dogs purchased by the government under Roosevelt's directions was sold. The official killing of cougars did not resume until 1914, when 14 were killed. After the National Park Service assumed control over Yellowstone National Park, cougars continued to be killed: four in 1916; a total of thirty-four in years 1918 and 1919. The last reported official killing of a cougar in Yellowstone occurred in 1925.[38]

Too Many Elk in Yellowstone?

In 1912, Roosevelt's attention again focused on Yellowstone. In an article to *Outlook* magazine, Roosevelt publicly voiced his concern over the increasing number of elk in the park. He had previously expressed worry regarding the park's elk numbers, but now feared that the problem would result in disaster. Roosevelt predicted the following:

> Elk are hardy animals and prolific. It is probable that a herd under favorable conditions in its own habitat will double in numbers about every four years. There are now in the Yellowstone Park probably thirty thousand elk. A very few moments' thought ought to show any one that under these circumstances, if nothing interfered to check the increase, elk would be as plentiful as cattle throughout the whole United States inside half a century. But their possible range is of course strictly limited, and as there are no foes to kill them down, the necessary death-rate is kept up by nature in far more cruel way—that is starvation by winter. The suffering and misery that this means is quite heartrending…What is needed is recognition of the simple fact that the elk will always multiply beyond their means of subsistence, and if their numbers are not reduced in some other way they will be reduced by starvation and disease.[39]

The only solution, Roosevelt decided, was that "it would be infinitely better for the elk, infinitely less cruel, if some method could be devised by which hunting them should be permitted right up to the point of killing each year on an average what

TR on Officer's Row at Fort Yellowstone, 1903. NPS photo archives.

would amount to the whole animal increase…Of course the regulation should be so strict and intelligent as to enable all killing to be stopped the moment it was found to be in any way excessive or detrimental."[40]

A number of obstacles prevented the implementation of Roosevelt's proposal for controlling the numbers of elk in Yellowstone by limited hunting. It was hard to convince the public and the military administrators in Yellowstone that the elk herds should be culled. Park administrators did attempt to solve the problem by increasing the feeding of hay to elk, decreasing domestic grazing in the National Forest Reserves, and by shipping elk outside the park, but this was not effective in Roosevelt's opinion.[41] Roosevelt criticized these methods: "from time to time well-meaning people propose that the difficulty shall be met by feeding the elk hay in winter or by increasing the size of the winter grounds…But as a permanent way of meeting the difficulty neither enlarging the range nor feeding with hay would be of the slightest use. All that either method could accomplish would be to remove the difficulty for two or three years until the elk had time to multiply beyond once more to the danger-point."[42]

Misleading publicity regarding the elk die-off in the winter of 1916–1917 seemed to confirm Roosevelt's worst fears. This news led many people to believe

the winter had killed off most of the park's elk population. Heavy snowfall kept the elk herds from traveling to their winter range. Many elk died from starvation, which preservationists took as proof that overpopulation was threatening the future of the elk. Some people became alarmed that the species that barely survived the era of market hunting was again headed for extinction, this time from natural forces. Most of this fear was based on exaggerated counts from previous years, but the park's new administration, the National Park Service, responded by continuing the policy of feeding hay to the elk. Roosevelt felt this would only continue to compound the problem by once again raising the elk population to uncontrollable standards.[43] Predator control of wolves and coyotes continued as the newly established National Park Service assumed the management of Yellowstone National Park. The new managers also targeted the cougar populations once again. In 1916, 4 cougars, 180 coyotes, and 14 wolves were killed. The following year, 100 coyotes and 36 wolves were killed. In 1918, 23 cougars, 190 coyotes, and 36 wolves were killed.[44]

In 1918, Roosevelt wrote to his friend George Bird Grinnell to express his concerns for the future of Yellowstone:

> The simple fact is that if we got additional winter grazing grounds for the elk, or fed them alfalfa, in four years they would have multiplied beyond the limit again, and we should be faced by exactly the same difficulty that we are now. There is winter ground for a few thousand elk in the park but not much more than a fraction of the present number. As their natural enemies have been removed their numbers must be kept down by disease or starvation or else by shooting. It is a mere question of mathematics to show that if protected as they have been in the park they would, inside of a century, fill the whole United States; so that they would then die of starvation![45]

The next year, the National Park Service killed 11 more cougars, 227 coyotes, and 6 wolves. Predator control continued to remove what "natural enemies" of the elk were left. Former Yellowstone superintendent and National Park Service Director Horace Albright later described the reason for this policy: "the rangers have grown to love all wild life except those predatory species which they so often observe destroying young antelope, deer, or elk. Aside from those outlawed animals, a national park ranger is never known to kill a native animal or bird of the park, or to express a desire to kill."[46] The issues raised by Roosevelt regarding elk numbers and the role of predators have continued to be debated by the National Park Service into the twenty-first century. Eventually, the National Park Service used controlled hunting to maintain elk numbers at certain levels. This ended in the 1960s when bad publicity and evolving scientific theories of density dependence led to the adoption of natural regulation policies. Attitudes toward Yellowstone's predators also changed. Many scientists began to realize the important role of wolves, coyotes, and cougars in the Yellowstone ecosystem. In 1935, the National Park Service ended predator control.[47]

In 1919, Roosevelt passed away at his home at Sagamore Hill, New York. With his death, Yellowstone lost not only one of its most important defenders, but also one of its early wildlife managers. Roosevelt's handling of predators in Yellowstone

will always be debated as having been good or bad. Yet one thing is clear: Roosevelt attempted to establish policies that he believed were in the park's best interest as he understood it at the time. Unfortunately, he did not understand many of the environmental changes that were occurring in Yellowstone, nor did he recognize how drastically the environment had been changed by those before him, especially how much damage had been done to the predator populations. He also believed that the natural increase of the elk populations and the effects of winter kills, which are now recognized as part of the natural process in Yellowstone's ecosystem, were inhumane and needed to be managed with what he viewed as more humane methods. Despite these shortcomings, Roosevelt's changes to Yellowstone's predator control policies were fairly advanced for his day and age. Roosevelt must be given credit for his effort to look beyond the image of predators as "beasts of waste and desolation" to critically examine their valuable role in the Yellowstone ecosystem.

I would like to thank Lee Whittlesey and Paul Schullery for their assistance in my research for this article.

Endnotes

1. Theodore Roosevelt, *The Works of Theodore Roosevelt*, edited by Herman Hagedorn, volume II (New York: Charles Scribner's Sons, 1927), 305. (Hereafter cited as TR Works.)
2. Ibid., 272.
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Jeremy Johnston, Assistant Professor of History, Northwest College, 231 West 6th Street Powell, WY 82435

A Delicate Balance: Front and Backcountry Management of Yellowstone's Cultural Resources

Laura Joss and Tom Olliff

Introduction

This paper represents the results of three years of our working together to address the coordination of cultural resource management and planning among diverse programs in the front and backcountry of a 2.2 million acre resource with up to 800 staff. This presentation attempts to represent some of the perspectives of both field rangers and headquarters-based resource managers. Examples of the creative resolution of conflicts and successes, which have been possible due to cooperation and applying the expertise each group brings, will be discussed. These examples may serve as models for resource management programs in other parks and heritage areas.

Cultural Resources Management Challenges and Conflicts

In Yellowstone, probably like many other parks, it often seems that our cultural mandates are at odds with our mandates regarding natural resources and wilderness values. The National Historic Preservation Act (NHPA) was signed in 1966; however, it didn't become a reality for the staff at Yellowstone until the late 1980s. Even as recently as 3 1/2 years ago (1984), the majority of NHPA related inventory, evaluation, and compliance in Yellowstone was either being done or overseen by just one individual, the cultural resource specialist. Due to lack of subject matter experts in the park, most inventory projects had to be done by contract or National Park Service (NPS) regional office staff. One exception was the park's Concessions Division, which took responsibility for the majority of their required inventory, documentation, and compliance. For other divisions, the lack of cultural resource inventories and subject matter experts (or money to contract for them) resulted in frustration in the lengthy process required before most projects could move forward. In a few cases, this frustration combined with the park's short backcountry working season led to the temptation to move forward on projects without completing the necessary compliance. The park has attempted to correct this situation through four steps: (1) the creation of the Branch of Cultural Resources in 1994, (2) re-engineering of the internal NHPA compliance process, (3) cultural resource management training, and (4) improved communication and cooperation among front and backcountry staff in all divisions.

The following examples are projects which illustrate the results of these changes, and show some of the benefits (such as enhanced resource protection and savings of staff time and funding) of this new cooperative process. In a resource as large as Yellowstone, backcountry rangers become the eyes and ears for the rest of the park staff. They monitor changing conditions and threats to resources, and they often initiate requests to perform preservation maintenance work. This is particularly true for historic cabins.

Preserving Historic Cabins

THE THIRTY-NINE HISTORIC BACKCOUNTRY PATROL CABINS, barns, and lookouts used by Yellowstone rangers today are direct descendants of the original "snowshoe" cabins built by the U.S. Army beginning in 1890. The patrol cabins are still used for the same purpose the military used them for—to protect park resources. The current cabins were built during the first half of the twentieth century, ranging from 1912 to 1944. They were placed approximately ten miles, or a day's ride, apart to form a patrol network. Patrols were dispatched to remote areas in the park to counter the illegal skin hunters, tooth hunters, fur trappers, and head hunters. While today's backcountry cabin mimics earlier cabins in style and function, the details have changed as technology improves. The most significant change for many of the cabins is the conversion from a sod roof. Most of the cabins built prior to 1925, including Buffalo Lake, South Riverside, Harebell, Fox Creek, and Thorofare, were constructed with a sod roof. All sod roofs were replaced by 1941. Other changes improved the "livability" of the cabin: dirt floors were replaced with wood or concrete, porches

Figure 1. Crevice Mountain Cabin (Yellowstone National Park Slide File #15,021).

Figure 2. Backcountry cabin interior (Yellowstone National Park Branch of Cultural Resources slide collection).

were added or improved, barns or sheds were built, and foundations were replaced or improved. Much of this work was done in the historic period; some of it was completed in more recent years. None of the cabins have remained static over the years.

Historic Furnishings in Cabins. Some cabins still contain the original stoves and furniture that were installed when the cabins were first put into use. These items are an important part of the cabin's interior appearance and history. The interiors are being documented as part of a current parkwide historic structures inventory, and the park curator is working to document original furnishings in situ.

Development of the Preservation Maintenance Program. Between when the first extant cabin was built, in 1912, until about 1980, maintenance was done primarily by crews of rangers with some carpentry experience. During this period, work was done to maintain or improve the structure. Little thought was given to maintaining the cultural integrity of the structure. Few records were kept of this work. What records are available appear in cabin logbooks, ranger reports, or in photos in the archives.

In 1983, the park contracted with a historic architect to inspect eleven backcountry cabins and recommend treatment. He also taught a preservation maintenance course to the park's burgeoning preservation maintenance crew, restoring the Crevice Mountain Cabin, built in 1921, in the process. Since that time, the preservation maintenance crew has restored nine structures. All work is done in compliance with the Secretary's Standards.

Difficulties of Working in Remote Conditions. Working in a remote setting for an extended period of time presents its own particular logistical problems. Since sites are in remote locations, helicopters deliver the materials, tools, and camp setup, but the crew has to walk or ride in. Helicopter time is the primary cost associated with preservation maintenance of backcountry structures. In the summer of 1997, the Buffalo Lake Cabin was restored. Materials cost $3,000, labor $14,000, and flight time $23,000 (all costs are approximate).

Compliance. One of the best ways to stretch the park's cultural resources staff is to have them train other staff to initiate cultural compliance such as inventories. This is especially critical in backcountry situations when traveling to a site may take several days and the on-site work may take a few hours. Yellowstone's cabins are being included in the parkwide historic structures inventory and evaluation project. As part of this project, in the summer of 1997, resource management staff and backcountry rangers were trained by National Park Service system support office staff to complete the historic buildings inventory form for backcountry cabins.

Re-engineering. This example of cooperation between resource management staff and backcountry rangers is part of the park's effort to improve our cultural resource compliance process. In 1996, the park's branch of cultural resources initiated a re-engineering of our internal NHPA Section 106 and 110 procedures. The results were two dramatically streamlined processes. The Section 106 process was reduced from thirty-one steps to five, and the Section 110 process from fourteen steps to seven. Under the new process, when a division has a project to address, it can begin the research to assess the cultural value of a site in consultation with the park's cultural resources specialist and subject matter experts. Park staff met with both the Wyoming and Montana state historic preservation officers to review the new process and made changes based on their recommendations.

This new process has already speeded up projects, but relies on park staff to gain the training they need about the National Historic Preservation Act, initiate the process in a timely manner, consult with park cultural resources staff, and bring in subject matter experts for the required professional inventories, evaluations, and reporting.

While working within this re-engineered system, there will always be projects which require extra cooperation and consideration among park staff. This is especially true for projects which have the potential to affect both cultural and natural resources. Some examples of such projects follow.

Preserving Cultural Landscapes

AN OFTEN OVERLOOKED CULTURAL RESOURCE is the cultural landscape. One can sit on the porch of most backcountry cabins and gaze out on the same scene that a cavalry officer gazed on 80 years ago: pristine mountain lakes and streams, towering peaks, lodgepole pine forest bisected by grassy meadows. The only element that is out of place is the modern invasion of noxious weeds.

Figure 3. Heart Lake Cabin (Yellowstone National Park slide collection).

In 1989, the Snake River resources staff discovered a large patch of Canada thistle (a noxious weed prevalent throughout the backcountry) near the front porch of the Heart Lake Cabin, which was built in 1923. Except for a few trees that have died in the subsequent years, the cultural landscape at Heart Lake looks the same as it did in 1923.

After the Canada thistle was discovered, the Heart Lake ranger began to control it through repeated mowings. While the patch has not been completely removed, the plants are stunted and consequently shorter than the native grasses and forbs in the area. The result is preservation of the cultural landscape of the Heart Lake Cabin area.

Cultural Resources Versus Natural Resources

Opal Terrace Versus the Executive House. A unique conflict between cultural and natural resource preservation has arisen in the park's Fort Yellowstone-Mammoth Hot Springs Historic District. The Executive House, a concessioner-occupied dwelling, is periodically threatened by the encroachment of the Opal Terrace geothermal feature. A Robert Reamer building, the Executive House was built in 1908. In the past, the Opal Terrace runoff covered the tennis courts adjacent to the house, and as the feature continues its natural flow, there is increasing potential for damage to occur to the historic structure as well as a possible threat to the safety of the building residents.

Park staff from a variety of divisions have worked together to resolve the conflict. The group's preferred alternative will protect the Executive House through minimal

Figure 4. Executive House and Opal Terrace thermal feature, 2004 (Yellowstone National Park Branch of Cultural Resources slide collection).

diversion of the thermal flow. Recommendations were also made for handicap accessible boardwalks, a viewing deck and interpretive exhibits that would explain the cultural/natural resource conflict presented to park management.

Cultural Mandates Versus Wilderness Mandates. Wilderness is a place "untrammeled by man." However, over a century of use has left its impact on Yellowstone's backcountry: trash piles left from old camps, hotels, dumps, and construction work; miles of telephone wires and piles of insulators; rusted wire fencing; and old foundations and poacher's cabins. All in all, the impulse of many wilderness managers is to "clean up" this so-called "trash." It would appear that the mandates of the wilderness act, and of NPS Wilderness Management Policy are in conflict with the NHPA.

The real problem is that many wilderness managers do not have the wherewithal to properly evaluate these potential historic properties and separate the trash from the treasure.

Park cultural resources staff are working with resource managers and rangers to identify, map, inventory, and document such sites. The park curator also works with staff to determine which materials are important for inclusion in the museum collection. This is also being done in the front country when artifacts are found in the walls, floors, and attics of historic structures as they are being rehabilitated.

Figure 5. Historic archeological site with early visitor refuse (Yellowstone National Park Branch of Cultural Resources slide collection).

Preserving Prehistoric Cultural Resources

Archeology Versus Modern Campsites. A good campsite is a good campsite—water, cover, view, access; we use the same campsites today that have been used for almost 10,000 years. Often, our campsites do not meet our minimum resource regulations: they are too close to the trail, too close to water [36 CFR 2.10 (3)], and it is impossible for campers to separate cooking and sleeping areas. We are in the process of trying to move many of our campsites to meet the requirements.

Our efforts to meet our backcountry requirements were stymied for several years because we could not complete archeological evaluations of the proposed new campsites and trails. Wilderness managers, unable to beg, borrow, or steal archeologists to complete the evaluations, became very frustrated with the collision of mandates. Finally, during the summer of 1996, an archeologist from the system support office detailed to Yellowstone put together onsite classes to teach backcountry managers to survey sites for archeological resources. This system has worked very well. In the last two years, four campsites and numerous trails have been relocated after being surveyed under the supervision of a qualified archeologist by backcountry managers trained during this class. They also work under the direction of the archeologist to document these surveys.

In the summer of 1997, in another coordination effort, cultural resource and fire management staff worked together on a project to reduce buildups of fuel around wickiups in the park. This fuel reduction effort will help protect these important cultural resources in the event of future fires.

Roads and Utility Corridors Versus Native American Trails. A good trail is a good trail—we have built our roads and utility corridors along many of the trails used prehistorically and historically throughout the park by Native Americans. A good example is the Bannock Trail, upon which much of the upper segment of the Grand Loop Road was built. Archeological resources are often found during cultural resource inventories for road widening or reroutes for the park's twenty-year federal highways road improvement project.

Obsidian Cliff Preservation. Obsidian Cliff is one of Yellowstone's premier cultural and natural resources. It has been an obsidian collection source for Native Americans since approximately 8800 BC, and was designated a National Historic Landmark in 1996. The associated interpretive exhibit kiosk in the parking lot across the street was built in 1931, and was the first nature shrine in the National Park Service.

The Obsidian Cliff area has many inherent safety and protection conflicts. Visitors want to see this important site (identified as a sacred site by affiliated tribal representatives), yet the lack of safe access presents problems. The base of the cliff along the road has been vandalized by visitors for years through unauthorized obsidian collection, and social trails have caused erosion. Backcountry archeological obsidian quarry sites on the top of the cliff (which were revealed during the 1988 fires) will be threatened as they become better known. The road is scheduled to be studied for potential widening or relocation in the future as part of the park's federal

Figure 6. Obsidian Cliff (Yellowstone National Park Branch of Cultural Resources slide collection).

Figure 7. Obsidian Cliff interpretive kiosk (Yellowstone National Park Branch of Cultural Resources slide collection).

highways road improvement project. Unfortunately, widening will be limited by the base of the cliff and wetlands across the road.

The park is considering producing a management plan for the area, using an interdisciplinary team. This team would address issues such as safety, protection of the resources, interpretation, and road widening or relocation. In the spring of 1998, a Shoshone-Bannock team will inventory the area for ethnographic resources, and their recommendations will be included.

Conclusion

Increased Workload. It is a given that the re-engineering of the NHPA compliance process has transferred some of the cultural stewardship and compliance tasks from the cultural resources specialist to division representatives. It has increased the workload on already overworked staff, and in most cases required the addition of a skilled seasonal worker to assist with inventory and evaluation. However, it has given divisions a greater sense of ownership and responsibility. Their understanding of the time frame and costs required to complete inventory and compliance before a project goes forward has forced divisions to prioritize projects, and focus on those which are most critical. This process will also save the park time in the long run because if it is done right the first time, we won't have to go back and correct earlier mistakes. The resources will also benefit because they will no longer be damaged by people with good intentions.

Willing Partners. No partnership can work without willing partners. In this case, the cultural resources staff was required to forgo some control on projects; staff from other divisions have to be interested and willing to continue to learn the resources and procedures. Division representatives must also continue to train field staff if the program is to succeed. Due to annual seasonal staff turnover, this is a great time commitment.

Support of Management. Yellowstone's upper management have fully supported this process. They were aware that the previous system had flaws, and looked critically at the new one. They required communication with and buy-in by our state historic preservation offices before the process was approved, and have supported the additional training and staff required to implement this system.

Reality Check. No new program is going to work 100 percent of the time, especially if it means changing old habits. How should one react when the program stumbles?

Park staff meet biannually to discuss pros and cons of the new system. There is vigilance for "correspondence creep": the addition of unnecessary steps in the paperwork process. Divisions which have had particularly good or particularly difficult experiences pass on their knowledge to others. Staff have met regularly with state historic preservation office staff to discuss projects and get feedback on the new system.

This process has forced a park which has done business in its own unique way for 125 years to make some drastic changes. While the process continues to evolve, the preservation and protection of our resources remain at the heart of everyone's efforts.

Laura E. Joss, Superintendent, Arches National Park, P.O. Box 907, Moab, UT 84532

Tom Olliff, National Park Service, Yellowstone Center for Resources, Yellowstone National Park, WY 82190

The War Against Blister Rust in Yellowstone National Park, 1945–1978

Katherine C. Kendall and Jennifer M. Asebrook

Following the discovery in the early 1900s that white pine blister rust threatened North American forests, the federal government launched a massive campaign to eradicate the disease. This control program ran for more than fifty years, first under the auspices of the Office of Blister Rust Control (created in 1916 as part of the U.S. Department of Agriculture Bureau of Plant Industry) and, later, under the U.S. Forest Service (Benedict 1981). The war on blister rust cost more than $150 million and was the most extensive forest disease control effort in the history of American forestry (Maloy 1997). As scientists now understand, this effort was ineffective in preventing the spread of blister rust. In the Greater Yellowstone Area, the fight against blister rust did not begin until the 1940s and, paradoxically, gained momentum just as blister rust control programs in other regions dwindled in the face of evidence that eradication measures were not working. The story of Greater Yellowstone's belated entry into the war against blister rust and the persistent commitment to a program that had been discredited in other areas offers a valuable case study in how resource management decisions are influenced by a complex matrix of scientific, social, and economic forces.

Figure 1. A typical blister rust control camp in Yellowstone National Park (Yellowstone Natioanl Park Archives).

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Blister Rust Life Cycle

Blister rust is caused by the fungus *Cronartium ribicola* Fischer. This organism requires two alternate hosts: white pines and plants of the genus *Ribes* that includes wild currants and gooseberries. The rust is a harmless annual on ribes plants but is a lethal perennial on many white pine species.

White pine blister rust cannot be passed directly from pine to pine. The fungus has a complex life cycle involving two spore phases in the bark of white pines and another three phases in ribes leaves. After residing in trees over the winter, the fungus produces sacks in spring that push through the bark, creating tree blisters or cankers. Each sack is filled with thousands of orange-colored spores. In May and June, these sacks mature and rupture, releasing spores that can be wind-dispersed many miles to ribes plants. The spores create pustules on ribes leaves and, under favorable conditions, a second type of spore is produced that infects other ribes plants. In late summer or fall, telia (hair-like spore columns) develop on the pustules, creating a brownish or rust-colored mat on the underside of ribes leaves. Telia produce sporidia, the spores that infect white pine. Sporidia are wind-dispersed and usually travel only a few hundred feet. However, under highly favorable conditions it may spread a mile or more (Miller et al. 1959). Viable transport and germination of sporidia usually occurs when the weather is cool (temperatures less than 70 degrees Fahrenheit) and moist (relative humidity greater than 97%). When the spores reach pine needles, the sporidia germ tubes enter the stomata and, within a year, grow into the bark at the base of the needle bundle. As the fungus grows, the bark swells and releases ribes-infecting spores that perpetuate the cycle. Once a canker grows completely around the trunk, it is girdled and the tree dies. Sometimes only branches are infected but this, too, can kill the pine if cankers defoliate most needle-bearing twigs.

About half of the 80 species of ribes native to the United States grow within white pine range. The susceptibility of ribes to blister rust varies by species (Miller et al. 1959), although all are capable of supporting rust. Of the ribes found in the Yellowstone area, the order of susceptibility to blister rust is *Ribes petiolare* > *R. montigenum* = *R. inerme* > *R. cereum* = *R. setosum* > *R. lacustre* = *R. viscosissimum* (Maloy 1997). Two white pines occur in this region: whitebark and limber pine. While both are highly vulnerable to blister rust, whitebark pine is rated as the most susceptible white pine in the world (Hoff et al. 1980).

Distribution

Blister rust was first discovered in the Unites States in 1906 in Geneva, New York (Miller et al. 1959) on a plantation of young white pine (*Pinus strobus*) seedlings imported from a European nursery. Later dating of cankers on other white pines demonstrated that blister rust was likely introduced to the east coast in 1898. Ironically, blister rust spread to Europe from the Baltic region of Russia, where white pines had been introduced from America (Miller et. al. 1959). By 1900, blister rust had spread over most of Europe.

Blister rust was introduced to the West Coast of North America at Vancouver,

British Columbia, in 1910, again on infected nursery stock from Europe. It went unnoticed until 1921 when it was found in several white pine stands in British Columbia and northwestern Washington (Miller et. al. 1959). The disease then spread in several stages along the West Coast. Blister rust moved slowly through northwestern Washington until the 1920s when the rate of spread increased dramatically. By 1933, the disease was established along the Oregon coast, well into northwestern California, through northern Idaho, and into western Montana. This surge corresponded to 'rust waves' regulated by favorable weather conditions in 1919, 1921, 1923, 1927, 1933, 1937, and 1941 (Maloy 1997). From 1943 to the late 1960s, blister rust infection spread in a slower and less uniform fashion into Wyoming and arrived in Yellowstone and Grand Teton national parks. After its discovery in Laramie, Wyoming, in 1967, blister rust was not found south of Wyoming until 1990 when it was found on southwestern white pine (*Pinus strobiformis*) in southeastern New Mexico (Conklin 1994).

Control in Yellowstone and Grand Teton National Parks

THE FIRST BLISTER RUST SURVEY in and around Yellowstone National Park was conducted in 1934. Although no evidence of blister rust was found in the park at this time, the survey determined that approximately 550,000 acres, or about 25% of the park, supported stands with whitebark and limber pine trees.

Scouting for the disease increased in Yellowstone once blister rust infection was found on ribes in 1937 in the Bear Creek drainage of the Gallatin National Forest, 19 miles from the park boundary. Reconnaissance focused in areas with heavy concentrations of *R. petiolare*, a species highly susceptible to infection. In 1944, blister rust was found for the first time in Yellowstone on two *R. petiolare* bushes in Clematis Gulch in the Mammoth Hot Springs area. From this point, blister rust continued to spread through the park. By the end of the blister rust control era, 31 areas totaling 115,470 acres were designated for protection (Figure 2).

The period 1945–1956. Blister rust control officially began in Yellowstone in 1945, coinciding with the replenishment of the labor pool with the discharge of troops at the end of World War II. One camp with 20 men was established to begin eliminating ribes in three control units: Mammoth, Mount Washburn, and Craig Pass. Like many of the control units that were to be established along the Grand Loop road system, these original units were chosen because of their scenic value along roads and in high visitor-use areas. These units totaled 9,600 acres and, with the addition of the Mount Washburn extension unit (3,500 acres) in 1951, were the focus for treatment until 1956 (Figure 3).

Treatment during these years went through many changes, due mostly to the development of new technology and herbicides. The first year of control included hand pulling ribes plants and chemical spraying of ammonium sulfamate in solution on root stocks. Manual removal continued to be a significant method of eradicating ribes plants through the entire program, but herbicides quickly became an integral component of ribes control in Yellowstone. Although its blister rust control program

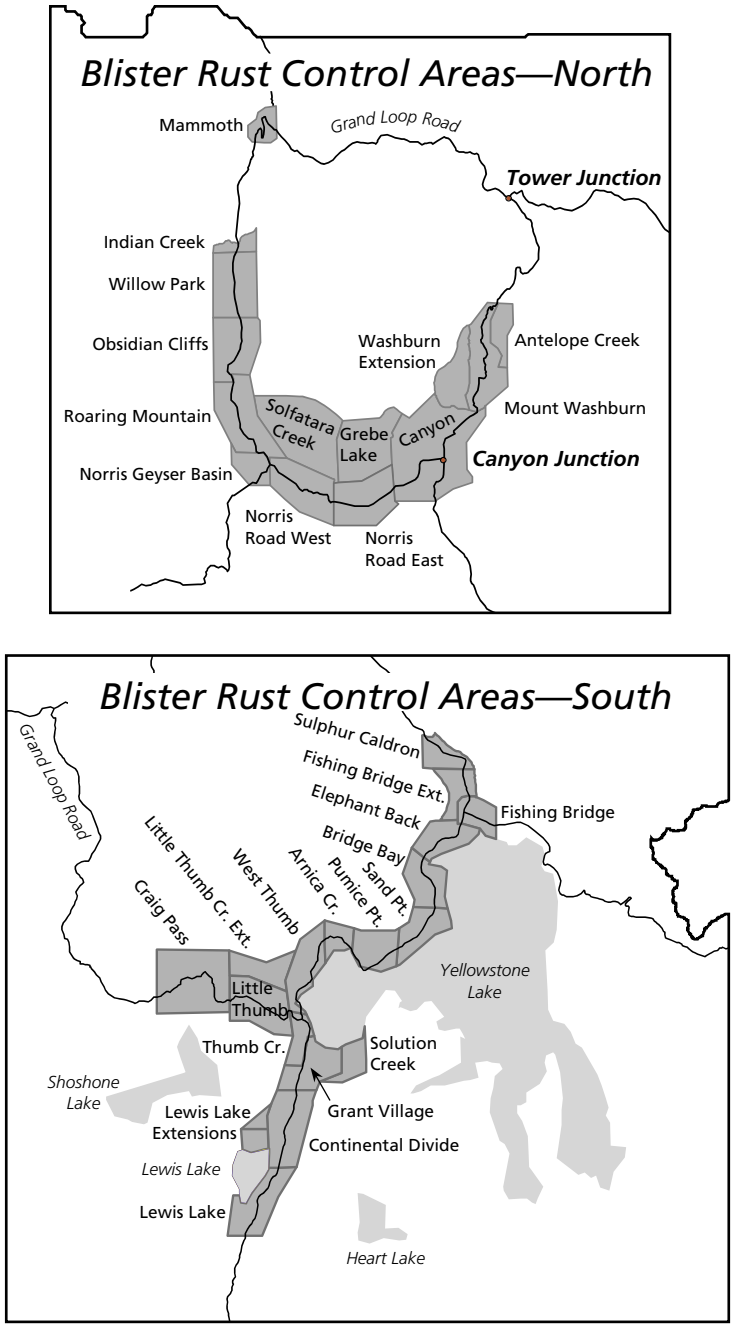

Figure 2. Blister rust control units in Yellowstone National Park.

Figure 3. Blister rust control crew (possibly at Canyon), Yellowstone National Park, 1952 (Katherine Kendall, Science Center, Glacier National Park).

started later, Yellowstone began to use chemicals three years before other national parks in the region.

From 1946 to 1948, 5,592 gallons of ammonium sulfamate and 2,4-D (Dichlorophenoxyacetic acid), a common defoliator, were sprayed on root stocks or leaves of ribes plants. Beginning in 1949, however, and continuing until 1967, Yellowstone used 2,4,5-T (Trichlorophenoxyacetic acid) for chemical ribes control. Yellowstone, like many other parks and national forests, used more powerful chemical applicators as they were developed. In 1952, the park began using portable power sprayers, increasing the efficiency of chemical application of 2,4,5-T on ribes. By 1958, they began to use Hi-Fog units with 1,000 pounds of pressure per square inch at the nozzle, capable of producing a mist-like spray. This was desirable because it made it possible to use only small amounts of concentrated spray on the ribes bushes.

When combined with 2,4-D, the hormone chemical 2,4,5-T creates "Agent Orange," the defoliant widely used during the Vietnam War. This chemical was eventually used by other agencies and parks throughout the region despite the fact that the dangerous dioxin TCDD had been found in 2,4,5-T in 1957. Workers clearly did not know the potential hazards of this chemical. One Yellowstone worker later wrote: "We pumped tons of 2,4,5-T.…Had great water fights with it—don't know if Agent Orange had any effects on co-workers—not on me or progeny." Clark Penn, a blister rust control crew member, reports that the portable backpack sprayers used in Glacier National Park in 1952 had open-topped tanks. As a result,

the herbicide solution often sloshed out of the tank and down the men's backs as they scrambled through brush and over mountainsides (personal communication, September 1998).

During the Depression years of 1933–1940, before blister rust control began in the Yellowstone region, an infusion of labor through the Civilian Conservation Corps (CCC) and money from emergency programs greatly accelerated control programs across the country. The control workers during this period, however, were often found to be inexperienced and without interest in the work. Retention of a competent labor force was a constant problem prior to the late 1940s (Maloy 1997). The post–World War II crews used in Yellowstone, however, were "run ruthlessly in a military fashion.…Veterans fresh from military service and the war necessitated a similar military treatment to insure the discipline and efficiency tantamount to doing the job and doing it right. Not only did this partially utilize the surplus workers available but it established a degree of excellence unparalleled in earlier times" (USDA 1947). This paramilitary approach appears to have instilled an esprit de corps, and established a reputation of blister rust control crews as being hard-working and tough that persisted to the end of the program. Blister rust control was also supported on many levels because these personnel were also available and sought-after for fighting fires (Benedict 1981).

As ribes infection continued to spread, the cost of control increased. The more seasoned crews in Yellowstone, no doubt, helped reduce costs and improve results. From 1945 to 1956, crews had treated or pulled 3,825,186 ribes plants, used 122,493 gallons of 2,4,5-T, initially treated 13,060 acres, and reworked 9,290 acres (Table 1). A total of 414 employees had put in 17,826 work-days and $381,000 ($2,273,670 in 1994 dollars) had been spent on the program.

The period 1956–1966. Beginning in 1950, however, rust rapidly intensified and spread through Yellowstone. Blister rust was found for the first time on a limber pine in 1950 (1948 infection origin) in the Slide Lake Creek drainage approximately three miles north of Mammoth Hot Springs and on a whitebark pine (1945 origin) in the Mount Washburn area in 1951. Clearly, white pine infection had been present longer than previously recorded. Ribes infection was also found in Lamar River Valley, on Stevens Creek, and on Elk Creek, and was twice as heavy as 1946 estimates at Slide Lake Creek by the early 1950s. By 1954, heavy pine infection centers had been found adjacent to the north and west boundaries of the park and infected limber pine were found within one mile of the Mammoth control unit. So in 1956, Yellowstone included 20,190 additional acres in the program with control units at Antelope Creek, Canyon, and Fishing Bridge, and an addition to Craig Pass (Figures 1 and 5).

Nineteen fifty-six was also the year that blister rust control began at Grand Teton National Park when the disease was found for the first time on a limber pine at Deadman's Bar. Grand Teton treated approximately 1,000 acres at this one control unit during four individual years. They eliminated 182,700 ribes plants through hand-pulling and spraying in 1957–1958 (Figure 4) and used 10,990 gallons of 2,4,5-T (Table 2). In 1961 and 1966 another 19,900 ribes plants were removed by

Table 1. Blister rust control activities in Yellowstone National Park.

Year	Total # of ribes removed	Total acres worked	Total man days	Gallons of herbicide	Trees Examined for Pruning	Real Cost ($)	Adjusted Cost (1994 $s)
1945	95,769	1,567	992	765		7,360	60,638
1946	94,200	599	768	1,056		10,831	82,286
1947	382,917	4,877	3,172	1,101		61,250	406,705
1948	172,700	1,967	1,495	2,670		25,554	157,532
1949	406,000	1,900	1,939	6,313		33,828	210,549
1950	221,000	1,160	1,260	5,950		23,865	147,121
1951	48,000	870	870	990		14,680	83,795
1952	365,000	1,210	1,220	10,010		30,446	170,039
1953	469,000	2,310	1,710	21,930		42,103	233,374
1954	627,000	2,370	1,910	21,170		38,138	210,492
1955	635,000	1,440	1,490	34,700		53,470	296,061
1956	308,600	2,110	1,270	21,430		39,427	215,077
1957	372,700	2,798	2,570	37,840		74,511	392,777
1958	473,000	10,660	4,030	59,260		121,961	625,671
1959	879,000	7,930	4,680	77,020		121,657	619,190
1960	628,000	13,110	3,490	36,300		96,433	483,194
1961	223,000	11,720	3,820	15,000		134,742	668,020
1962	140,000	10,090	2,090	7,430		83,930	411,368
1963	279,000	13,030	3,080	18,000		106,949	517,806
1964	357,000	17,860	3,630	17,800		108,967	520,743
1965	452,000	11,410	3,350	23,400		116,735	548,729
1966	176,000	11,030	2,810	5,500		113,862	520,081
1967	98,966	14,513	2,305	1,750		117,900	523,707
1968	15,498	7,121	1,348			126,038	537,221
1969	9,261	11,200	1,270			110,250	446,007
1970	21,213	10,840	1,067			118,740	453,371
1971						118,000	432,332
1972	340				2,798	79,000	280,106
1973	1,027				21,134	82,000	273,651
1974	1,493				55,299	78,200	235,283
1975	2,117				123,293	79,100	218,053
1976	135					47,313	123,257
1977	50					3,000	7,335
Total	7,954,986	175,692	57,636	427,385	202,524	2,420,240	11,111,571

*1949–1967: 2,4,5-T herbicide used.
1970: Ribes eradication ended in Yellowstone National Park.
1971–1977: Pruning program only. Funds may be estimates.

Figure 4. Blister rust control crew in Grand Teton National Park, 1957 (Katherine Kendall, Science Center, Glacier National Park).

hand-pulling; no chemicals were used in those years.

Blister rust continued to infect unprotected whitebark and limber pines. A 1961 survey outside the Mammoth control area found 7% of the trees infected, with 67% of those having killing cankers. With infected trees also found near Glen Creek, Golden Gate, Obsidian Cliff, and the Tower Fall campground, Yellowstone continued to add

Table 2. Blister rust control activities in Grand Teton National Park.

Year	Total ribes removed	Total acres worked	Total man days	Gallons of spray
1957	130,700	620	280	4,100
1958	51,000	680	280	6,890
1959		No ribes eradication conducted		
1690		No ribes eradication conducted		
1961	7,000	900	210	
1962		No ribes eradication conducted		
1963		No ribes eradication conducted		
1964		No ribes eradication conducted		
1965		No ribes eradication conducted		
1966	12,900	980	90	
Total	201,600	3,180	860	10,990

Figure 5. One of the 1956 blister rust crews in Yellowstone National Park (Katherine Kendall, Science Center, Glacier National Park).

other blister rust control areas to the program. In 1962, 35,730 additional acres were slated for protection at Norris (East), Norris (West), Lake, Bridge Bay, Grant Village, West Thumb, West Thumb Creek, Lewis Lake, Continental Divide, Arnica Creek, Pumice Point, and Sand Point, and, in 1963, Grebe Lake (Figure 1). Finally, in 1964, the last units, totaling 41,230 acres, were added for protection at Solfatara Creek, Norris Geyser Basin, Roaring Mountain, Obsidian Cliff, Willow Park-Indian Creek, Sulphur Cauldron, Elephant Back, Solution Creek, Lewis Lake Extension, Little Thumb Creek, and Little Thumb Creek Extension. From 1957 to 1966, crews had treated or pulled 3,979,700 ribes plants, used 297,550 gallons of 2,4,5-T, and treated 109,638 acres (Table 1). A total of 778 employees had put in 33,550 work-days, and $1,079,746 ($5,307,580 in 1994 dollars) had been spent on the program. Many of these figures were double those from the first decade in Yellowstone.

It is interesting to note that during this time of blister rust control program expansion in Yellowstone and Grand Teton, many other areas were abandoning their efforts to eradicate ribes due to its questionable effectiveness. Soon after World War II, a pathologist employed by the Office of Blister Rust Control from the University of Idaho found that infection could spread beyond designated protective zones and that the amount of ribes live-stem allowed per acre was too high (Maloy 1997). A 1958 study in the Lakes Region found that ribes populations had little relation to rust infection rate (Maloy 1997). Mount Rainier National Park ceased control activities as early as 1953 because, despite 24 years of control, white pine had been nearly eliminated in the park by the disease. By 1958, similar revelations in Glacier National Park resulted in a decline in ribes eradication and more emphasis on treating white pines with antibiotics such as Acti-dione and Phytoactin. Glacier stopped all ribes eradication by 1961 and used only antibiotics until all treatment

against blister rust ended in 1968.

One obstacle to the blister rust control program was the continued rise of wages and other expenses. Two problems contributed to this. First, while finding and removing the first ribes cost little, finding and removing the last ribes in a pine stand cost a lot more (Benedict 1981). Second, it became clear that repeated reworking for up to three or four years were necessary to break the cycle of ribes re-germination. While some land managers had already begun to use one-man crews or contractors to eliminate the cost of camps (Benedict 1981), Yellowstone continued to staff large camps.

It is also puzzling that Grand Teton started a blister rust program in the first place given a 1945 review of the park's blister rust status. The report made a recommendation against attempting protection of white pine from blister rust in Grand Teton because conditions appeared to render protection impractical if not impossible due to (1) high susceptibility of whitebark pine; (2) general distribution of *Ribes petiolare*, a highly susceptible ribes known to infect whitebark pine over considerable distances; (3) rough topography involving hazardous and costly ribes eradication; (4) occurrence of ribes in open upland sites favorable to wide dissemination of sporidia from ribes to pine; and (5) meteorological conditions characteristic of high elevations, including mists and strong winds, favorable for formation of sporidia and their rapid transport over long distances.

Three circumstances caused Yellowstone to buck the trend and continue with control efforts. First, blister rust was still spreading in the park. It would have been difficult to stop control measures when there was available money and the problem was so evident. Second, and more important, managers believed that ecological conditions in the Yellowstone area were different from the northern Rocky Mountains. Since infection levels were lower in this area than in northern Idaho and western Montana, they believed that the relatively cool and dry conditions of Yellowstone's higher elevations were unfavorable for spread and intensification of blister rust. With this low chance of spread in combination with large eradication units, they believed there was a possibility of total blister rust control. Finally, other studies found that blister rust infection did not necessarily constitute a lethal threat and that occasionally trees remained free of rust in severe infection conditions. There was still reason to be hopeful.

The period 1967–1977. Nineteen sixty-seven was probably the year that the blister rust program in the West turned from hopeful to hopeless. First, it was then that the Northern Region (Region 1) of the U.S. Forest Service drastically curtailed its blister rust program. It acknowledged that, due to climatic conditions, ribes eradication had not given adequate protection to white pines except on a very small acreage. They also stated that the antibiotic Phytoactin was not effective in fighting rust infection and the antibiotic Acti-dione was not effective unless cankers were scarified and received direct application of the material. At that time, the agency made the decision to focus on a rust-resistant tree breeding program. Second, by 1968 National Park Service blister rust funding was cut from all the region's parks except Yellowstone. Some still conducted rust distribution surveys and certain scenic areas were treated

on an individual-tree basis, but all significant control efforts were abandoned. Lastly, a 1968 study in the western white pine region found no significant differences in rust incidence between stands never eradicated and stands from which ribes were eradicated as many as eight times (Maloy 1997). The study concluded that long-range spread must, therefore, be of greater consequence than was previously thought.

Yellowstone did curtail the blister rust control program by 1968, reducing its seasonal force by 80%. Yellowstone also did not initiate control work in units approved in 1964, leaving only 23 control units, totaling 95,160 acres, receiving some treatment (Table 1). However, at this late date, a study was initiated to test if eradication of ribes reduced or eliminated blister rust infection at the Mammoth and Mount Washburn complexes.

In addition, between 1969 and 1977, Yellowstone began a pruning program at Mammoth, Mount Washburn, and Glen Creek sites. Pruning involved cutting off limbs with non-lethal cankers and excising lethal cankers on the bole of the tree. Although all ribes eradication operations were suspended by 1969, Yellowstone continued to get funding through 1977 for blister rust control and was one of the last places to practice control in the region. These last few years of ribes control and the pruning from 1967 to 1977 resulted in the removal of 144,938 ribes plants, the use of 1,750 gallons of 2,4,5-T, and the treatment of 43,674 acres, much less than in the prior decade (Table 1). A total of 459 employees had put in 7,187 work-days and $959,541 ($3,530,323 in 1994 dollars) had been spent on the program. In addition, 5,162 acres had been pruned with over 200,000 trees examined for cankers.

Conclusion

In the end, nearly 8 million ribes plants had been removed from Yellowstone National Park, over 175,000 acres had been worked and reworked for blister rust control, 1,651 employees had put in over 57,000 work-days, and more than 427,000 gallons of herbicide had been sprayed on ribes plants throughout the program. The majority of the ribes pulled were in the Mount Washburn (56%) and Norris–Canyon (27%) control areas. A total of $2,420,238 ($11,111,570 in 1994 dollars) had been spent on the 32-year program. From a cost perspective, this was almost triple what Glacier National Park spent on blister rust control and nearly ten times the amount spent on control in Mount Rainier, Grand Teton, and Rocky Mountain national parks. The same trend follows for the number of ribes removed, employees hired, and herbicide used.

It was only in 1978 that blister rust control came to complete stop when a paper was published on the non-effectiveness of ribes eradication as a control of white pine blister rust in Yellowstone National Park (Carlson 1978). A study in Mount Washburn found that rust incidence remained low even though ribes were extensive in some areas. The study concluded that ecological conditions of the area probably limit rust spread, that eradication of ribes was clearly not warranted in the future, and the existence of white pine in Yellowstone was not threatened by blister rust.

More recently, scientific opinion has changed on the long-term outlook for Yellowstone white pines in relation to blister rust. Heavy infection and mortality

from rust continues to move into areas previously thought safe from the epidemic. Rare weather events have created infection "wave years" several times in the last couple of decades in the Sierra Nevada; the same is likely to occur eventually in the Greater Yellowstone Area. Monitoring plots established in Yellowstone for Carlson's study were revisited in the mid-1990s. All trees sampled in 1970 were uninfected and alive; by 1996, 11% were infected with rust and 2% were dead (Kendall and Schirokauer, in preparation). Perhaps even more telling is the current status of seedlings and saplings in Yellowstone that were healthy when individually marked in 1969. When relocated in 1996, 18% were dead and another 19% were infected with rust (Kendall and Schirokauer, in preparation). There is clearly cause for concern for the future of whitebark and limber pine in Yellowstone.

Although all the Herculean labors of surveying for rust and pulling and spraying ribes were in vain, most blister rust control crew members look back on their days with great fondness and enthusiasm. Blister rust control money put a lot of young men through college and summers in the camps launched more than a couple of National Park Service ranger careers. This episode in history serves to remind us of the grave danger of exotic species to native flora and fauna. It also counsels caution when we are tempted to try saving one native species at the expense of another, or at the risk of environmental contamination. The chance of success must be weighed against the costs and consequences.

Acknowledgments

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Katherine C. Kendall, U.S. Geological Survey Biological Resources Division, Glacier Field Station, West Glacier, MT 59936-0128

Jennifer M. Asebrook, National Park Service, Glacier National Park, West Glacier, MT 59936-0128

Setting Yellowstone's Record Straight: A. C. Peale's Journal Observations during the 1871 Hayden Survey

Marlene D. Merrill

I like to think that somewhere in Heaven there is great rejoicing whenever a dusty old handwritten journal is discovered—especially if it includes a record of an historic event. I even like to imagine a Heavenly chorus shouting: *"Now…*history will get the story right!" Why? Because, first-hand journal accounts provide far more reliable accounts of historic events than descriptions written after-the-fact in the form of reminiscences and highly edited reports.

There are a significant number of inaccurate published histories written by participants in Yellowstone's early surveys. Their writers often embroidered facts, exaggerated claims, and omitted relating particular survey events. Some writers may have done this to enhance their own reputations and their parties claims for recognition. Others may have lost their field notes and diaries or neglected to keep a record of an experience they then later mis-remembered. Others simply forgot, or believed certain aspects of a survey were too inconsequential to write about.

Early survey publications come in many forms, and include official reports, scientific and popular articles, as well as memoirs written long after the events. Historians, mostly out of necessity, have relied on these publications to create what is now a substantial body of secondary literature describing and analyzing the work of these first surveys. So, perhaps it is not surprising that, for over a century, a series of myths and inaccuracies about these early surveys continue to find their way even into contemporary accounts of Yellowstone history.

This is especially true for Hayden's 1871 survey—probably the most famous of all the Yellowstone expeditions. Its scientific discoveries led Congress to set aside the area as the world's first national park. As if that were not enough, Hayden's survey also provided the earliest on-site images of the area in the form of photographs by the party's photographer, William Henry Jackson, and paintings by its guest artist, Thomas Moran. Jackson's and Moran's work shaped—and continues to shape—the public perception of Yellowstone and the American West.

This paper is based on research for the author's books: Marlene Deahl Merrill, editor, Yellowstone and the Great West: Journals, Letters, and Images from the 1871 Hayden Expedition *(Lincoln: University of Nebraska Press, 1999); and Marlene Deahl Merrill, editor,* Seeing Yellowstone in 1871: Earliest Descriptions and Images from the Field *(Lincoln: University of Nebraska Press, forthcoming, 2005).*

Unfortunately, inaccurate secondary accounts about this survey now abound in books and articles. Even meticulous and highly regarded scholars recycle these commonly held inaccuracies. Let me read a paragraph written by William Goetzmann from his book *Exploration and Empire: The Explorer and the Scientist in the Winning of the American West* (1966):

> On July 31, Hayden, Schoenborn, Elliott, and Peale struck out to the northwest, bound for the Firehole Geyser Basin. They traveled some thirty-one miles through a rough country of rocks and fallen timbers before they reached a stream which turned out to be the Madison. There they discovered *[sic]* what is now known as the Upper Geyser Basin. Following the east fork of the Madison, they eventually reached the Firehole River and the Lower Geyser Basin,…[O]ver such terrestrial marvels as the Punch Bowl, the Dental Cup, and the Bath Tub towered the giant waterspouts—Grand Geyser, the Giant and Giantess, and of course, Old Faithful.[1]

Thanks to the journal kept during the survey by Hayden's mineralogist, Albert Peale, it is now possible to correct the errors and omissions in this passage, and learn that Hayden's "small party," also included a guide and hunter, a cook, and the "driver" of the horse-drawn odometer. Although they did not start out together, Hayden's party eventually caught up with another small group from the Barlow-Heap party—a separate Yellowstone survey from the U.S. Corp of Army Engineers that shared Hayden's military escort. Capt. Barlow and Hayden explored and studied the geyser area together (a fact that Hayden does not disclose in his official report). The stream the parties reached was not the Madison, but its East Fork (now called Nez Perce Creek). The party reached the Lower Geyser Basin first, *then* turned south to explore the Upper Basin (not the other way around). Hayden's party saw only two of the great geysers in action, Old Faithful and the Grand. They observed only the craters of the Giant and Giantess.

One could claim that these corrections are trivial and that I'm only nit-picking with a highly esteemed scholar. But, the point I wish to make is that Goetzmann (and other scholars) erred because they probably did not know that Peale's (and other) daily survey records were becoming available. So, they relied on accessible published sources, primarily Hayden's official report, Jackson's mis-remembered recollections, and several earlier secondary accounts of this famous expedition. Because Hayden and Jackson remain the survey's two most famous members, their authorship, unfortunately, lends credence to the belief that their accounts are both reliable and complete.

To look for accurate accounts of Yellowstone surveys, one has to look for journals, fieldnotes, and letters written by survey members *during* their expeditions. The problem, of course, is that few of these are readily available, or exist at all. Up until recently, few scholars have spent the time and money to search them out, particularly when they are featuring only brief descriptions of early expeditions. Thanks to drawing on heretofore unpublished primary sources, Yellowstone historians Aubrey Haines, Lee Whittlesey, and Paul Schullery, have perceived and interpreted Yellowstone's history in a number of new ways.

Albert Peale's daily journals written during the 1871 survey, illustrate how his first-hand accounts can help correct the errors and omissions in the later histories of this famous survey. Let me tell you a little more about him.

Peale was a small-framed, wiry, and modest young man who had received his medical degree from the University of Pennsylvania shortly before the survey got underway. During his final year, he studied with Ferdinand Hayden, who was a professor of geology and mineralogy there. Although Peale was descended from the illustrious Peale family (his great grandfather was the famous Revolutionary War painter, Charles Willson Peale), Albert seemed to have little interest in basking in their reputations. Instead, he carved out his own long-lasting niche as a reliable and level-headed mineralogist/geologist. From his first work with Hayden in 1871 until Hayden's death in 1887, he became Hayden's closest friend and colleague. Peale undertook the earliest scientific investigations of Yellowstone's thermal features in 1871, 1872 and 1878. His published reports on Yellowstone's geysers, hot springs, and fumaroles came to more than 435 pages, and constituted nearly the entire second volume of Hayden's two-volume twelfth (and final) annual report, published in 1883.

Peale's 1871 journal writings appear in two small and bruised leather volumes. Because they ended up in two different repositories (one in the Yellowstone archives, the other in Denver's U.S.G.S. Field Library) their importance has been overlooked until I began working with them in 1990 in preparing my book: *Yellowstone and the Great West: Journals, Letters, and Images from the 1871 Hayden Expedition.*

Peale did more than write in his journal. While participating on the survey, he also wrote a series of "letters" that were published in his hometown newspaper, the *Philadelphia Press.* Both Peale's journal and newspaper writings are fresh and candid; moreover, they reveal one of the earliest spontaneous and personal responses to features in the Greater Yellowstone Area. Peale not only corrects facts and misleading information from other published accounts, he supplies important information which his cohorts omit entirely. For instance, Peale describes many of the circumstances surrounding Jackson's photographic work, and identifies the settings and individual survey members who were Jackson's subjects. We learn, for instance, that Jackson took ferrotype pictures along the route and gave them away. In one case, the party camped near a Montana ranch owned by a Mr. Allen, who provided them all with milk, cream, and fresh butter. Such generosity demanded some kind of thank you, so Jackson took a ferrotype of the ranch and presented it to Allen. "[Allen] was very pleased with it," Peale records in his journal entry for Thursday, September 7.

At the time, Peale probably didn't think his comments about Jackson's work were very important, but today, this record alone adds significant information to Jackson's now-historic photographs.

More generally, Peale provides a close look at Hayden's style of leadership as well as a description of the survey's actual work. He reveals that the survey operated in quite an informal—if not casual—manner. Small groups of men were always off on specialized assignments, while Hayden often worked alone or alongside only one or two others and at the end of the day often remained aloof from others at the party's campsites.

Peale also describes the scientific contributions of individual members of the party. Little has been known about this particular aspect of the survey work, for Hayden rarely singled out individual people for credit in either his report or later articles. As a result, particular contributions have been assigned either to Hayden, himself, or to the party as a whole. For instance, one of the survey's major achievements was mapping the shoreline and recording the various depths of Yellowstone Lake. In his journal, Peale names and describes the work of three men who undertook these earliest depth soundings of the lake. This was a tricky and dangerous business, given the uncertain seaworthiness of their small frame boat which had been put together for this purpose, along with the size and volatility of Yellowstone Lake. Hayden does not name or acknowledge the work of these three men in an official progress letter to the Secretary of the Interior. Instead, he takes full credit for the work, saying: "I have made quite thorough soundings of the Lake."[2] If for no other reason, Peale's writing is important for finally giving credit where credit is due.

Peale's writing corrects errors and repeatedly clarifies misleading impressions from later published accounts. Discovery claims, of course, are a chancy business in an area like Yellowstone, where native people and white trappers and hunters had made countless unrecorded "discoveries." Nevertheless, Jackson claimed in *Pioneer Photographer* that their party was "so far as records show," the first group of white men to visit Mammoth Hot Springs.[3] Hayden didn't make such a claim, but he made much of the fact that his was the first exploring party to visit Mammoth Hot Springs. In this, he was correct. Neither the Washburn-Langford party in 1870, nor the Cook-Peterson-Folsom party in 1869 visited these springs. Hayden's Report and Jackson's recollections, however, create the impression that this dramatic area was rarely—if ever—observed by white men. Peale, however, makes it abundantly clear that, by 1871, the springs had become known to a sizable number of men from neighboring areas. In all fairness, Hayden, unlike Jackson, does report the fact that their party discovered, "a number of invalids" there using the springs to effectively treat cutaneous diseases, especially "syphilitic diseases of long-standing."[4] But, there is much more to this story than mentioning the presence and rehabilitation of invalids at the springs, as we can see from the "letter" that Peale wrote for the *Philadelphia Press,* while still in Mammoth. He writes:

> Mr. J. C. McCartney and Mr. H. R. Hore [*Horr*], with commendable foresight, have taken out a claim for 320 acres, which covers a considerable portion of the springs. They expect to commence the erection of a two-story hotel next week. It requires no stretch of the imagination to see this place thronged with invalids drinking this water and bathing in it for their health. When the Northern Pacific Railroad runs through this country, this will be one of the places that no tourist will think of neglecting, for it will rank with any natural curiosity that the world can produce.[5]

Needless to say, Hayden did not include these details in his report, even though he was very familiar with the railroad's recognition of Yellowstone's potential as a tourist attraction at the time. Other evidence reveals that Hayden was even seeking possible ways to route future Northern Pacific railbeds into the Yellowstone Valley as

well as to locate geographically feasible routes to connect with the Union Pacific. He was also on the look-out for nearby coal beds and water sources that could eventually be used for locomotive fuel. Although Hayden probably had no *official* connection with the Northern Pacific, Peale's comments suggest that Hayden was making no secret of his party's investigations on behalf of railroad interests.

The fact is, by 1871, Mammoth Hot Springs, as well as large areas of what is today's park, were no longer pristine wilderness areas. Peale frequently refers to meeting up with adventurers and hunters who appeared to be quite familiar with many parts of the area. In fact, while establishing the party's permanent camp at the Bottler brothers' ranch in the Paradise Valley, Hayden hired two guides/hunters from the area. Probably the Bottlers or perhaps one of the survey's guides (known today only as "José"), was responsible for leading the party directly to Mammoth Hot Springs. Hayden's report, however, creates the impression that his party was doing its work in the midst of a *terra incognita.*

Histories of Hayden's first Yellowstone survey rarely treat the presence of the small team of Army engineers that was assigned to explore Yellowstone in the summer of 1871 and to share Hayden's military escort. Based in Chicago, it was led by Captain John Barlow and his assistant, Captain David Heap, both West Point graduates and decorated Civil War veterans. Peale often describes the Barlow party as working "in tandem" with the Hayden party. Hayden on the other hand writes very little about the presence of Barlow's party, and virtually nothing about their work. Barlow, however, wrote a marvelously detailed report about his survey's work in Yellowstone that was published by the Government Printing Office in 1872. In it, he frequently refers to the presence of Hayden and small groups of Hayden's men. Peale's journal confirms this and adds even more details. The fact is, on several occasions Hayden and Barlow did a good bit of fieldwork together, shared information and made joint decisions. This was especially true in the geyser basins where the two plus a few members from each of their parties, explored together, shared scientific data and, not incidentally, became lost.

Peale occasionally poked fun at the Barlow party, and suggested they were novices at fieldwork. He noted that their badly packed supplies repeatedly fell off their mules, requiring the party to leave some members behind to help them re-pack their supplies. Barlow was apparently an amusing character who carried an umbrella and sometimes indulged in two hour lunches. David Heap, Peale reported, is "the most comical looking man. He [wears] a buckskin suit with fringes and has a lot of traps stuck about his person."[6]

Such humorous asides rarely appear in official reports.

Although Peale is a straightforward writer, perhaps what is most appealing about his accounts is that he is also very human. In his journal he confesses to, but never dramatizes, his bouts with fatigue, homesickness, and even fear. By writing in his own private journal, Peale had nothing to lose by candidly recording his survey experiences and his personal reactions to them.

Some of this candidness appears in Peale's journal entry for Sunday, August 6, 1871. After several days spent investigating the geyser basins Peale with Hayden (and several others) thought they were heading to a pre-arranged campsite on the West

Thumb of Yellowstone Lake where they would meet up with the rest of the survey party. But they ran into complications. Peale writes:

> In coming down to [Shoshone] Lake the Doctor [Hayden] led the party through a miry place. One of the mules became mired and had to be unloaded and taken back around through the woods the [other] way…[A]fter passing along [the] shores, against which there was quite a surf beating, we struck into the woods, Schönborn [the topographer] leading. José [the guide] said we were going too far to the right, but still we kept on. After a while Elliott [the official artist] left us in disgust. One of the horses of the escort gave out and had to be led. Towards sunset Schönborn and the Doctor came to the conclusion we were lost so we decided to camp at the first water. The soldier and horse with José stayed behind to rest. About a mile and a half further we came to a small lake about 1 mile wide and 2 long which was not down on the map and must be the headwater of one fork of the Snake River. We are away to the south of the Yellowstone Lake. We traveled about 22 miles through the timber, some of it of the worst description. I tore my green blanket on some tree...

This is not the stuff of published writing—whether it's in the form of Hayden's official report, or in an old man's recollections, like Jackson's autobiographies. Although their accounts are useful and important, we also need to find and make more available yet unpublished accounts, like Peale's—accounts that remain in under-used archives and dusty attics. They will provide important personal stories, correct for published errors, exaggerations and omissions, and contribute to Yellowstone's on-going history for the *next* 125 years.

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Charles C. Adams and Early Ecological Rationales for Yellowstone National Park, 1916–1941

James Pritchard

As America's first national park, Yellowstone has long been the focal point for contentious public debate over federal resource management policies. Few such policies have been as hotly contested in recent years as what has come to be called "natural regulation"—a policy of letting ecological processes, such as fire, take their natural course within Yellowstone's boundaries. Critics of natural regulation, most notably Alston Chase in his 1987 jeremiad *Playing God in Yellowstone*, attribute this policy to "a new philosophy of nature" invented by "California cosmologists" in the 1960s. The sixties were, indeed, an era of shifting popular and scientific ideas about the environment and consequent changes in federal approaches to managing national parks. It is, however, a serious misreading of Yellowstone's history to suggest that ecological rationales emerged fully formed in the 1960s and then spread within National Park Service ranks like an insidious foreign plant species. Such ideas, in fact, had been the subject of study and discussion among park managers and scientists for many decades. Charles C. Adams, an early twentieth-century animal ecologist, conceived a scientific rationale for Yellowstone in the 1920s, arguing that the park preserved "natural conditions" and thus enabled scientists (and the public) to observe nature's processes free from human intervention. An examination of Adams's work demonstrates that the idea of Yellowstone as a place to preserve natural conditions has been a powerful and enduring theme in the park's history.

During the first two decades of the twentieth century, scientists influenced park development by participating in the movement for national park standards, and by advocating the preservation of natural areas. Charles Christopher Adams was an instrumental member of the movement to protect "primitive conditions" in national parks. Arriving from Harvard at the University of Chicago in 1899, Adams studied under Charles B. Davenport, Henry C. Cowles, and Charles Otis Whitman. He worked as a curator at the University of Michigan's Natural History Museum while completing his Ph.D., awarded in 1908. From 1908 to 1914, he served as a professor in animal ecology at the University of Illinois. In December 1914, he participated in the initial organizational meeting of the Ecological Society of America (ESA),

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along with Victor Shelford, Henry C. Cowles, and others. The ESA named Adams its president in 1923.[1]

In 1913, Adams's *Guide to the Study of Animal Ecology* discussed the importance of ecological investigations, pointing out that experts in taxonomy traditionally designed the surveys employed by museum expeditions and for analysis of fishery resources. Economically useful lists resulted, but these were of limited use for discovering relationships among animals. A descriptive element was essential in ecology, yet the scientist must do more than collect specimens, also gathering "observations on the habits, activities, interrelations, and responses of animals."[2] Ecological surveys needed to be developed in a deliberate manner. Adams was self-consciously splitting away from natural history traditions as he helped create the field of animal ecology.

For Adams, fieldwork was essential to ecology. He repeated the question posed by William Keith Brooks in 1899: "'Is not the biological laboratory which leaves out the ocean and the mountains and meadows a monstrous absurdity?'"[3] Adams thought answers to important questions would be found not in the laboratory but in the field. Ecologists must not simply gather data, but learn to habitually "study in the field."[4] By this he meant thinking, endlessly mulling over facts and observations: field data helped the ecologist to arrive at the ultimate aim, "the *interpretation* of the responses of animals to their complete environment."[5]

The work of Charles C. Adams gave the National Park Service (NPS) scientific reasons to protect the "primitive" character of its landscapes. While use of the term "primitive" over time seemed to yield to the word "original" and finally to "natural," the terms were interchangeable through the early 1930s as scientists and conservationists discussed the conditions they aimed to preserve in the parks. Adams urged scientists to conduct ecological surveys to record animal "associations, their interrelations and responses to their environment—before they have become too much changed or exterminated."[6] Adams suggested that saving every type of environment might not be possible, but he felt it important to at least record for posterity the ecological relationships. Adams sought a study of "original conditions," which were vanishing with each succeeding generation.[7] He wondered "if the naturalists of the future will commend our foresight in studying with such great diligence certain aspects of biology which might be very well delayed, while ephemeral and vanishing records are allowed to be obliterated without the least concern."[8]

Adams was not alone in his concern about preserving natural conditions in park landscapes. In 1916, Joseph Grinnell and Tracy Storer, scientists at the University of California's Museum of Vertebrate Zoology at Berkeley, published "Animal Life as an Asset of National Parks" in the journal *Science*. Their thoughts about the national parks reflected some of the latest ecological thinking, but also revealed how natural history traditions and cultural baggage limited conservation practices.

To "realize the greatest profit" from parks' native animal and plant life, wrote Grinnell and Storer, "their original balance should be maintained." Dead trees should not be cut down, because they "are in many respects as useful as living" ones: woodpeckers which ridded the living trees of destructive insects found sustenance as well as nesting sites in standing dead timber. They considered downed timber also

essential in maintaining a "balance of animal life," for decaying logs provided homes for mice and thus supported hawks, owls, fox, and marten. Undergrowth or thickets should not be destroyed in parks any more than necessary because they provided "protective havens" as well as berries for birds, squirrels, and chipmunks. Non-native species, they thought, should be excluded from the parks: "In the finely adjusted balance already established between the native animal life and the food supply, there is no room for the interpolation of an additional species." The well-known example of the English sparrow proved this point—that introduced species often competed so well that they displaced native species.[9]

Grinnell and Storer saw the predator situation very differently from the NPS Ranger Division and the Bureau of Biological Survey. The Berkeley scientists advised that predators in the national parks be allowed to "retain their primitive relation to the rest of the fauna," even if they levied a considerable annual toll on the other native animal life. These naturalists were convinced that prey species, such as mice and squirrels, had adjusted themselves to regular predation by carnivores. Like many other naturalists of their time, Grinnell and Storer thought of predatory animals such as marten, fisher, fox, and golden eagle as "exceedingly interesting members of the fauna."[10] In the context of 1916, "interesting" meant that the animal was of considerable scientific curiosity because naturalists knew very little about the species.

Grinnell and Storer argued for an absolute prohibition against hunting or trapping any wild animals in the parks. The principle was simple: "The native complement of animal life must everywhere be scrupulously guarded," especially along roads where the animal life was most likely to be seen by visitors, and thus had the "highest intrinsic value from an esthetic viewpoint."[11] Grinnell and Storer equated park predator control with the destruction of natural balance, and they offered an attractive esthetic justification for nature preservation.

Yet their willingness to entrust nature with the balance had limits. Nature might be adjusted, they suggested, to present the animal life of a national park at its best to the human visitor. Managers might increase native berry-producing plants, especially in the vicinity of camps and buildings, making up for thickets destroyed in building and road construction, allowing visitors to see a greater variety of bird life. They thought that local feeding stations during tourist season would not alter natural conditions "in any serious degree."[12] Their emphasis on the localized control of predatory birds in order to create roadside venues for bird watching demonstrates their conviction that naturalists might control nature, carefully arranging the wildlife for display.

Adams helped spark a larger movement in the Ecological Society of America. In 1917, ESA President Ellsworth Huntington appointed Victor Shelford to head a new Committee on Preservation of Natural Conditions for Ecological Study, which functioned through 1946. By 1921, the committee identified nearly six hundred natural areas, many of them in the national parks, that deserved preservation. Emphasizing scientific rationales over recreational and aesthetic reasons for preservation, the committee advocated "An Undisturbed Area in Every Natural Park and Public Forest." By 1921, about ten percent of the ESA's membership

enthusiastically joined the committee, which during the 1920s fought irrigation schemes in the national parks, including one intended for the Bechler Basin in southwestern Yellowstone. Scientists were concerned that logging and hunting were one step behind, forever changing the original conditions found there. Other organizations such as the National Research Council signed on to the campaign to preserve natural conditions. A widely noted public statement of scientists on the subject came in 1921, when the American Association for the Advancement of Science passed a resolution opposing the introduction of exotic plant and animal species into the parks. Significantly, the resolution opposed "all other unessential interference with natural conditions."[13]

Barrington Moore, editor of the journal *Ecology*, joined Adams and Shelford in publicizing the need for preserving natural conditions in the national parks. In the Boone and Crockett Club's 1925 publication *Hunting and Conservation*, Moore explained the scientists' case for preserving parks in a natural state. People must see conservation in the broadest sense, wrote Moore, where the object was putting every acre of land to its "highest use."[14] National parks were important for recreation, but they also offered an opportunity to study plant and animal life "in their natural surroundings."[15] Moore argued that scientists were becoming less satisfied with collecting and identifying, wanting instead to pursue new studies in heredity and environment. Laboratories were necessary but not sufficient; studying in nature's workshop would enable investigation of evolution and adaptation firsthand.

Despite his recognition of a constantly evolving world, Moore also saw a balance of nature. Investigating this balance made national parks important to science, thought Moore, as the parks increasingly represented the last undisturbed places. He argued that the "processes of nature are so delicately adjusted" that when people interfered with nature the results were entirely unpredictable.[16] In America, Moore thought, species of animals had gone extinct precisely because people had upset the balance of nature by introducing non-native fish and game animals to forests and parks, and by removing dead trees.

Not only scientists, but national park advocates as well spoke out on behalf of primitive nature in the parks. The National Parks Association (NPA), established in 1919, utilized the idea of preserving "primitive" conditions through the early 1930s in its language and view of the parks' purpose. Robert Sterling Yard was associated with the National Park Service from its inception. When Stephen Mather came to Washington to take charge of the new bureau, he brought Yard at his own expense to serve as the agency's publicity director in Washington. An experienced journalist, Yard wrote articles that brought favorable publicity to the parks. With Mather, Yard established the NPA, but soon friction developed between them.

Yard's ideal vision of the parks was embodied in his campaign for "National Park Standards," an effort to restrict the national park designation to landscapes of national interest. Yard's standards defined the parks as large landscapes that essentially maintained their "primeval" state, superior in quality and beauty, lands deserving preservation for people's education, inspiration, and enjoyment. The NPA suggested that parks should be "a sanctuary for the scientific care, study, and preservation of all wild plant and animal life within its limits, to the end that no species shall become

extinct." The NPA urged that "wilderness features" in parks "be kept absolutely unmodified." Finally, National Park Standards urged that "sanctuary, scientific, and primitive values must always take precedence over recreational or other values." Thus during the 1920s, the NPA saw not only the danger of industrial intrusions into the parks, but already worried about the proper balance between use and preservation.[17]

Charles C. Adams remains central to this story because he served as an early connection between ecology and the National Park Service, contributing to science in Yellowstone in a very direct fashion. In 1919, Adams helped establish and became the first director of the Roosevelt Wild Life Forest Experiment Station, located at New York State University's College of Forestry in Syracuse. Professor Alvin Whitney, Adams's colleague at the School of Forestry, operated a Boy's Forest and Trail Camp from 1921 to 1923 in Yellowstone. Although the camp ended up a financial bust, it provided the first connection between Yellowstone and the Roosevelt Experiment Station. Field parties began to journey from Syracuse to Yellowstone National Park, establishing their headquarters at Camp Roosevelt near the junction of the Yellowstone and Lamar Rivers.[18]

The Roosevelt Experiment Station supported several of the earliest scientific studies of wildlife in Yellowstone. In 1922, Edward R. Warren published an article on "The Life of the Yellowstone Beaver," while Richard A. Muttkowski's study on the food habits of Yellowstone trout appeared in the *Roosevelt Wild Life Bulletin* in 1925. Edmund Heller, a staff member of the Museum of Vertebrate Zoology and co-author (with Theodore Roosevelt) of a book about African wildlife, turned his talents to a study of big-game animals in Yellowstone in 1925.

While some contributors to the *Bulletin* visited Yellowstone only briefly, Milton P. Skinner spent much of his professional career associated with the park, working as Yellowstone's first park naturalist from 1920 to 1922. Skinner then secured an appointment as one of two Roosevelt Field Ornithologists. He was promoted to Roosevelt Field Naturalist in February 1924.[19] In 1925, his voluminous study on Yellowstone's birds appeared in the *Roosevelt Wild Life Bulletin*, and in 1927 Skinner wrote a prescient article on predatory and fur-bearing animals of the park for the journal.[20] In 1925, he also published *Bears in the Yellowstone*. A veteran of many days in the field, Skinner had observed the bears enough to make detailed comments on their food habits, information that became important during the 1970s when biologists questioned the dependency of bears on park garbage dumps. Bears, noted Skinner, ate roots and bulbs in the spring, berries at the end of summer, pine cones, timber ants, termites, "fat juicy grubs," indeed "practically everything edible."[21]

In 1926, Adams became preoccupied with his new position as director of the New York State Museum in Albany, busy with work on the American Society of Mammalogists' Committee on Wild Life Sanctuaries, and engaged with the ESA Committee for the Preservation of Natural Conditions. The Roosevelt Wild Life Experiment Station did not sponsor additional projects in Yellowstone, although it pursued studies in New York and published its *Bulletin* until 1941. Even though the station's staff performed investigations in Yellowstone for a relatively short time span, they performed some of the earliest significant ecological science in the park.

There were limits, of course, on how much the idea of preserving natural

conditions affected NPS management practice during the 1920s. Yellowstone's creation owed much to the influence of railroads, and their interest in promoting tourism set precedents for the park. National Park Service Director Stephen Mather also emphasized tourism development to build a popular base of support for the bureau. Defending the national parks from commercial development meant encouraging park use. Yellowstone Superintendent Horace Albright never fully embraced Adams's notion of preservation to protect an unmodified nature. Pragmatically, he protected and manipulated animal populations with the intention of providing tourists with the opportunity to see abundant wildlife.

Yet the connection between Adams and Yellowstone laid a foundation for later thinking about what the parks could protect and preserve. The idea of preserving natural conditions influenced Yellowstone's wildlife management in significant ways. During the 1930s, national parks stopped controlling predators. Shortly after World War II, Yellowstone dismantled its bison ranching facilities to present wild animals in their natural setting. Park administrators closed the bear feeding platforms with the idea of eliminating the most garish zoo-like features of the park. To preserve a "natural" range, Yellowstone rangers began a systematic program of transporting (and eventually slaughtering) "surplus" elk in the 1920s. Since the late 1960s, however, park biologists have questioned prevailing ideas about what a rangeland should look like in a natural condition. Today, Yellowstone no longer sponsors a fish hatchery that artificially augments sport fish populations.

Not only scientists, but tourists and philosophers still look to the national parks as places where nature proceeds according to its own rhythm. The Yellowstone ecosystem, despite the limits our culture and our past place upon it, remains "one of the largest, essentially intact, wild ecosystems remaining in the earth's temperate zone."[22] As Charles C. Adams hoped, it remains one of the last places where biologists can watch functioning natural systems with most of their original complement of animals and plants, largely unaffected by human manipulation. The reintroduction of the wolf represents a major step in recreating the natural conditions Adams wanted to preserve. We sometimes think of nature preservation in the parks as the direct descendent of aesthetic preservation. In fact, a complex interaction among cultural movements, ideal notions about how nature works, changing conservation strategies, scientific information, institutional structures and a dash of politics have informed and shaped park policies. Scientists, including Adams, proposed during the early twentieth century that Yellowstone serve as an ecological control. This has endured as one of its most significant purposes, underlying both management and public understandings of nature in Yellowstone.

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James Pritchard, Department of Landscape Architecture, Iowa State University, Ames, IA 50014

A Public Face for Science: A. Starker Leopold and the Leopold Report

Kiki Leigh Rydell

In 1963 a group of scientists and wildlife experts authored a report—subsequently, and more commonly, referred to as the Leopold Report—to help the National Park Service manage its wildlife. While the Leopold Report reflected in broad terms the scientific thinking of wildlife biology in the 1960s and, in a narrower sense, some of the ideas put forth by previous park service critics, it bore the unmistakable imprint of its primary author, Aldo Starker Leopold. Son of conservationist and wilderness advocate Aldo Leopold, Starker Leopold was at the time a wildlife biologist at the University of California in Berkeley. The report is a prime example of Starker Leopold's particular expertise: his uncanny ability to translate biological ideas into public policy.

The Leopold Report developed logically, or naturally, from Starker Leopold's earlier thinking about nature. As eldest son of Aldo Leopold and member of the Leopold family—all of whom shared a deep and enduring love for and scientific interest in the outdoors—Starker found a natural and comfortable place in wildlife biology. He brought to the discipline a love for hunting and fishing and a inquisitive mind that was forever searching for ways to understand the natural world.

Starker's early years were spent on the Rio Grande River and in the oak and prairie country around Madison, Wisconsin, hunting and fishing with his parents and siblings. From an early age he kept a hunting journal in which he recorded —clearly and systematically—the conditions and count (or bag) of the day.[1] He and his father were very close and they shared insights about nature and wildlife habits. When Aldo's classic text *Game Management* was published in 1933, he gave Starker a copy for Christmas and inscribed it with these words: "The materials for this book were gathered from the four winds, but the conviction that it should be written comes largely out of our trips together on the Rio Grande."[2]

After completing his undergraduate studies at the University of Wisconsin, the younger Leopold followed his father's footsteps to Yale Forestry School in 1936 but decided in 1937 to continue his graduate work at the University of California and work with zoologist Joseph Grinnell.[3] After his first term at Berkeley, he took what was to be a very important field trip with his father: For a month in the winter of 1937, he hunted in the Mexican wilderness of the Rio Gavilan. The trip had a

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profound impact on Starker's wilderness and wildlife ecology education. "[The trip] gave me my first real look at an honest-to-god wilderness, an ecosystem unaltered by any livestock or people," he commented forty-five years later. He was especially taken with the role fire played in keeping the land "healthy." "It began to dawn on me that fire was a perfectly normal part of that sort of semi-arid country, and might even be an essential part of it." Leopold was also struck by the natural and apparently beneficial role predators played in this healthy landscape. "There was a tremendous crop of deer," he remembered later, "but not too many because there was also a big crop of mountain lions and wolves, both of which were killing the deer."[4]

Leopold did research for his dissertation on "The Nature of Heritable Wildness in Turkeys," while working for the Missouri State Conservation Commission and wrote the dissertation in the fall of 1943 while living with his parents. He successfully defended his dissertation in the spring of 1944 and it was well received by most biologists. One source of criticism came from a University of Chicago biologist, Joseph Hickey, who favored rigorous quantitative analysis over natural history. Leopold took no heed of Hickey's criticism and he would never belong to the group of wildlife biologists calling for rigorous quantitative analysis to replace factual description based on careful observation.[5]

For two years after graduation, Leopold worked in Mexico collecting the field data on Mexican wildlife he would later include in his award-winning book *Wildlife of Mexico* (1959), a natural history of true Leopoldian proportions.[6] In 1948, soon after his father's death, Leopold returned to the Mexican wilderness of the Rio Gavilan area he had visited a decade earlier. He had planned to collect specimens

Figure 1. A. Starker Leopold hunting chukkar partridge in the Tremblor Range, San Luis Obispo County, California, 1955. Photograph by Eben McMillan, courtesy of James McMillan.

and "initiate some long-term studies of the native fauna under virgin conditions."[7] But instead he found that civilization had invaded the wilderness: lumber trucks, new roads, and grazing stock littered the landscape. "We knew then," he wrote in a piece for a popular journal, "that instead of initiating an era of renewed acquaintance with the wilderness, we had come to witness its passing."[8] Leopold returned from the trip determined to preserve wilderness: "Must there be a cow on *every* hill and a road in *every* valley?" he asked.[9] And he returned with a deepening awareness of the complexities of the predator-prey relationship. Just how much should predators be controlled before the "natural balance between predator and prey" was disturbed, he pondered.[10]

Leopold was hired by Alden Miller, who replaced Joseph Grinnell as director of the University of California's Museum of Vertebrate Zoology, to fill a new position at the museum in "Wild Life Conservation." In particular, Miller wanted Leopold to provide "leadership in research and public relations in this field for the Museum."[11] Leopold rose quickly through the ranks, becoming, in 1958, Miller's assistant director of the Museum of Vertebrate Zoology. Miller recognized and appreciated Leopold's practical bent and approach to wildlife management issues. Leopold became known, in fact, for his expertise in "human affairs" and for his ability to synthesize scientific ideas and then translate them into political and lay terms.[12] These skills and a decade of experience handling hot topics—such as deer management and fire and predator policy—prepared him well for the role he would play as advisor to Secretary of the Interior Stewart Udall in the 1960s.

In the early 1950s Leopold presided over a group of wildlife biologists studying deer management in California. In his capacity as director of the project, Leopold was primary author of the two ensuing reports and the primary recipient of the criticism that arose when recommendations were made. The deer irruptions, Leopold argued, were the result of poor management. "Chronic undershooting, often coupled with unnecessary predator control, has permitted countless local irruptions of varying degrees of severity—an unexcusable [*sic*] waste of game and range resources as well," he wrote. Just as the problem with irruptions lay with wildlife and range management, the remedy for irruptions, according to Leopold, also had *a management solution*. In particular, Leopold recommended "deliberately and purposefully manipulating plant successions to maintain high range capacities for deer" and liberalizing the hunting regulations—to include doe hunting—for full harvesting of the annual deer crop.[13] Especially with this last point, Leopold's recommendations raised the roof. To put it mildly, doe shooting was highly unpopular. But Leopold did not shy away from what he thought was good science for the sake of popularity. "Let me make this clear at the outset," he argued forcefully in a piece for the popular press, "there is no controversy over deer management among those who have studied the animals in the field. The controversy is among those who study the problem beside a pot-bellied stove or in a smokey conference room."[14]

Another issue Leopold took on in the 1950s was fire policy and controlled burning. In 1957, Leopold presented a paper at the Fifth Biennial Wilderness Conference entitled "Wilderness and Culture." In this talk, he tackled the issue of fires in wilderness areas, especially national parks. "There is still one striking

exception in the trend toward naturalness in park preservation," he observed: "the complete exclusion of fire from all areas, even those that burned naturally every year or two before becoming parks." "I am convinced," he continued, "that ground fires some day will be reinstated in the regimen of natural factors permitted to maintain the parks in something resembling a virgin state. Both esthetic considerations of open airy forest versus dense brush, and assurance of safety from conflagration of accumulated fuel will force this issue sooner or later."[15] In an interview almost thirty years later, Leopold described the park service personnel attending the conference: "[O]ut of the corner came the old-time Park Service boys," he related. "Harold Bryant, who was one of the old timers, stood up, and he was shaking he was so mad. And he made me mad when he started out and said, 'I am amazed that the son of Aldo Leopold.…' And boy that really set me off."[16] As with the deer management issue, Leopold did not budge, predicting—correctly—that allowing fires to burn would become part of park policy "sooner or later."

Leopold gave a great deal of thought to the idea of wilderness. He was a strong supporter of wilderness areas for their scientific as well as esthetic value. Anticipating his work in the 1960s on national park policy, Leopold advocated in 1955 that wilderness areas be managed to "stimulate original conditions as closely as possible."[17] As part of his management strategy, Leopold applied his ideas on the importance of fires to a healthy ecosystem. "As a matter of policy in preserving natural areas *we are going to have to accept responsibility* for…controlled experimentation with fire," he wrote in a professional paper.[18]

As with deer management and fire-control issues, Leopold did not do any original research in the area of predator–prey relationships. Rather he synthesized the material from the research of others and more importantly brought it to the attention of the public. He was a public educator *par excellence*. In 1954, he presented a paper to the National Association of Biology Teachers on the ecology and economy of predation, in which he argued that instead of rebuking predation, humans should consider it an advantageous way to limit surplus individuals because, as he put it, predation "cleanly eliminates some individuals without impairing the vigor and health of the survivors." "Alternate controls such as starvation, disease, and intra-specific bickering," he continued, "impose a drain on all members of a population, leaving survivors weakened in body or spirit" by the loss of food or social intolerance.[19]

At this point it is important to remember that Leopold was a wildlife biologist–manager and not purely a biologist. His work had a very practical side: learning about wildlife systems so these same systems could flourish. His particular expertise came not so much from his own science *per se* as from his ability to take scientific ideas into a public arena and stand up for them with eloquence and authority.

During the 1950s, Leopold worked together with British naturalist Frank Fraser Darling on policy recommendations for managing Alaskan wildlife populations. To manage well and fully utilize the big-game herds of Alaska, Darling and Leopold advocated habitat preservation by "deliberately controlling two of the principal influences on range conditions—fire and numbers of grazing animals."[20] The key to the success of the wildlife resource was management—management based on sound policies. The bone the biologists chose to pick with the agencies managing Alaska's

wildlife resources was "the inadequacy of present policy."[21] Leopold's concern for policy issues and his readiness to take up a position as advisor to the government on management concerns anticipated his involvement in wildlife resource policy in the 1960s.

Leopold worked on a number of projects on a variety of wildlife and conservation issues throughout the 1960s. Most continued work started at least conceptually at an earlier date. His publications, while never at the scientific center of the burgeoning field of wildlife ecology, now veered even further from the cutting edge of primary research and turned to public policy work based on secondary sources. This is not to say that Leopold became more theoretical; he, in fact, held fast to his practical bent. Nor is it to argue that he left his field boots behind for a comfortable armchair position from which he could reflect peacefully on uncontroversial wildlife principles. While he donned his field boots less frequently for research and more for policy studies, Leopold became deeply embroiled in some of the hottest wildlife issues of the decade. More than involved, Leopold moved to the center of the storm over national park wildlife policy, predator control, and wildlife refuge definition.

When, in 1962, Secretary of the Interior Udall called on Leopold to serve as chair of his Special Advisory Board on wildlife matters, Yellowstone Park was in a state of crisis. Park service employees were implementing a two-pronged policy to restore some sense of "balance between Yellowstone's animal populations and their environments": first, reduction of elk herds on the northern range of the park and second, the education of the public about the need for such massive killings. Neither prong was developing smoothly: vociferous complaints about the reduction continued.[22] Leopold was well aware of his board's assignment. "It is acknowledged," he wrote in the report, "that this Advisory Board was requested by the Secretary of the Interior to consider particularly one of the methods of management, namely, the procedure of removing excess ungulates from some of the parks."[23] Familiar with the questions of management his committee would have to address, he knew the report would be in the limelight of a heated wildlife management debate.

The report provided Leopold with the opportunity to air in public many of the ideas he had been grappling with for years: the ecological necessity of both fires and predators, and the importance of habitat maintenance for healthy wildlife populations. "I really worked long and hard on that [report]," he later remembered. "I got in a lot of the ideas that had been brewing in my mind for a long time."[24]

He also saw the report as a real opportunity to influence wildlife policy nationally and even internationally. As he put it "the world was looking at us." "If," he told one listener, "we were to recommend public hunting of elk, parks in Africa would feel pressed to permit the public hunting of elephant. We decided that we would develop a philosophy of management that could be applied universally."[25] With such a serious mission at stake, Leopold did not shy away from advocating an unpopular position on issues of park management. As he later told one interviewer: "I figured, 'Okay, I'm in my career here; I can say any damn thing I want.'"[26]

The Leopold Report advocated continuation of the park service's policy of elk reduction as part of its idea of "purposeful management of plant and animal communities as an essential step in preserving wildlife resources 'unimpaired for

the enjoyment of future generations.'"[27] Other management methods could include reintroducing native species and allowing fires and other natural controls such as predators to curb explosive populations. "Of the various methods of manipulating the vegetation," he wrote in the report, "the controlled use of fire is the most 'natural' and the easiest to apply."[28] Leopold received criticism from several directions for his position on both fire as a management tool (some environmentalists initially opposed this idea) and continued park service reduction of "excess" ungulates (obviously many hunters opposed this idea).[29]

It is especially interesting to watch Leopold mature as a wildlife biologist with respect to the issue of public hunting in the park. Pressure to allow public hunting from the sporting side of the wildlife management field must have been tremendous. Even one of his colleagues on the Special Advisory Board—Thomas Kimball—supported this position. Kimball referred to the excess elk that he and other committee members observed in the park as part of their research as excess "game," for example.[30] But Leopold came out firmly opposed to the idea.[31] The parks' "primary purpose…is not public hunting," he argued. If one traces Leopold's own growth as a wildlife biologist it comes as no surprise that he felt so strongly about this issue. While he remained an avid hunter, Leopold by the 1960s had developed a philosophy of wildlife management that was quite different from his previous philosophy. In earlier decades, producing a crop for hunting had been the primary purpose of wildlife management for Leopold. According to the more mature Leopold of the 1960s, however, wildlife existed not just to be harvested, but also to be viewed.

As trained wildlife biologists, he told an audience of students, "we must take a broader view of our objective than the narrow and rather specific one in which I emerged as a young wildlife biologist, namely that we're producing a crop for hunting.…[T]hat is only a part of our total responsibility."[32] Of equal weight, according to Leopold, was "wildlife management for its aesthetic values."[33] Thus while the values of hunters—and those in wildlife management who believed that hunting was the main reason to preserve wildlife populations—remained important to Leopold, they were not the defining parameters within which all wildlife management decisions should be made.

When it came out, the Leopold Report received for the most part high marks from the biological and wildlife management community. Its two main recommendations—continued ungulate reduction and management of the parks according to scientific principles to restore and preserve wildness—rested on comfortable premises for most wildlife biologists. The ungulate reduction proposal, while politically controversial and difficult for many hunters to accept, was scientifically in accordance with the ideas of the time. One scientist, for example, wrote to the associate superintendent of Yellowstone shortly after the report came out: "I found their conclusions to be very encouraging. It is interesting that the conclusions reached by all persons who examine your problems objectively are essentially the same."[34] Another comment—made to Leopold directly this time—came from Charles Piersall of the Izaak Walton League: "I consider your report to be the most factual and scientifically arrived at that I have ever read on the subject….I accept the report because of the fact that the individual

members of the Advisory Board have visited and personally experienced the varied climatic and topographical conditions contributing to the Northern Yellowstone elk situation, and at the same time weighed and evaluated the scientific data compiled by other competent biological and ecological authorities."[35] While elk reduction was halted—for political reasons—a few years after the report came out, Leopold's position on the issue did not waver and was never really at odds with the scientific community.

While most biologists—Leopold included—had some difficulty with his recommendation to manage the parks to maintain or restore "primitive" biotic associations, the issues were not unusual ones for biologists to be grappling with in the 1960s. Leopold based the recommendations of his committee on a report issued by a committee of the First World Conference on National Parks entitled "Management of National Parks and Equivalent Areas." This report advocated managing national parks based on scientific research to maintain "biotic communities in accordance with the conservation plan of a national park." Management, for this committee—as for Leopold's committee—could involve "active manipulation of the plant and animal communities, or protection from modification or external influences."[36]

Some might argue that Leopold did not have a realistic appraisal of ecological relationships if he could advocate trying to restore or maintain *a* particular biotic association. But Leopold's ecological sense was not out of line for his time. And he knew that there were limitations to what scientists at that or any time could accomplish. "In essence, we are calling for a set of ecologic skills unknown in this country today," he acknowledged.[37] And he felt that he took ecological principles into account when he made his recommendations. For example, Leopold recognized the difficulty of dealing with ecological communities when he told the park service that "A reasonable illusion of primitive America could be recreated, using the utmost in skill, judgment, and ecological sensitivity."[38] What Leopold really wanted was for the park service, as he put it, to "recognize the enormous complexity of ecologic communities and the diversity of management procedures required to preserve them."[39]

What Leopold feared was a policy of overprotection instead of active management. "Reluctance to undertake biotic management," he wrote, "can never lead to a realistic presentation of primitive America, much of which supported successional communities that were maintained by fires, floods, hurricanes, and other natural forces."[40]

Adolph Murie, the well-known naturalist on the staff of the National Park Service, was so pleased with the report that he hesitated to, as he put it, "make any comments that deviate from full agreement." But comment he did. Protection was what the parks needed, not management. "I believe," he wrote in a review of the report for *Living Wilderness*, "that our attitude should be to protect parks with the minimum necessary management." After offering a hint of criticism, Murie backed off and chalked it up to "phraseology." "My comments," he conceded, "are in great part a matter of different phraseology. I am certain that fundamentally there is agreement that our national parks should be preserved in a natural state, as free as possible from all intrusions and manipulations."[41] But he did take issue with the

idea of maintaining "biotic associations within each park…as nearly as possible in the condition that prevailed when the area was first visited by white man."[42] Natural conditions cannot be "maintained," Murie argued correctly. Change, as Leopold well knew, is an integral part of any natural community. "This goal," complained Murie, "suggests that we freeze the environment at a certain primitive stage. This implies a static condition. Although the committee may not have meant this, it has been so interpreted and accepted by some administrators."[43]

Bob Linn, who as a park service employee was responsible for implementing the Leopold Report, also "realized" this major "flaw" in the Leopold Report. "[T]he statement as written," Linn wrote years later, "implies that an ecological condition can (and should) be frozen in time." When Linn and his colleagues came up with a more ecologically correct expression of the same idea, the Leopold committee, according to Linn, responded by declaring: "Of course that's what we meant."[44]

Conservationists and biologists applauded Leopold's recommendations for minimizing artificiality and human intrusions. "We urge the National Park Service to reverse its policy of permitting…non-conforming uses," Leopold wrote for his committee. "Above all other policies, the maintenance of naturalness should prevail," he wrote.[45] Such recommendations were considered "inspired" and "startling" by conservation journals. Bruce Kilgore wrote the following for the *Sierra Club Bulletin*: "The Leopold Report is one of the most significant reaffirmations of national park policy since the establishment of the National Park Service.…[T]he great significance of this report is that it sets forth at an extremely high political level the basic ecological principles which Muir, Olmsted, Leopold, the Sierra Club, and others have been urging down through the years."[46]

Many of the ideas in the Leopold Report were not new to the park service. Historians of the national parks have documented that biologists such as Joseph Grinnell and his students George Wright and Joseph Dixon had argued vociferously for management of the parks to preserve the primitive.[47] The reports issued by these biologists are clear testimony to their philosophical and scientific belief in the need to preserve the primitive. "The old phrase, 'let nature take its course,' applies rightly to National Parks, if to no other areas in our land," wrote Grinnell to the superintendent of Yosemite in 1925. Nine years earlier Grinnell had written: "Herein lies the feature of supreme value in national parks. They furnish samples of the earth as it was before the advent of the white man."[48] And in 1935, as part of the series *Fauna of the National Parks of the United States*, George M. Wright wrote: "Maintenance of wildlife in the primitive state is…inherent in the national-park concept."[49]

No doubt Leopold knew about the Fauna Series, for he had a copy of the series in his possession during his drafting of the report. No doubt he had done his homework before putting together his own report. And no doubt he shared their scientific perspective. He was, after all, Grinnell's student and a product of the same philosophical tradition as George Wright and Joseph Dixon. That his report supports the findings and conclusions of the Fauna Series comes as no surprise.

It is clear that the Leopold Report reaffirmed ideas promulgated in the 1930s. But the impact the report had on park service policy was decidedly its own. While the words of Wright and others influenced a few biologists and concerned citizens,

the Leopold Report influenced public policy. In May 1963 Secretary of Interior Udall sent a memorandum to Conrad Wirth, director of the National Park Service. "The report of the Advisory Board on Wildlife Management of the National Parks…has been reviewed….You should, accordingly, take such steps as appropriate to incorporate the philosophy and the basic findings into the administration of the National Park System."[50] Five years later, the Leopold Report was incorporated into the "first [National Park Service] comprehensive policy manuals."[51]

What was so different about the Leopold Report was the context within which it was received. That the report was written in the environmentally conscious 1960s and that it was commissioned by the secretary of the interior meant that its message would get heard. The park service in 1963—unlike in the 1930s—seemed ready to listen to science.

Another angle from which to view the Leopold Report is how it indirectly helped resolve the dilemma posed by the park service's Organic Act—a dilemma recognized by Leopold's predecessors. "The conclusion," wrote George Wright in volume two of the Fauna Series, "is undeniable that failure to maintain the natural status of national parks fauna in spite of the presence of large populations of visitors would also be failure of the whole national parks idea."[52]

By defining the "goals" of wildlife management in the parks as being to "represent a vignette of primitive America," Leopold joined the two primary functions of the park service: preservation of nature and use (or enjoyment) by people. Now the park service could comfortably argue that the use or enjoyment part of their mandate was dependent on the successful restoration of, as Leopold had written in the report, "a reasonable illusion of primitive America." Director Wirth picked up on this aspect of the Leopold Report. "The report provides an excellent framework within which to carry out the management and conservation of park resources," he wrote to Udall in August 1963. "The *use* objective should be stated in similar broad and long-range terms and in a way consistent with the conservation principle." He continued, "If we are to conserve parks as 'vignettes of primitive America,' it follows that the parks should be presented and *used* primarily as 'vignettes of primitive America.' This is to say, use should be such as to capitalize upon the distinctive qualities and special scientific, educational, and aesthetic values of these areas.…This is where our emphasis, in managing public use of parks, should be."[53]

In this way Leopold took biological ideas—past and present, his and others—into the political arena. The report became policy, was to varying degrees enforced, and has remained a topic of discussion in numerous circles. According to Frederic Wagner, writing in *Wildlife Policies in the U.S. National Parks*, the report had a decisive influence on park service policy. First, "it strengthened NPS policy resolve to manage biological resources in the parks by focusing attention on preserving samples of ecosystems in the conditions that prevailed at the time of European contact." Second, its emphasis on active management was "incorporated into the 1968 natural-area policy manual." Third, "it made a firm case for a sound, scientific basis for park management and recommended a strong research program" in the National Park Service.[54] Leopold's abilities as a communicator helped him turn biological convictions into political realities.

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Kiki Leigh Rydell, Department of English, Montana State University, Bozeman, MT 59715

Part 4

National Park Ideas

Economic Aspirations and the Politics of National Park Creation in Jackson Hole, Wyoming, 1919–1929

Lawrence Culver

Abstract

The twentieth-century history of Jackson Hole provides an opportunity to explore the development of modern tourism, the creation of a national park and its resulting impact, and conflicts between locals and outsiders over economic and environmental issues. These themes are highlighted by a short settled history and geographic isolation that made Jackson Hole a cohesive place long before its political organization as Teton County. The Tetons themselves serve as an excellent example of the commodification of a monumental western landscape transformed into an iconographic beacon for tourists worldwide. The town of Jackson, which grew from a struggling agrarian hamlet to an international tourist mecca in a matter of decades, provides a unique case study of the development of a national park "gateway" and skiing destination. It has separate significance as a largely artificial creation of eastern capital, a stage set masquerading as the "Last of the Old West."

This paper examines the public debate that led to the creation of the first small Grand Teton National Park in 1929. The paper focuses less on political wrangling than on the socioeconomic implications of park creation. More specifically, it examines how valley residents changed from vociferous park opponents to enthusiastic boosters due to economic conditions and changing local perceptions of tourism as a legitimate and sustainable method of economic survival. As the ranching economy of Jackson Hole faltered, tourism became a necessary source of income. This meant that the creation of Grand Teton National Park, initially viewed as a threat to local development, became the valley's best hope for survival.

Today, Jackson Hole, Wyoming, is one of the most famous and exclusive tourist destinations in the West. The Tetons, looming on the west side of the valley and reflected in a chain of mirror-like lakes, have become internationally known icons of the region. Celebrities maintain homes in the valley, and local government officials struggle with congestion, pollution, development, and a real estate market that has made home ownership increasingly unattainable for all but the most affluent. Seven decades ago, however, such a future could not have seemed more improbable. The story of this transformation, and the national park that precipitated it, illuminate local and regional perspectives on the politics of national park creation and the economics of tourism. More fundamentally, the saga of Jackson Hole provides an

excellent case study of the touristic commodification of the scenic West, and the far-reaching changes this process wrought.

In the 1920s, Jackson Hole remained scarcely populated and little visited. Locals suffered through a severe depression, their agricultural economy shattered by a combination of economic and environmental factors. Valley residents also had to cope with a contentious debate concerning the legal status of the Tetons, the mountains that towered on the west side of the Hole. Some, worried that the Tetons could be marred by overdevelopment, felt that the range should receive national park status, either as an annex of Yellowstone or as a new national park. Others felt that the mountains were sufficiently protected as part of Teton National Forest, and that national park status would end grazing and timbering in the range. When the national park debate began in 1919, most locals opposed the national park idea. By 1929, they embraced it. This reversal resulted from a combination of economic, environmental, and political factors.

Most fundamentally, however, locals ultimately supported the creation of Grand Teton National Park because they realized that their old dreams of ranching success could not be fulfilled. Instead, they found themselves resorting to tourism, an economic activity they promoted with ambivalence.

The settled history of Jackson Hole is short, even by Wyoming standards. For most of the nineteenth century the valley lay empty, visited only by Native American hunting parties and fur trappers, who left a legacy of names on the land. The first permanent white settlers did not appear until 1884. The first cattle, 100 head, arrived the same year, and wintered on wild grasses.[1] The simultaneous arrival of humans and cattle was a portent, for ranching would serve as the predominant economic activity in Jackson Hole for the first forty years of its settled history. With ample alpine grazing lands, reliable streams and rivers, and a modicum of annual rainfall, Jackson Hole seemed excellent ranching country. The number of cattle increased only incrementally until 1906, but then grew rapidly. By 1917, approximately 14,000 head of cattle grazed in the valley. Unfortunately for cattlemen, this represented their high tide. Only 8,000 would remain by 1931.[2]

Despite such a seemingly promising setting, ranches struggled to survive. The isolation imposed by the Tetons proved an insurmountable obstacle. Everything had to traverse Teton Pass to reach the railroad and larger towns to the west. All the necessities of ranch life and operation had to be hauled over the pass, and locally produced goods had to cross the mountains to reach markets far from the valley. This not only added expense, but made the shipment of anything other than live cattle difficult. The lengthy transportation time largely precluded the production and marketing of perishable goods like butchered meat, milk, and cheese. Moreover, the fertile guise of Jackson Hole belied a valley floor composed of coarse, stony glacial sediments. The porous soil contained few nutrients, and allowed rainfall to rapidly percolate deep underground.[3]

Climate compounded difficulties imposed by geography and geology. Temperatures varied wildly, resulting in short and unpredictable growing seasons.

For example, from 1920 to 1930, temperatures ranged from a high of 88 degrees to a low of -52 degrees.[4] At Moran, a settlement in the northern portion of Jackson Hole, the average date of the last killing spring frost fell on 18 July, while the average first killing fall frost occurred 12 August.[5] Rainfall, most of which actually fell as snow, normally totaled less than 22 inches a year.[6] The short growing seasons and subhumid conditions effectively limited agricultural production in the region to the growing of hay for winter forage. These environmental stresses led ranchers to try to obtain additional income from another unwieldy and sometimes unintelligent species: the Dude.

Tourism first appeared in Jackson Hole in the 1890s, in the form of a small number of wealthy hunters from the East and Europe. Locals quickly realized that outfitting and guiding hunting parties added a welcome supplementary income to their agricultural endeavors. Some hunters, like Owen Wister, author of *The Virginian*, later owned cabins or ranches in the valley.[7]

Although Jackson Hole ranchers originally dabbled in the tourist industry to serve the needs of hunters, they soon began attracting urbanites who wanted to experience daily life at a cattle ranch, and paid handsomely for it. This type of vacation seemed ideal to early-twentieth-century Americans searching for hardiness, virility, patriotism, and a reestablished bond with nature—attributes seemingly threatened by the teeming mechanized cities of the East, and purportedly endangered by immigrants and supposedly effeminate Victorian social mores.[8] The first Jackson Hole ranch designed expressly as a guest ranch appeared in 1908, when Henry Joy founded the JY Ranch on the shore of Phelps Lake. Four years later, Struthers Burt, a Philadelphia author who had been associated with Joy's endeavor, founded the Bar BC near Moose, on the west side of the Snake River.[9] Others followed soon after.

However, most ranches in Jackson Hole that took guests remained cattle ranches, focusing on beef as their primary source of income. This continuing reliance on agriculture, not tourists, had various causes. Dudes sought authenticity, and a ranch without cattle seemed hardly a ranch. For Jackson Hole ranchers, cattle had been a steady source of income since the 1880s. More fundamentally, a citizen who subsisted off of tourists instead of cattle seemed questionable. Whether due to America's longstanding glorification of agriculture or westerners' ideals of rugged independence, ranchers were loathe to admit that tourists might matter as much as cattle. Even Struthers Burt, the Philadelphian dude rancher, took great umbrage at assertions that his ranch was not "real," as when he was accused of drawing his income from tourists while a native "must look elsewhere for the larger part of his income."[10] Burt's son Nathaniel later conveyed the feelings of the period: "These were our mountains, and we gave them our names. These were our lakes, and we rode to them and swam in them at will….Dudes were allowed in as a special favor on our part. Tourists and strangers were not to be tolerated, despised on sight. The country belonged to God and us only."[11] While times were good, the residents of Jackson Hole could afford to harbor such sentiments. Locals would have to reconsider their views of tourists if the economy or climate faltered. After World War I, both would fail them.

Almost simultaneously, a conflict began over plans to include the Tetons and some portion of the valley floor within Yellowstone National Park. At the time of Yellowstone's creation in 1872, some argued for the inclusion of not only Jackson Hole and the Tetons but also the entire Wind River Range to the southeast. Proponents contended that since park animals wintered in mountain valleys to the south, it seemed logical to include their winter rangelands in Yellowstone. General Philip Sheridan supported this idea after he accompanied President Chester Arthur on a tour of the greater Yellowstone region in 1883.[12] In 1897, Colonel S. B. M. Young, acting superintendent of Yellowstone Park, argued for the same plan.[13] However, substantive attempts to expand Yellowstone or in some other way protect the Tetons and Jackson Hole did not materialize until the close of World War I. The first legislative effort to protect the Tetons began 24 April 1918, when Wyoming Congressman Frank Mondell quietly introduced a bill to include the Tetons, the glacial moraine lakes at their base, and the northern portion of Jackson Hole in an enlarged Yellowstone.[14]

Though Mondell sponsored the bill, Horace Albright and Stephen Mather had crafted it. Horace Albright, the first of these two, loomed large over not just Jackson Hole, but over national politics and dialogue for more than fifty years. Born in Owens Valley, California, Albright saw the place of his childhood engulfed by the power of Los Angeles, thirsty for water. After earning a law degree from the University of California, Albright headed east and became the protege of Stephen Mather, the first director of the National Park Service, founded in 1916. Mather, a consummate lobbyist with keen political instincts, organized an art display of western landscapes at the Smithsonian, arranged a pro-park conference, and led a gargantuan pack trip in Yosemite with influential journalists and Congressmen to secure funds for his new agency. Albright learned from his example.[15]

At first, the passage of the bill for an enlarged Yellowstone National Park seemed assured. Jackson Hole residents, preoccupied with the worldwide influenza epidemic, appeared largely unaware of the measure. However, Idaho Senator John Nugent killed the bill in February of 1919, bowing to the concerns of Idaho sheepmen who feared the loss of their grazing rights.[16] A chance to protect the Tetons without much travail had been lost. Instead, Jackson Hole would be torn by controversy for more than thirty years.

Mondell reintroduced the bill in the next session. In late summer, Albright traveled to Jackson Hole, where he spoke before a gathering of locals, primarily dude and cattle ranchers. Wyoming's Governor Robert D. Carey also attended. Albright, assuming these citizens resembled most rural westerners, promised that the expansion of Yellowstone would mean more and better roads for the area. This proved a crucial miscalculation. Dude ranchers depended on the valley's reputation as an authentic remnant of the unspoiled West. Indiscriminate road construction endangered this image.[17]

The meeting soon degenerated into a shouting match: "The crowd propounded the question, 'Who wants the extension of the park?' This question Mr. Albright endeavored to answer several times, but did not succeed in making it clear."[18]

Albright later admitted his error: "I had made a serious tactical mistake in not carefully checking the attitudes of the citizens before going to the meeting."[19] Mondell withdrew his bill, and Albright retreated to Yellowstone, inaugurating his tenure as superintendent.

Although Albright beat a hasty retreat, the battle, as far as locals were concerned, was now joined. The editorship of the *Jackson's Hole Courier*, perhaps hoping news of a Yellowstone conspiracy would sell papers, started printing above the paper's masthead: "WHO WANTS THE PARK EXTENDED?—The Unanswered Question."[20] The paper printed dire warnings of the dangers of eastern capital and federal power. Shortly after the conflict arose, the *Courier* ran an article cataloging the horrors visited upon residents in the vicinity of Colorado's Rocky Mountain National Park. The paper asserted that the park had been monopolized by eastern capital, eliminating the livelihoods of local hotel and tour operators. The article condemned Superintendent L. C. Way, who "entered into a twenty year contract with the Rocky Mountain Parks Transportation Company (representing eastern capital seeking the commercialization of our western scenery) giving them EXCLUSIVE rights to haul passengers."[21]

Another editorial condemned an individual favoring park creation for being "strongly in favor of the state ceding it [Jackson Hole] to the national government, forever, to be exploited by railroads and hotel and transportation companies."[22] The paper asserted that ranchers, innkeepers, tour guides, and dude ranchers faced economic extinction if Yellowstone absorbed the Tetons. This view, while extreme, had some basis. Park concessionaires had early gained a reputation for mercenary, monopolistic practices.[23] Struthers Burt, who later came to support the park idea, issued a blistering indictment of Yellowstone and its expansion:

> Yellowstone Park is a national park only in name; it is a farmed-out proposition, run by a corporation; and run exactly as that corporation wishes. There is just one logical reason for the extension of the park, and that reason is that it will make money for the transportation company, who will thus be enabled to increase the length of the tour of the park from three to four days longer than the present trip—the present trip having been greatly cut down by the introduction of automobiles.[24]

Anyone who did not virulently oppose the national park idea faced the wrath of the *Courier*. Sometimes this yielded unintended comic results. The paper flatteringly reported President Warren G. Harding's trip through the West in the summer of 1923. However, his sojourn in Yellowstone included a brief glimpse of the Tetons. Upon seeing this vista, Harding became an advocate of the mountains' protection. A *Courier* headline curtly reported this event: "President Harding Sees Tops of Grand Tetons. Decides 400,000 Acres Must Be Added to Yellowstone Park. Another Man for Park Extension Who Never Saw the Area."[25]

In addition to their general paranoia of eastern capital, many Jackson Hole residents, not just ranchers, exhibited another tendency still found in the West today:

a lingering aversion to tourism as a primary source of economic activity. Locals still harbored dreams of making Jackson Hole an agricultural center, or even a site for some form of industry. For example, locals reacted vehemently when an article appeared in the *New York Times* stating that Wyoming's Governor Robert D. Carey and Senator John B. Kendrick favored Yellowstone's expansion because "they know that Jackson's Hole (where snow fell this Summer on July 4th and Sept. 4th) can hardly be turned into an agricultural paradise like Central Idaho."[26] *Courier* editor Walter Perry even claimed that booming industry, not scenery, would ensure Wyoming's fame, meaning "Wyoming will not need the scraps of publicity emanating from the Yellowstone National Park."[27]

Despite ranchers' overwhelming opposition to park expansion, nature and economics soon conspired to make them reconsider their opinion. In the fall of 1919, a severe drought hit the region, making hay for winter feed both scarce and expensive. This coincided with the global collapse of the beef market after World War I. The commodity markets had soared during the war, and the federal government guaranteed high basic prices for staple goods. But, with Germany's surrender in November of 1918, these ended. Demand plummeted, and within a year prices did as well.[28] Ranchers had to pay up to fifty dollars a ton for feed, and found in the spring of 1920 that their cattle were not worth the price of the food they had consumed.[29] Plummeting prices led farmers and ranchers nationwide to produce more goods, only exacerbating the problem. This downward spiral continued through the 1920s, meaning that for many farmers and agricultural regions the Great Depression effectively began a full decade before the 1929 Wall Street crash. The agricultural depression hurt many Americans, but was especially devastating in Jackson Hole, where ranching had been a marginal enterprise in the best of times. Ranchers who ran dude operations on the side found themselves wholly dependent on their tourist income. For those worst hit, selling out to the park service suddenly seemed inestimably preferable to bankruptcy.[30]

The ranchers' difficulties rippled across the valley. The *Courier* printed notices of businesses changing hands and sales of ranching and farming equipment.[31] Ads placed by residents seeking employment and statements by local businesses politely reminding customers to pay outstanding accounts grew common.[32] More ominous portents appeared later. In the summer of 1923, the *Courier* carried an announcement for a government auction of land and possessions belonging to citizens unable to pay state and county taxes. The list included 279 individuals, families, and businesses.[33] Notices of mortgage foreclosures also appeared increasingly after this point.

As agriculture faltered, valley residents tried to attract new sources of income. Such boosterism often focused on the town of Jackson, the largest settlement in the valley, located at its southern end. Jackson incorporated in 1914, and remains the only incorporated town in the valley today. The same year had seen the founding of the Jackson State Bank by a group of prosperous settlers.[34] The bank's cashier, Harry Wagner, also served as Jackson's first mayor. Initially, the bank's assets grew fairly steadily. By 1915, the bank listed total deposits of $76,252, and $244,315 in 1920.

However, they dropped sharply after that point due to the hard economic times that gripped the valley, and did not substantially rise again until the end of the decade.[35] Despite these fluctuations, the bank helped cement Jackson's position as economic hub of the valley.

The *Jackson's Hole Courier*, founded in 1909, provided another element in the town's dominance. It served as the primary source of information in the area, and endlessly promoted the valley's scenery, society, and economic potential while reserving the limelight for the town of Jackson. Its endless boosterism for economic development of all kinds illuminates residents' hopes and dreams, but also stridently clashes with the harsh economic realities they faced.

For all of the *Courier's* efforts, new economic development happened slowly, or more often did not happen at all. Any agricultural enterprise, whether centered on crops or livestock, suffered from the unalterable climate and isolation of Jackson Hole. Even geology, which left the area with a wealth of spectacular scenery, did not provide valuable minerals or ores. Locals discovered deposits of coal and phosphate, but transporting them out of the valley proved impractical. Some coal mining did occur, but this employed only a few who supplied coal for local demand, an already small market made smaller by the abundance of readily available firewood. Prospectors even panned placer gold in the Snake River, but in such scant amounts that it did not warrant recovery efforts.[36] This undoubtedly disappointed locals, but the lack of sizable mining operations protected the Tetons from the disfiguring scars and pollution the industry left as its hallmarks in so many parts of the West.

Jackson did score a major victory when named the county seat of newly formed Teton County in 1921. Before 1921, Jackson Hole had been included in Lincoln County, leaving valley residents 180 miles north of their county seat, Kemmerer. They vocally petitioned for a better solution. Wyoming's legislature created Teton County 18 February 1921, drawing boundaries that roughly followed the outlines of the Jackson Hole watershed. After a close election, Jackson became the county seat. The same year, Jackson reelected its mayor and town council, the first entirely female city government in America. The ratification of the Nineteenth Amendment, which granted suffrage to women, occurred in 1920. That same year, Jackson elected Grace Miller, wife of Jackson State Bank president Robert Miller, mayor, and Rose Crabtree, Mae Deloney, Faustina Haight, and Genevieve Van Vleck to the four seats on the town council. Jackson basked in positive media attention that presented it as a progressive, civil place, not just a county seat, but the most advanced town in "the equality state" of Wyoming.

The creation of Teton County warranted a poetic outburst in the *Courier*: "All hail Teton, county newest / Of Wyoming, favored state! All hail Teton, souls the fewest, / Starting out with cleanest slate!"[37] This trite stanza contains unintended ironies. The poem did not appear until 1923, because Teton County did not become an operating political entity until then. Lawsuits protesting the creation of the county delayed its inception for two years. The fact that the proposed county had "souls the fewest" constituted part of the problem. Teton County met neither the population

nor the economic standards required for county creation. Wyoming officials assented to the creation of what was, in truth, an illegal entity in part because Jackson Hole residents assured them that the new county would soon meet those requirements. It did not. In 1930, county population stood at 1,980 persons, well below the 3,000 persons required by the state.[38] Moreover, the state required a gross assessed taxable valuation of not less than $5 million. Teton County's assessed valuation subject to taxation did not reach even $2 million until 1931.[39] Teton County's creation, then, did not mark the triumph of prosperity and progress. It instead served as an act of political appeasement.

After the county's creation, locals focused on a new issue: the threatened destruction of the mirror-like moraine lakes at the Tetons' base. This concern has significance, for it demonstrates that Jackson Hole residents did not oppose a national park just as simple yokels in thrall to the frontier myth of endless resources and boundless development. The residents of Jackson Hole had exhibited their willingness to support conservation efforts two decades before, when they forced national action to protect one of the last large elk herds in the American Rockies. By 1885, large numbers of Yellowstone elk, cut off from their grazing areas in the Wind River mountains, wintered in Jackson Hole. They competed with cattle for winter forage, and also ate hay stored for livestock. This situation worsened as the cattle population increased. In the catastrophic winter of 1908–09, approximately 10,000 elk died of starvation, even though ranchers, who often profited from the hunting business, gave the animals what hay they could spare. Stephen Leek, one of the first full-time hunting guides, photographed grisly vistas of elk carcasses stretching to the horizon. He took the pictures east, hoping for governmental action. By 1912, a federal program commenced. The National Elk Refuge originated with 1,760 acres north of Jackson, and ultimately grew to 24,000 acres.[40] The refuge became one of the first major federal efforts to preserve not just scenery, but habitat and wildlife.[41] The refuge also signified cooperation between locals and government to protect a natural resource. Residents preserved their hunting business, and ranchers could even make a profit selling excess hay to the refuge.[42]

Dude ranchers knew that the moraine lakes, like the elk, provided natural amenities that drew tourists to the area, and many other locals appreciated the aesthetic values the lakes provided. For these reasons, out-of-state irrigation schemes engendered fearful speculation. Idaho announced its desire to draw water from the Fall River, located in the southwestern portion of Yellowstone National Park. Montana interests wished to dam Yellowstone Lake for hydroelectric power. While these plans later failed, Jackson Hole residents feared not only that they would pass, but that the extension of the park might allow similar projects on the Snake River, or on one of the moraine lakes at the base of the Tetons. Jackson Lake, the largest of these, had been dammed in 1906 and its dam enlarged in 1910, resulting in a reservoir storing water almost exclusively for the benefit of Idaho farmers downstream on the Snake.[43]

The conversion of Jackson Lake into a reservoir left it surrounded by dead,

inundated trees, and turned the Snake River into a muddy torrent during water releases. Locals complained of these results: "We…have seen and experienced the results of the damming of Jackson's lake, and the using of the Snake river for an irrigation ditch."[44] The state of Wyoming had already drawn up plans for the damming of Emma Matilda and Two Ocean lakes. Worse yet, officials of the Forest Service were considering the construction of saw mills on some of the lakes, and permitting timber companies to float logs down the Snake. The danger these and other Jackson Hole lakes faced made the park idea increasingly appealing to some residents. Struthers Burt, for example, transformed from a virulent enemy of the park service to one of its most eloquent supporters.

However, the scenic qualities of the lakes were threatened by more than just irrigation schemes. East of the lakes, new developments arose, constructed to cater to the needs of a new type of visitor: the auto tourist and auto camper. Car-bound recreation exploded in popularity nationwide as soon as cars became widely available. Auto tourists stayed in roadside cabins, while auto campers slept outdoors.

While locals normally welcomed visitation, their attitudes towards auto tourism proved complex. An anecdote told by Yellowstone Superintendent Horace Albright illuminates this ambivalence. In the 1920s, Albright often stayed at a Jackson inn operated by Rose Crabtree. On one occasion, she saw a car drive into Jackson, loaded with luggage and camping gear. Mrs. Crabtree ran out of her hotel and into the street, where she shook her fist and yelled, "There come the damn tourists!"[45]

ALBRIGHT FOUND THIS EVENT a humorous illustration of locals' contradictory attitudes, but it has a deeper meaning. Mrs. Crabtree resented the sight of that car with good reason. Locals had built guest cabins, gas stations, cafes, dance halls, and saloons east of the Tetons, particularly around the shores of the moraine lakes at their base. This tourist strip understandably upset preservationists, but also threatened tourist businesses in Jackson. The town lay several miles southeast of the central peaks of the range, and East Gros Ventre Butte, towering northwest of Jackson, blocked the Tetons from view. Hotel operators like Rose Crabtree had the most to lose. Visitors might still stop in Jackson for food or gasoline, but sought accommodations at more scenic spots. Worse yet, improving roads in Yellowstone might lead more tourists to enter Jackson Hole from the north, bypassing Jackson and other valley settlements entirely. Dude ranchers also feared the new car-bound tourists, for their presence impinged upon the rustic purity dude ranches sought to preserve, and auto campers, who camped in tents beside their cars, had no need for dude ranch accommodations.

Such concerns made their mark. While public opposition continued, some Jackson Hole residents privately decided that only some form of legal protection could preserve the Tetons, the moraine lakes, and the tourist industry that the valley increasingly depended upon. On 26 July 1923, dude ranchers Struthers Burt and Horace Carncross, cattle rancher Jack Enyon, former *Courier* editor Richard Winger, store owner Joe Jones, and affluent easterner turned Jackson Hole resident Maude Noble invited Horace Albright to Noble's cabin.[46] That evening, those assembled at the Noble cabin proposed to Albright a new plan to protect Jackson Hole, and established an alliance to further it.

All present wanted to preserve the spectacular scenery of the valley. How to best achieve this, whether through zoning, state protection, or by creation of a national park or recreation area, remained unclear.[47] Struthers Burt made the most intriguing proposal. He suggested creating a "museum on the hoof" to preserve both wilderness and culture. Habitat and wildlife would be protected as in a national park, but grazing, dude ranching, and some hunting would continue. Houses would remain log, and roads would stay unpaved. Open spaces would be kept undeveloped. The town of Jackson would be preserved and zoned to maintain a frontier ambiance.[48] Burt's proposal shared characteristics with Adirondack Park in New York, which enclosed preexisting towns within its boundaries, and also with Williamsburg, where strict zoning laws maintained a colonial atmosphere. The specific enforcement mechanisms to ensure compliance remained unclear. This idea might have precluded much of the conflict that followed, as well as the unsightly sprawl that later engulfed Jackson.

However, Burt's proposal did not come to pass. Albright agreed to support it, but privately believed that only a traditional national park, with its regulations and resources, could effectively protect the area. Whenever possible, Albright continued to take influential visitors over "terrible roads" from Yellowstone south to see the Tetons, using these tours as boostering junkets to promote national park status for the range. On one of these tours, Albright convinced John D. Rockefeller Jr. to embark on a plan to aid in the creation and expansion of Grand Teton National Park. This plan, however, did not become widely known until after the creation of the park in 1929.[49]

Meanwhile, Jackson Hole's grinding economic difficulties continued. The *Courier* carried an announcement for another tax auction, and the amounts delinquent taxpayers owed had risen.[50] Bankruptcy notices appeared in almost every issue of the paper. Soon after, the newspaper announced: "No legals will be released from this office beginning August 1, until payment received. Please do no embarrass us by asking for exceptions."[51]

As the agricultural depression continued and new enterprises did not materialize, the *Courier*, in a marked change from earlier boosterism, increasingly labored to promote a more promising prospect, tourism. This marked a distinct change of tone from earlier reporting, which had dismissed those who suggested tourism might be the valley's best hope for survival. Walter D. Perry, who served as editor from 1923 to the early 1930s, proved particularly effusive, abandoning the pro-industry rhetoric he had previously employed. In one editorial, he even argued that the increased price of food caused by tourist consumption was beneficial, for it meant that farmers had more to gain by selling their goods in Jackson Hole than by shipping them to Idaho or Utah. However, Perry's conclusions proved more blunt: "Dude money, tourist money is cash. That is something worth considering. Each dude, tourist, or big game hunter who visits Jackson's Hole and finds here his ideal vacation land automatically becomes a booster, an advertiser."[52]

Some of this boosterism touted the scenery of Yellowstone National Park, but

most concerned the scenic and societal virtues of Jackson Hole itself. Articles hailed increasing visitation, as in 1924, when 600 "dudes" stayed at ranches through the course of the summer, and the valley had an estimated total visitation of 5,000 tourists, including automobile travelers and campers. However, the fact that 145,000 people visited Yellowstone the same year demonstrates that most tourists to America's oldest national park did not venture south to Jackson Hole.[53] Separated by terrible roads and little-known, Jackson Hole did not benefit from Yellowstone's visitation as it does today.

The favorable tone that now accompanied the discussion of tourism did not carry over to debates concerning national park status for the Tetons. In August 1925, the Coordinating Commission on National Parks and Forests, created by President Calvin Coolidge, held hearings in the area. Though pressured not to act by the Forest Service, which controlled the Tetons, the commission voted to advocate the creation of a separate unit of Yellowstone to protect the central Teton Range. The *Courier* printed lists of all the ranches and summer homes endangered by the proposal and protests against park extension.[54]

Despite the paper's continued opposition, an increasing number of Jackson Hole residents began to rethink their opinions. Continuing bad times forced some to accept the possibility of national park status for the Tetons, and the possible creation of a separate unit of Yellowstone or even an entirely new park made this prospect more bearable. Si Ferrin and Pierce Cunningham, two long-time ranchers, circulated a petition that ninety-seven landowners signed, and sent it to the Commission's hearings in Casper. Park proponent Richard Winger wrote the proposal, something most signatories apparently did not know. This petition publicly printed what had previously only been privately discussed. It enunciated the once unthinkable but now growing view that the destiny of Jackson Hole lay not with agriculture or industry, but tourism. The petition urged the creation of some sort of recreation area or park to protect the scenery of Jackson Hole. It went on to condemn the Forest Service for its continued attempts to promote both economic development and recreation in the Tetons: "By trying to do two things at once, with the same area, thereby trying to please those interested in stock and those interested in recreation, the Forest Service has succeeded only in making life miserable for all concerned."[55] The most revolutionary passage followed:

> We have tried ranching, stock raising, and from our experience have become of the firm belief that this region will find its highest use as a playground. That in this way it will become the greatest wealth-producing region of the State. The destiny of Jackson's Hole is as a playground, typical of the West, for the education and enjoyment of the Nation as a whole.[56]

After this point, opinions began to shift elsewhere. The *Courier* moderated its anti-park tone, printing stories without the usual editorial comment. Wyoming Congressman Charles Winter and Senator John Kendrick announced that they could support the enclosure of the Tetons in a new national park separate from

Yellowstone.[57] Not coincidentally, bad economic news continued. By July of 1927, Teton County reported a debt of $24,272.22, and the school district had to take out another in a series of loans.[58] More bankruptcy notices and reminders for payment followed.

In 1928, the Senate Committee on Public Lands held a hearing in Jackson, where they discussed park proposals and received a largely friendly reception. After committee members retired to their accommodations at the J.Y. Ranch, however, a small group demanded to meet with them. Led by Jackson's state senator William C. Deloney, the group tried to reverse the senators' pro-park stance. While they failed, they did convince the committee to support the creation of a smaller park independent of Yellowstone, consisting almost exclusively of alpine terrain and the moraine lakes at the base of the Tetons. These new boundary lines excluded Jackson Lake, pleasing purists who feared that the inclusion of a pre-existing reservoir might allow further such development in existing national parks. Furthermore, grazing and even limited timber harvesting could continue. The construction of hotels or even permanent camps was prohibited, allaying fears of dude ranchers and Jackson hotel operators. These compromises made the park acceptable to almost everyone. After all, it primarily protected bare rock lacking potential economic value. Its territory nominally protected the other moraine lakes, but meant that development could continue immediately adjacent to their eastern shores.[59] The creation of a park separate from Yellowstone meant that the new park would not be seen as an extension of Yellowstone's monopolistic transportation and hotel companies. The agreement eased tensions, but also led to the creation of what one historian condemned as "a stingy, skimpy, niggardly little park."[60]

By January of 1929, a new bill crafted through compromise and sponsored by Wyoming Senator John B. Kendrick called for the creation of a 100,000 acre park encompassing the Tetons but omitting Jackson Lake, with its western boundary at the summit of the range. Senators favorably reported the bill out of committee in exchange for a formal promise to examine Idaho's water claims in the southwestern portion of Yellowstone.[61] On 21 February 1929, Congress passed an act creating Grand Teton National Park.

Instead of the expected vituperation, the *Courier* expressed resigned optimism. Before the new park opened, the paper urged, "Jackson must be prepared to face a new condition or fade."[62] When President Herbert Hoover signed the bill creating the national park on 26 February, the *Courier* ran editorials from other Wyoming papers praising the new park's creation. Jackson Hole prepared for the park's dedication festivities, scheduled for 28 and 29 July. The newly formed Jackson's Hole Chamber of Commerce went into high gear, convincing the National Editorial Association (NEA), composed of the nation's newspaper editors, to come to the park's dedication after their annual convention, meeting that year in Cheyenne. The *Courier* later announced that the chamber planned to entertain the NEA at a Jenny Lake fish fry the evening of 28 July. The article concluded with a note from editor Walter Perry: "Alright folks, pledge your support so that this affair may go over big. It

means much toward the growth and development of the valley. In many ways it's the most important event of the season. Let's get busy."[63]

In the course of a decade, the prospect of a national park in Jackson Hole had changed from a subject of violent opposition to a reason for optimistic industriousness. Obviously, part of the moderation in tone came with the reduction of the proposed park's boundaries, and with the creation of a new park instead of a simple annexation by Yellowstone. However, the primary reason remained economic. For Teton County, what had been anathema in 1919 seemed the only hope by 1929. Dreams of industry or agribusiness had gone unfulfilled. Only the hope of tourist dollars remained.

At the dedication ceremony, held 29 July 1929 on the eastern shore of String Lake, approximately 1,000 spectators witnessed Wyoming Governor Frank C. Emerson present a spectacular "gift" to the park service and the nation. Horace Albright, recently named director of the park service, happily accepted it. Spectators heard speeches and songs, and a group of mountaineers scaled the Grand Teton, leaving at its summit a bronze tablet commemorating the occasion. Dude ranchers, politicians, journalists, preservationists, and ordinary residents all came together, forgetting, if not forgiving, the animosities of the past decade.[64]

Unfortunately, this amicability proved short-lived. The plan that Horace Albright had fomented in secrecy with John D. Rockefeller Jr. unraveled, revealing a pro-park land buy-out plan that infuriated many locals. Further in the future lay a contentious debate over the creation of Jackson Hole National Monument and the ultimate expansion of Grand Teton National Park. In addition to these local travails, residents would also have to suffer through the Great Depression and World War II along with the rest of America. Only after these ordeals ended would the citizens of Jackson Hole finally begin to enjoy increased tourist visitation, the most lasting and ultimately most influential result of Grand Teton's creation.

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Lawrence Culver, Assistant Professor, Department of History, Utah State University, 0710 Old Main Hill, Logan, UT 84322-0710

The Influence of the American Concept of a National Park on Japan's National Park Movement

Taiichi Ito

Abstract

Japan's national park system was established under a strong influence of American parks. Information on establishing Yellowstone Park could have been heard of by Japanese delegates to the United States who were visiting when the park bill was signed by President Grant on March 1, 1872. However, interest in American national parks was boosted by early Japanese visitors' essays and other documents that gradually appeared in the 1890s. Among such visitors, Yoshio Kinoshita, a capable railroad manager with a background in civil engineering, viewed national parks as a potential resource to bring foreign tourists to Japan, and then to improve international understanding of Japan. He was interested in park management and supported the Japanese park movement through the Japan Tourist Bureau and its official publication. Complementing Kinoshita's realistic ideas, Tsuyoshi Tamura, a landscape architect as well as a forester, promoted national parks by stressing scenic quality and railroad access. Recognizing the fact that excluding private lands from a national park was impossible in Japan, Tamura and other park supporters adapted German land-use zoning methods in the National Park Law of 1931. Then, they determined park boundaries including private lands, though national forests and other public lands were preferred as core areas.

Introduction

The National Park Law of 1931 was successful in Japan thanks to the devoted efforts of national park supporters, many of whose overseas experiences led to an understanding of the importance of national parks. The American national parks had an especially strong influence on the establishment of their Japanese counterparts, although park promoters such as Yoshio Kinoshita and Tsuyoshi Tamura were well aware of the cultural and environmental differences between Japan and the United States, and tried hard to adjust the American idea of a park to a Japanese setting.

This paper traces the influence of the American parks on Japan's national parks movement before World War II, based on documents found in Japan and the United States. At the same time, the process of adapting the national park idea to Japan's environment is revealed. Then, characteristics of Japan's national park development will be discussed.

Establishment of Public Parks in Japan

The Meiji Restoration in 1868 opened Japan to the world, a change in policy after a long period of national isolation. The new government tried to introduce everything that was available in modern Western countries such as the United States, Britain, Germany, and France. One such desired Western facility was the public park. However, it was difficult to construct public parks in already crowded cities, and budgets were limited. Consequently, in January of 1873, the new government designated shrines, temples, and other traditional recreational areas as public parks. Since the ordinance did not distinguish city parks from other categories such as nature preserves, historic sites, or national parks, the areas designated were a mixture of various types of open space. However, it should be noted that the previous Shogun government had already protected a variety of areas. These were not only urban recreational areas intended for public enjoyment, but also de facto nature preserves intended for watershed management and other conservation purposes. These areas were later utilized as city parks or nature reserves.

In addition to these feudal regulations, Buddhism and Shintoism also played an important role in preserving the natural environment of Japan. However, although feudal governments had protected traditional scenic spots that were well known to the public, preserving nature for recreational purposes was a new idea. It therefore took a little time for the national park movement to develop, after initially supporters obtained relevant information from abroad.

The Iwakura Embassy and the Yellowstone Park Act

On December 23, 1871, the first major government mission to the United States and Europe following the Meiji Restoration was organized. It had three purposes: to pay courtesy calls to the countries that had ratified treaties with Japan; to amend the one-sided treaties that Japan had been forced to ratify in the last days of the Tokugawa Shogunate; and to study everything that there was to learn about in advanced countries. The Iwakura Embassy, named after Tomomi Iwakura, the ambassador extraordinary and plenipotentiary, consisted of about fifty important members of the government. It had an enormous influence on Japan's later national policy. This mission visited twelve countries over a period of one year and ten months, and returned to Japan in October 1873. During this long journey, the majority of the time was spent in the United States and the United Kingdom, revealing the mission's special interest in those countries.

Kume's detailed report[1] of the Iwakura Embassy reveals that the mission was also interested in public parks. They observed not only city parks, such as Central Park in New York City on June 10, 1872, and Boston Common in Boston on June 18, but also visited summer resorts, such as Saratoga Springs on June 15 and Niagara Falls in New York State on June 14. There is even a paragraph reporting on Yosemite Valley and the Giant Sequoias, though the mission did not have the chance to visit those areas.

Of more interest is the fact that the mission met with important figures involved

in the establishment of Yellowstone National Park when the park act was being enacted. The party arrived in Chicago on February 27, 1872, and was welcomed at the hotel by the governor of Illinois and General Philip H. Sheridan. On February 29, they finally reached Washington, D.C., and were greeted by the governor of the District of Columbia, who was Jay Cooke's brother. On March 4, President Ulysses S. Grant received Iwakura and his Embassy at the White House. On July 22, the Iwakura Mission left Washington, D.C., and visited Jay Cooke's mansion. They stayed overnight, as Jay Cooke could not return home before nightfall. The next morning, Cooke talked with the mission about the proposed transcontinental railroad to Seattle, and its influence on relations with Japan.

Thus, the mission not only arrived in Washington, D.C., on the day before the president signed the Yellowstone Park Act, but also met General Sheridan, President Grant, and Jay Cooke. Furthermore, the articles reporting the birth of Yellowstone appeared in several newspapers while the mission was staying in the United States.[2] It therefore seems quite possible that some members of the mission were well informed about Yellowstone. However, the journey through the territories of Montana and Wyoming was an exotic event for most of the Easterners, and even if mission members did hear of these things, they could not relate them to Japan. Besides, by the time that the party returned to Japan, the above-mentioned Japanese public park ordinance had already been proclaimed in early 1873, during their absence.

Early Japanese Visitors to American National Parks

The Iwakura Embassy did not leave any record of Yellowstone Park in their report, but retired General Grant visited Nikko in 1879 and suggested that the area should be protected.[3] Local people in Nikko petitioned the Imperial Diet to designate the area that included the Toshogu Shrine as an Imperial Park in 1911, when the park proposal was introduced. Nikko later became one of the first national parks in 1934, after the enactment of the National Park Law of 1931.

Reports on Yellowstone National Park were first published in Japanese in 1888, and subsequently articles on American national parks written by Japanese visitors began to appear in several magazines.[4] However, many articles were merely translations of English material, and not based on Japanese personal experience.

It is difficult to identify the first Japanese visitors to the American national parks. However, with the end of the isolationist policy many Japanese had emigrated to California, and Yosemite was one of the parks accessible to them, especially after the opening of the railroad to El Portal. For example, Zenshiro Tsuboya and Masaharu Anezaki visited Yosemite Valley in September 1907, using the Yosemite Railroad, which had been opened only a few months. Both wrote essays describing the grandeur of the Valley. Most important, Anezaki proposed the establishment of national parks in Japan from an ultra-nationalistic viewpoint.[5] Among such early Japanese visitors, Iesato Tokugawa (1863–1940) and his party are well recorded. Iesato was the legitimate successor of the last Tokugawa Shogunate, and was the speaker of the House of Peers in the Imperial Diet at that time.

Yellowstone became more accessible in 1903, when a branch line from

the Northern Pacific Railroad reached Gardiner, Montana, at the park's North Entrance, followed in 1907 by the Union Pacific branch line to West Yellowstone, at the West Entrance. Tokugawa's party arrived at the depot at West Yellowstone on the morning of July 7, 1918. They must have been on their way back to Japan following negotiations related to World War I, since they came to the United States as a mission of the Japanese Red Cross. Ninagawa,[6] one of the members of the mission, recorded the visit in a magazine and his account provides insights into the Yellowstone of those days. They spent three days in the park, enjoying fishing and swimming. J. E. Haynes, official photographer of the park, took their pictures.[7] His photographs reveal the transitional state of the park's management in 1918, with the superintendent, Chester A. Lindsley, in civilian attire, while other staff are in military uniform (Fig. 1).

Iesato Tokugawa, as the House Speaker, received the first national park proposal and petitions in 1911. His relatives were serious promoters of the conservation of historic sites and national monuments[8] and he may therefore have had some influence on the later national park movement in Japan.[9] However, records to support this have not yet been found.

Kinoshita's View of National Parks as a Railroad Manager

The above-mentioned individuals visited and enjoyed American national parks as tourists. However, Yoshio Kinoshita (1874–1923, Fig. 2), then a railroad engineer for the Ministry of Transportation, recognized the value of national parks as a tool for the promotion of international tourism and mutual understanding, from his viewpoint as a railroad manager.[10]

Figure 1. Iesato Tokugawa at Yellowstone with the superintendent, Chester A. Linsley and his staff (J. E. Haynes Collection).

Kinoshita left Japan on September 16, 1904, to study railroads and related facilities and services. After his arrival in Philadelphia early in December of that same year, he became a special student at the University of Pennsylvania, and studied traffic management under Professor Emory R. Johnson.

During the summer of 1905, he stayed at Crawford House in White Mountain, New Hampshire, and inspected the railroads in the region, including the cog rail that ran to the summit of Mt. Washington. His reminiscences reveal that while he was in the area he had the idea of establishing a national park at Mt. Fuji, funded by some of the compensation expected from a defeated Russia. He did not visit the western national parks, but his experiences in eastern resorts, such as the White Mountains, must have convinced him that a national park combined with railroad service was a powerful tool, one that could boost international tourism in Japan. In addition, he was an extensive reader, and might have read Nathaniel Langford's *The Discovery of Yellowstone Park, 1870*, or Hiram Chittenden's *The Yellowstone National Park* (fifth edition) both published in 1905.

Figure 2. Yoshio Kinoshita (Courtesy of Ms. Emiko Shingu, Daughter of Yoshio Kinoshita).

In March 1906, Kinoshita left for the United Kingdom to further study transportation. Along with his railroad study, he tried to visit as many scenic areas as possible, such as the Lake District. After visiting other European countries, he finally returned to Japan, via Siberia, on October 21, 1907, and then worked hard to improve railroad service in Japan.

Less than four years after his return, a proposal to establish a national park at Mt. Fuji was introduced to the Imperial Diet. Kinoshita was invited to attend a committee on the national park proposal in the House of Representatives, to explain the park system in the United States and Canada. His detailed lecture stressed the importance of good park management, taking advantage of his on-site experience in the United States. Thanks to his precise explanation, the proposal was adopted on March 14, 1911, and Kinoshita then dispatched letters to major American national parks, asking for detailed information on park management.

For example, the acting superintendent of Yellowstone, Colonel Lloyd M. Brett, answered Kinoshita's requests by sending the annual report and the park rules, and arranged the cooperation of F. J. Haynes and the Northern Pacific Railways.[11] These documents reveal that Kinoshita was interested in the economic benefits of national

parks and the role of railroads in introducing more foreign tourists. At that time Japan was suffering a depression, and was eager to obtain foreign exchange. One of his men recalled that they initiated a survey of the proposed Mt. Fuji National Park, although no evidence has been found of that work.

At the same time, Kinoshita recognized the importance of supplying information on Japan, to dispel hard feelings following the Russo-Japanese War of 1904–1905. In late 1911, in parallel with the national park study, he proposed the establishment of the Japan Tourist Bureau (JTB), an organization to promote international tourism and to assist foreign tourists. Established in 1912, JTB introduced a bilingual "Tourist" magazine the following year. The Japan Tourist Bureau and this magazine played an important role in promoting both the national park movement and international tourism in Japan.

A full-scale national park movement had to wait until the 1920s, when Tamura initiated a park survey. The nine-year period of stagnation after the passage of the first national park proposals in 1911 can be attributed to several causes. First, Kinoshita was occupied with railroad business after 1913, as the Director of Transportation at the Railroad Agency. For instance, he introduced around-the-world railroad tickets with the help of Thomas Cook in the United Kingdom. However, his right-hand men in JTB contributed articles on national parks to "Tourist" magazine. In 1916, JTB also hosted a lecture by Mark Daniels, the General Superintendent and Landscape Engineer for National Park in the United States, before the establishment of the National Park Service, in an effort to promote national parks in Japan. Thus, efforts to boost support for parks continued.

Second, after 1911 the government was inclined to protect historic sites and natural monuments, rather than to establish national parks.[12] Almost at the same time that the first national park proposals were discussed in the Imperial Diet, a proposal to protect historic sites and natural monuments was also under consideration. The idea had been introduced by a professor of the Imperial University, Manabu Miyoshi, who had studied botany for three years in Germany, beginning in 1891. In 1906, Germany established the National Natural Monument Protection Bureau, and its director, H. Conwentz, impressed Miyoshi with his outstanding conservation achievements. Miyoshi's idea gained the support of influential members of the House of Peers, who were concerned about the destruction of historic sites following the Meiji Restoration. Such strong support led to the enactment of the Historic Sites, Scenic Beauty and Natural Monument Preservation Law in 1919. The Division of Geography in the Minister's Secretariat of the Ministry of Home Affairs was responsible for such sites.

Third, the Forest Law of 1897 already provided some protection for twelve types of Protected Forest, including scenic protection. About 20 percent of the Protected Forests were private forests. Furthermore, the Forestry Bureau started to designate Preservation Forests within the national forests, based on scientific and cultural considerations. Thus, some of the likely national park areas were already under protection after 1897. This regulation seems to have acted as the reasonable excuse to shelve the national park proposals until the passage of the Historic Sites, Scenic Beauty and Natural Monument Preservation Law of 1919.

Unfortunately, Kinoshita succumbed to tuberculosis following a trip to Siberia, where he was negotiating a Trans-Siberian Railroad route from Japan. He died on September 8, 1923, amidst the confusion caused by the Great Tokyo Earthquake. However, his thoughts on national parks and on the role of the railroads in tourism influenced succeeding national park promoters, such as Tamura.

Tamura's Emergence as a Principal Park Maker

Tsuyoshi Tamura (1890–1979, Fig. 3), landscape architect and conservationist, is internationally reputed to have made the first proposal for a World Conference on National Parks, at a General Assembly of the IUCN meeting in Athens in 1958. He received the Keystone Medal at the Second World Congress on National Parks, held at Yellowstone and Grand Teton National Parks in September 1972.

His interest in national parks is evident in his first book entitled *Introduction to Landscape Architecture*, published in 1918. This led to his involvement in a field survey to identify suitable national park areas, which was commissioned by the Sanitary Bureau in the Ministry of Home Affairs. The bureau had been in charge of public parks since 1873, in the belief that parks maintain public health. However, Tamura later recollected that he had a hard time understanding what national parks really were, since little information about them was available in Japan in those days. Nevertheless, he gained some knowledge of national parks from books by Frank A. Waugh, Professor of Landscape Gardening at the University of Massachusetts, Amherst.

Tamura's first encounter with American national parks was in the summer of 1923. He left for the United States on March 20, to study national parks and forest recreation. He visited Yellowstone from August 17 to 22, following visits to Yosemite, Mt. Rainier, Glacier, and Canadian national parks in the Rocky Mountains. Then he headed for Washington D.C., to visit the headquarters of the National Park Service, where he had the opportunity to meet with the director, Stephen Mather. He also visited western national forests and met the area's first recreation engineer,

Figure 3. Tsuyoshi Tamura with Harold J. Coolidge at the International Conference on Marine Parks, Tokyo, 1975 (National Park Association of Japan).

Arthur Carhart, in Denver, although by that time Carhart had already left the Forest Service.[13]

While the Sanitary Bureau had hired Tamura to investigate proposed national parks and obtain park information from the United States, the Division of Geography was also interested in national parks and had a book on American national parks translated in 1920. Its author, Dr. T. Ahrens, was born in Baltimore and emigrated to Germany to work for the National Natural Monument Protection Bureau. This meant that the Division of Geography, in charge of historic sites, scenic beauty, and natural monuments, obtained information on American national parks via Germany. Consequently, their view of national parks reflected the protection-oriented German approach to the natural environment, which recognized national parks as nature preserves rather than as recreational areas.

On the other hand, Tamura and the Sanitary Bureau stressed the recreational and scenic value of parks, and appealed to the public that national parks could bring international tourists and income to Japan. Naturally, both local politicians and the public in the proposed park areas supported the kind of park proposed by the Sanitary Bureau, especially as the recession following World War I was becoming serious.

Thus, the national park movement promoted by the Sanitary Bureau gained public support. However, after studying abroad Tamura became more realistic and recognized that Japan could not establish national parks like Yellowstone or Yosemite, since it no longer had large areas of public domain. The fact that his magazine articles introducing the American national parks started in Hot Springs National Park, and then followed with Lafayette National Park (now Acadia) reflects his penetrating consideration. These two parks contained many private inholdings, similar to the proposed Japanese national parks.

The draft national park bill of 1930 proposed that parks be created by designating specific areas, including private land, and that land-use be controlled by zoning.[14] This idea came from the Forest Law of 1897 and the City Planning Law of 1919, both of which were drafted after studying similar laws in Germany. The resulting National Park Law of 1931 included articles on the regulation of land use by zoning, and compensation to private landowners for economic loss was stipulated. However, it was an era of global business depression, and no budget was allocated. Therefore, they deliberately avoided the inclusion of private land in park lands, especially in Special Areas with stronger forestry restrictions. Public areas such as national forests and semi-public land owned by temples and shrines were preferred. The resulting twelve original national parks included on average only 13 percent private land.

Discussion

The American national parks had a strong influence on the national park movement in Japan, especially through Kinoshita and Tamura, each of whom studied American national parks independently. However, in the process of assimilating national parks into Japanese culture and land ownership systems, various adjustments were made.

First, just as Japan learned from both the United States and from Europe after the Meiji Restoration, so the national park movement also shows clear evidence of

the influence of not only the United States but also of Germany. Especially, the Division of Geography supported the German protection system, and the Forest Law shows a strong German influence.

Tamura was impressed by the American national parks, and promoted national parks as recreational areas. He thought that Italian parks, which included both private land and national forests, were more practical, but he also had information on the Adirondack Park, which was established in 1892. This park, with extensive private lands within the so-called "blue line" border, could be a model of Japan's national parks. However, the boundary was marked simply for future land purchase, and the park had no land-use zoning regulations in those days. Japanese park promoters therefore referred to existing domestic laws that included zoning regulations. In short, the idea of national parks came from the United States, while practical adjustments were made by consulting German-influenced laws.

Second, discussions in the National Park Commission revealed that forestry was a major force behind zoning regulations in Japanese national parks, and that the Forestry Agency supported designating national forests as national parks. This is in sharp contrast to the conflict in America between the National Park Service and the U.S. Forest Service. From the beginning, the Forestry Agency was also interested in parks, as shown by the fact that Tamura was commissioned for a field study abroad by the Forestry Agency, as well as by the Sanitary Bureau. Tamura himself was not sure which agency could best take care of the parks. He had a doctoral degree in forestry, and his advisor was a leading forestry professor, Seiroku Honda. However, after visiting the United States, and especially after meeting Carhart, Tamura was convinced that management by the Sanitary Bureau, with its experience of city parks, would be better. The Forestry Agency found no problems with the possible restrictions imposed by the National Park Law. For these reasons, management of the national parks by the Sanitary Bureau was settled by the time the park bill was drafted, and the Forestry Agency accepted the double agency management of national forests in national parks.

Third, although nationalism had some influence over the park movement in Japan, promotion of international tourism was a much more crucial motivation than it was in the United States. Alfred Runte pointed to the influence of American nationalism and a national inferiority complex in the face of overwhelming European culture as principal forces behind the American national park movement.[15] While the "See America First" campaign tried to bring back the American tourists that were heading for Europe, Kinoshita and other promoters were eager to secure foreign exchange and to alleviate the depression and poverty in Japan. In addition, at a local level, residents of the proposed park areas enthusiastically supported the parks, in expectation of the beneficial economic effects incidental to the parks' establishment. Thus, regionalism, rather than nationalism, was the prevailing force behind the park movement for individuals in Japan.

Fourth, facing pre-existing industrial land use, Japan's national parks accepted private inholdings from their inception. Runte also developed the so-called "worthless land theory" as a prerequisite to being a national park in the United States. In contrast, Japanese national parks were established with the condition that they

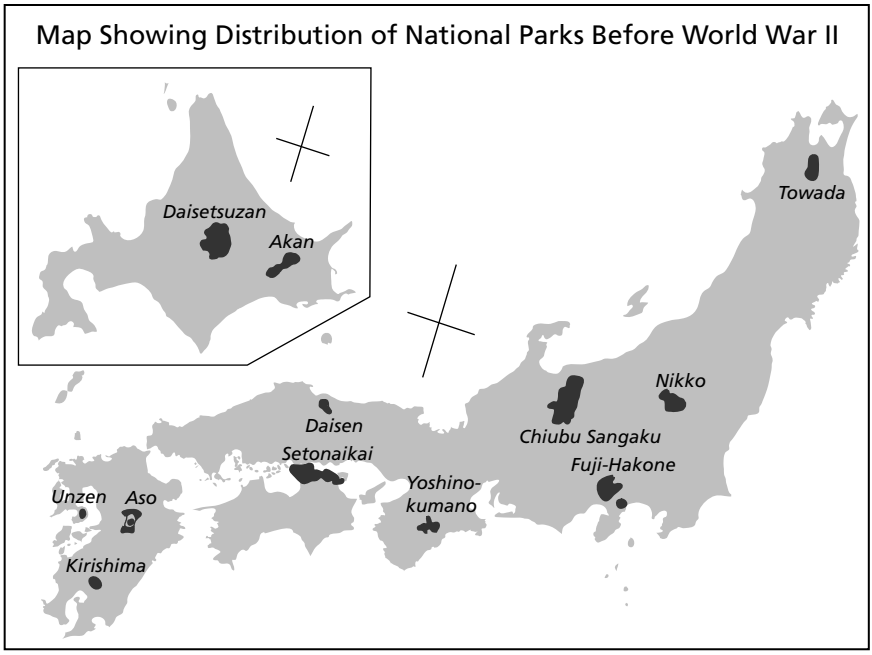

Figure 4. National Park System of Japan (adapted from J. Amishima's The National Parks of Japan*, 1938).*

must coexist with forestry and other industrial uses.

Fifth, Japan's national parks began as a system stipulated by the National Park Law, while American parks were established by individual acts. This is partly because the promoters learned from the American precedent. However, the regional support for local park proposals forced the park-makers to consider distribution and geographical balance when they were at the drafting stage of the National Park Law. Consequently, the original twelve national parks are scattered all over Japan (Fig. 4).

Finally, although the twelve national parks were designated by 1936, Japan was struggling desperately with economic depression and gradually became involved in World War II before a management system was established. In real terms, it wasn't until after the war that a management system was formed, under the absolute influence of the Occupation Army. The National Park Service dispatched Charles A. Richey, then the Assistant Chief, Land and Recreational Planning, to Japan in April 1948, to make a master plan for the Japanese national parks. He visited the proposed park sites with Tamura and other park supporters for five months, and submitted a report[16] to the General Headquarters, Supreme Commander for the Allied Powers on November 18, 1948. Many of his suggestions in this report were deeply influenced by Tamura's ideas, which definitely affected post-war Japanese national park policy. Thus, Tamura is regarded as father of national parks of Japan.

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Taiichi Ito, Graduate School of Life and Environmental Sciences, University of Tsukuba, Tsukuba 305-8572 Japan

Roundtable Remarks

The Greater Yellowstone Idea

Robert Keiter

Let me start by applauding, while also questioning, the organizers' decision to place an attorney as the final regular speaker on the conference program. They must have had great confidence that I would hold the audience with penetrating legal analysis, or, perhaps, there were other reasons for that selection. Anyway I appreciate the opportunity to talk about the Greater Yellowstone idea.

Let me begin by quoting Paul Schullery from his wonderful new book *Searching for Yellowstone*. Just briefly, Paul makes the point on page 197 that "the emergence, especially in the 1970s, of the widespread public consciousness of Yellowstone National Park as part of a greater ecosystem is probably the most important conceptual shift in public understanding of the park since it became a formal wildlife preserve in the late 1800s," thus suggesting the power of the notion of the Greater Yellowstone concept itself. Historically, the concept of Greater Yellowstone can be traced to 1917 when Emerson Hough coined the phrase in noting and endorsing various repeated efforts to expand the park to include related adjacent lands. The modern coinage of the Greater Yellowstone Ecosystem term is traced by most observers to the Craighead brothers who employed it during their 1970s grizzly bear studies, which have been alluded to earlier. We also should note the creation in the mid-1960s of the Greater Yellowstone Coordinating Committee which was established among the principal federal land management agencies in the region to address common management problems. And, we should note the establishment in the early 1980s of the Greater Yellowstone Coalition, an environmental advocacy organization with a region-wide focus dedicated to promoting the notion of coordinated, ecosystem-based management for the region. That organization has not only achieved some significant success in this arena, but it also has served and continues to serve as something of a prototype for regional organizations in other locations around the west and elsewhere. That's a very brief sketch of the history or evolution of the Greater Yellowstone concept, at least as an institutional matter.

There is an inherent logic to the idea of Greater Yellowstone. Economically, the communities located in the region that surrounds Yellowstone National Park have understood, virtually from the beginning, that they are linked both to the national park and to the nearby national forests, that there is a sort of umbilical cord that attaches these communities to the surrounding federal lands for economic reasons. You can see that connection in the various policies that have been pursued over the years by individuals, businesses, and governmental entities seeking to protect those economic interests, which range from tourism to the extraction of lumber, and beyond. More recently, we've begun to understand, as the other speakers alluded to,

the ecological connections between the various lands that are defined individually on the map of this region, including the national parks, the national forests, and the other lands. These ecological connections include such phenomena as grizzly bear range, bison and elk range, the presence and impact of fire, other natural processes including geothermal activity, and the watersheds located within the region. As a result, it has been suggested that the Greater Yellowstone Ecosystem ought to be defined as roughly twenty million acres in size, embracing two national parks, three national wildlife refuges, and six or seven national forests that fall within three states, as well as twenty or more counties and at least as many local governmental entities. That's a very rough sketch of the practical origins of the concept and a definition, at least one of the definitions, that has been applied to it.

But what does it mean? What does Greater Yellowstone or the Greater Yellowstone Ecosystem mean? Is it just a nice convenient identifying phrase and nothing much more? Is it merely a federal concept that has no relevance to local communities or that garners no support among state and local governmental entities? Is it simply an effort de facto to expand Yellowstone National Park boundaries? Or does it instead suggest the need for a brand new type of coordinated ecosystem-based management for the region? Or even more grandiosely, does it envision a sort of vast, nature-first wildland complex here in the Greater Yellowstone Area? All of these are possibilities; all of these have been suggested as what the concept means or ought to mean, and, they all have been, and will continue to be, the focus of argument over the Greater Yellowstone concept. Having now raised those issues, let me offer four primary observations about the Greater Yellowstone idea. I've divided or characterized them as conceptual observations, institutional observations, strategic observations, and what I refer to as more universal observations.

On the conceptual level (and we've heard a fair amount about this already), it seems to me significant that there has been surprisingly rapid progress towards acceptance of the Greater Yellowstone concept. You have in the 1960s, as I've mentioned, the creation of the Greater Yellowstone Coordinating Committee (GYCC). That group moved on to endorse the idea of a Greater Yellowstone Area during the vision process in the 1980s, and, more recently, those federal agencies have endorsed the notion a Greater Yellowstone Ecosystem. You also have, as I mentioned, a regional environmental organization—the Greater Yellowstone Coalition—that continues to promote this concept at every opportunity. And you have the conservancy districts in the area organized under the banner of Greater Yellowstone. On the ground, the Greater Yellowstone concept and the connections that it implies played a role, perhaps even a major one, in the organizing effort that recently thwarted establishment of the controversial Noranda mine. What I'm suggesting, then, is that conceptually there has been a significant amount of progress toward legitimizing the Greater Yellowstone Ecosystem idea.

Let me finish this point by reading something that I wrote almost ten years ago: "the ecosystem concept interjects a provocative new image into the debates that are now influencing and molding public lands policy. Scientifically, the concept demonstrates the indisputable interconnectedness of jurisdictionally fragmented pubic lands. The concept also has great power as a metaphorical device; rooted in

scientific fact yet evocative enough to stir the hearts and minds of an American public now strongly committed to the preservationist ideal and its national park heritage. Already the Greater Yellowstone Ecosystem concept has fused two world-renowned national parks, several well known wilderness areas and the adjoining national forest lands into a regional entity that has engaged public attention at national and international levels. It has broadened the perspective of land managers beyond their own borders and it is transforming traditional land management policies. In short, the ecosystem concept provides the fundamental premise for regional management and thus brings a compelling new vision to the ongoing debate over the future of the public domain." I'll stand by those words notwithstanding the events of the last ten years since they were written.

Now some further observations that are institutional in nature. Here, both within Greater Yellowstone and elsewhere, the shift toward thinking in greater ecosystem terms has been a more gradual and evolutionary—rather than revolutionary—process toward giving some real institutional meaning to the notion of ecosystem-based management. Currently, several important issues are being addressed through interagency, ecosystem-based management initiatives. The GYCC is still in place and functioning. It is reexamining, on a coordinated basis, both fire policy and winter–use policy. It plays a role, along with the U.S. Fish and Wildlife Service and the relevant state agencies, in grizzly bear and wolf recovery efforts. A separate regional entity—the Greater Yellowstone Interagency Brucellosis Committee—is engaged in attempting to resolve the current bison controversy. Having noted this progress toward ecosystem-based management, let me also say that it's a difficult and often frustrating process. The institutional arrangements are difficult; they're not necessarily efficient; they don't always work that well; and the players are continuing still to feel their way along the path toward ecosystem-based management. On that note, the Greater Yellowstone Coordinating Committee's vision process is regarded rather widely as a failed exercise in federal interagency coordination. And although the Noranda dispute was framed in terms of the impact that the mine might have on Yellowstone Park and although various ecological connections were made evident in the arena of public debate, it is clear that resolution of that issue was not a comfortable or coordinated interagency solution between the park service, the forest service, and the other involved federal and state resource management agencies. So, as an institutional matter, implementation of a Greater Yellowstone management regime is progressing in fits and starts.

Let me turn to my third point, and it's a strategic point that seems to emerge from the notion of a Greater Yellowstone. Despite the frustrations and difficulties that I've alluded to in management, it seems to me that there is more to be gained than lost by acknowledging and building upon the idea of a Greater Yellowstone community. Numerous commonalities exist within the region's communities and within all three of the states that are reached by the Greater Yellowstone concept. Politically and institutionally, there is much to be gained by acknowledging these commonalties, both within the federal agency structure and at the state level. Particularly for the states, rather than individual states going it alone, a united Greater Yellowstone approach to and recognition of shared problems might lead, in many instances, to a

saner and more satisfactory resolution of common problems. If somehow we can bring the shared interests of all the communities and states within the Greater Yellowstone area to bear on common problems, then we can figure out solutions that work on a regional basis and leverage the strength of this commonality to achieve better and more durable solutions. As an example, consider the bison-brucellosis controversy. The parties have fragmented off the different states in the bison controversy, and they are addressing the issues piecemeal in Montana, Wyoming, and Idaho, rather than on a joint basis where there are common and shared interests with respect to this important resource. Instead of having the issue framed and resolved by statewide livestock and wildlife concerns, if we can get Greater Yellowstone's wildlife and livestock concerns to the forefront in this issue, then we might make more progress in resolving the matter. And to do this—and here I think Susan has hit the nail squarely on the head—will require engaging and involving all of Greater Yellowstone's citizens and communities in these region-wide issues and problems.

Moving on to my final point, I have some universal observations about the Greater Yellowstone Ecosystem concept. The basic idea is of great importance for national parks, which today stand to benefit immensely from the greater ecosystem concept. Paul Schullery put it quite well, I think, in the passage that I read to begin this talk. It is significant that the ecosystem management concept was pioneered in Greater Yellowstone, but it has now, as most of you are aware, been transported afield and taken hold elsewhere. In the Pacific Northwest, ecosystem management has been endorsed in the regional forest plan designed by the U.S. Forest Service and the Bureau of Land Management to address the timber harvesting-spotted owl controversy. The federal court that reviewed that plan legitimized the notion of ecosystem management on public lands. The White House has now convened an interagency task force that has endorsed the notion of ecosystem management. Virtually all that is lacking, at least at the federal level, is explicit congressional endorsement of the concept. That will take awhile for reasons that are probably obvious to all.

Although the vision process that I alluded to earlier is widely regarded as a failed GYCC initiative from the 1980s, it actually spawned some interesting offshoots that are really outgrowths of that vision process. If you examine what is occurring in the Upper Columbia Basin EIS ecosystem project, it emulates rather closely what was done by the GYCC. First the U.S. Forest Service and BLM did a regional inventory or assessment of ecosystem resources, which was then followed by recommended revisions to the management plans for the area—all done on a large ecosystem scale. There are some differences: the National Environmental Policy Act was used in that process, while it wasn't used in the GYCC process. But the basic approach was still quite similar to the GYCC's vision process. You can also see parallels in other both smaller and larger ecosystem initiatives around the West. The Sierra Nevada ecosystem project is another example that bears a resemblance to the GYCC vision process.

More grandiosely, and perhaps more optimistically, it seems to me that the ecosystem management process offers an opportunity to repair the longstanding schism between the utilitarians and the preservationists. Ecosystem management is

a concept that could merge these divergent traditions in natural resource philosophy together into a shared approach to resource management in regions like Greater Yellowstone and elsewhere. As I suggested, it is therefore vitally important for the National Park Service to be involved in this debate, not only in Greater Yellowstone but throughout the federal bureaucracy. It must be actively engaged in defining what ecosystem management might mean and how it can be used to promote park resource protection.

Let me conclude with an anecdote about the power of the idea of the greater ecosystem concept. Four years ago, I served as a Fulbright scholar in Kathmandu, Nepal. Among other things, I studied the national park system in Nepal. One of the things that really struck me was the commitment that the Nepalese and Chinese governments had made to creating a Greater Everest Ecosystem conservation area. This Himalayan "greater ecosystem" includes a series of national parks, nature reserves, and conservation areas surrounding the tallest mountain in the world, itself another major and world famous landmark like Yellowstone. And that, I think, vividly illustrates the potential power and reach of this concept. Thank you.

Robert Keiter, Wallace Stegner Professor of Law and Director of the Wallace Stegner Center for Land, Resources and the Environment, University of Utah, S. J. Quinney College of Law, 332 South 1400 East, Salt Lake City, UT 84112

A House Divided: The National Park Service and Environmental Leadership

Richard West Sellars

In 1991, a conference on national parks held in Vail, Colorado, focused on what it termed "environmental leadership"—asking by what means should the National Park Service establish itself as a leader in sound ecological land management. On the surface, it seems strange to raise such a question about a bureau that for three-quarters of a century had managed special public lands under the mandate to leave them "unimpaired." Yet the park service had always emphasized a kind of tourism and scenery management. And its response to demands to become more ecologically informed—especially outspoken since the early 1960s—had been, as a Vail conference document noted, "sporadic and inconsistent, characterized by alternating cycles of commitment and decline." The question then arises: What historical factors limited the National Park Service's success in this regard?

With the Northern Pacific Railroad Company as its chief lobbyist, the 1872 Yellowstone Park Act made a commitment to nature preservation—but it also, in effect, heralded the emergence of tourism as an important part of the economy of the American West. In the parks, economic benefits derived from public lands would be based on a low-impact utilitarian use—tourism—rather than on the more customary extraction of natural resources. Products of their times, the early national parks were not intended to be inaccessible nature preserves. The public was encouraged to visit the parks and to stay for a while—an obvious factor, but one which had enormous implications for the future of the national parks.

By the early twentieth century, for example, more than 400 miles of roads had been built in Yellowstone, along with hotels, horse corrals, and trails. Yosemite, Sequoia, and other early parks were similarly developed for tourism. Such development came also to include maintenance facilities, electrical plants, employee housing, campgrounds, garbage dumps, and extensive water supply and sewage systems.

The treatment of natural resources also reflected the desire to ensure that the public enjoyed the parks. To protect popular species of wildlife, predators such as mountain lions, wolves, and coyotes were killed. Naturally occurring forest fires were suppressed to protect beautiful green landscapes. And to please anglers, millions of fish—native and non-native species—were planted in lakes and streams, many of which had previously been fishless.

Reflecting the utilitarian nature of national park affairs, the principal proponents of the 1916 National Park Service Act were a former borax mining executive (Stephen T. Mather), a landscape architect (Frederic Law Olmsted, Jr.), a horticulturalist

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(J. Horace McFarland), and a young lawyer (Horace Albright). Like the other founders, Olmsted, who drafted the act's principal statement of purpose—that the national parks be left "unimpaired for the enjoyment of future generations"—gave no indication in his correspondence that "unimpaired" required an exacting biological preservation within the parks. Rather, as one whose profession involved the aesthetic enhancement of landscapes for public enjoyment, Olmsted was concerned about keeping national park *scenery* unimpaired—maintaining the beauty, dignity, and nobility of the parks' majestic landscapes.

The 1916 act thus mandated no changes whatsoever for previously established policies dealing with predators, forests, fish, and other natural resources. Instead, the act consolidated a dispersed park management by creating an assertive new bureau within the Department of the Interior—one that was backed by advocates of outdoor recreation, tourism, and landscape preservation, and one that could promote the national park idea with Congress and the public.

Guided by the 1916 act, development to accommodate tourism in the national parks continued with few interruptions. Several periods of construction and development stand out: the Mather years (1916–1929); the New Deal era, when President Franklin Roosevelt's emergency work-relief funds meant flush times for the park service; the billion-dollar Mission 66 development program (1956–1966); and the Bicentennial era.

Through most of the 1950s, it could be argued (and was assumed by National Park Service leadership) that with decades of scenery protection and tourism management in the parks the park service was meeting its original mandate. Mission 66 alone, totaling a billion dollars of appropriated funds over a decade, provided substantial evidence that ensuring accessibility and public enjoyment of the parks was exactly what Congress and the people wanted. Meanwhile, more than half-way through Mission 66, the budget for biological research in the parks amounted to less than $30,000 per year—a factor of no concern to Congress or the public at large.

Concerns about the national parks were expressed, however, and during the Mission 66 era these concerns underwent important changes. They were first focused on deteriorated postwar conditions of park facilities (this was blamed mostly on Congress). Criticism then shifted toward the park service for the appearance and the extent of its modernistic, intrusive Mission 66 development. Finally, by the early 1960s, critics targeted the park service's refusal to consider the ecological impacts of park development or to use science in park management. Like many of today's critics, they began to define the most crucial park needs in terms of ecological preservation and science.

Significantly, however, the drive to develop the parks for tourism had propelled developmental professions into commanding roles within the park service. Landscape architecture, because it formed the crucial link between park development and the protection of scenery, became the single most influential profession in the park service (a position that, arguably, it maintains today). Early on, the landscape architects had joined with engineers, foresters, and park superintendents and rangers in establishing a loosely allied but enduring park service leadership, whose values and perceptions formed the dominant culture within the park service. These leaders were deeply committed to public enjoyment of the parks, valued park scenery much more

than ecology, and evidenced little interest in acquiring a scientific understanding of the parks. With minimal internal opposition, the leadership imposed its values and principles on a receptive park service rank and file, and established managerial traditions that, in part because of their success with the public, became taken for granted as right and proper for the parks.

THROUGHOUT NATIONAL PARK HISTORY, biological science has been the only important program to have been initiated with private funding. Indeed, during Stephen Mather's directorship the park service established a firm policy of borrowing scientific expertise from such bureaus as the U.S. Forest Service, the Bureau of Plant Industry, and the U.S. Biological Survey. In 1929, however—thirteen years after the park service was created—George Wright, an independently wealthy biologist stationed in Yosemite, used his own funds to launch a survey of wildlife in the national parks and to establish a park service office of wildlife biology. Later funded through the park service's own appropriations, this office grew by the mid-1930s to a maximum of about twenty-seven biologists who conducted research and reviewed park development projects for possible impacts on natural resources.

In the context of prevailing park service values, the wildlife biologists' vision was truly revolutionary, penetrating beyond the parks' scenic facades to comprehend the significance of the complex natural world and challenge the managerial status quo. The biologists, for example, opposed the killing of predators and voiced concern about the ecological impacts of park development. With no true botanists in the park service's resource management programs (the foresters were mainly "timber men"), the wildlife biologists sought to maintain natural conditions in national park forests, adamantly opposing the policy of total fire suppression, arguing that in a national park a blackened forest is just as valuable as a green forest. And they charged that chemical spraying to kill native insects in the forests violated the very purpose of the national parks.

Without George Wright's leadership, the park service may have waited decades to create a science program—there is no evidence to indicate otherwise. Indeed, when Wright's leadership was ended by his untimely death in 1936, the program declined, reduced to about nine biologists by 1939. By comparison, in the late 1930s the park service had an estimated 400 employees classified as landscape architects—part of an overall total of about 2,400 landscape architects, engineers, foresters, and other technicians, and a clear indication of fundamental park service values. Without a vocal public constituency that could overcome prevailing park service indifference, the wildlife biology program languished for more than two decades.

Unlike in the 1930s, increasing public environmental awareness in the 1960s and 1970s brought outside pressure for scientific resource management in the parks. This was manifested especially in two 1963 studies, the "Leopold Report" (principally authored by biologist A. Starker Leopold) and a subsequent report by the National Academy of Sciences. Both argued for creating strong, scientifically based natural resource management programs. In effect, they challenged the park service to reinterpret in scientific and ecological terms its long-standing mandate to leave the parks unimpaired. But a full and committed response would require park

service leaders to share their control of policies, programs, staffing, and funding with science, which had long been marginalized. Moreover, the reports' insistence on scientifically informed decision making (grounded in research) threatened traditional park management with a more costly, difficult, and time-consuming process. The reports thus precipitated a struggle within the park service between the ecologically oriented factions and the far more powerful leadership establishment.

Since the Leopold and National Academy reports, there have been about two dozen similarly critical studies of national park science and resource management, each with comparable recommendations. While science and natural resource management programs have certainly grown well beyond what they were at the time of the Leopold Report, the very fact that so many critical reports have appeared since 1963 suggests that the park service's response has indeed been, as the Vail document stated, "sporadic and inconsistent, characterized by alternating cycles of commitment and decline."

THE PARK SERVICE'S ORIGINAL LEGISLATIVE MANDATE had fostered the emphasis on use and enjoyment of the parks—yet it certainly did not exclude close scientific management of the parks when that became a recognized option. Still, the park service has never had, as the Vail conference report acknowledged, "any specific statutory language directing it to engage in science as part of its assigned mission." Thus, without a scientific mandate, the park service has refused to seize the initiative to build sufficient science programs on its own. And a 1993 park service document entitled "Science and the National Parks II: Adapting to Change," stated that, despite "repeated authoritative urging," there is "no assurance that [the park service will build such programs] now, on a long-term sustained basis, without statutory direction."

A 1992 National Academy report stated that such resistance was "rooted" in park service culture, but it did not identify cultural traits. The Vail conference report, however, stated that the culture was exemplified by employees who are "creative and embrace responsibility, [do] not avoid accountability and [do not] play it safe" and who are imaginative, committed, and have initiative—altogether a definition so conventional that it provided no clues as to the dominant values and perceptions of the organization.

In truth, the dominant culture of the park service has in large degree evolved in response to the demands of tourism. Since the nineteenth century, park managers have had to deal not only with the planning, construction, and maintenance of park facilities and roads and trails, but also with such increasingly difficult concerns as concession operations, visitor services, law enforcement (including, in more recent times, drug and crowd control), and the political pressure from tourism and other interests outside the parks.

Out of this evolving set of circumstances, certain shared basic assumptions began to emerge before the park service was created; they gained strength under Mather and his successors, and endured—some of them into the present. These dominant assumptions have included: With public enjoyment of the parks and the protection of scenery being the overriding concerns, management even of vast natural parks required little scientific information and therefore few, if any, highly trained

biologists—the unscientifically trained eye could judge park conditions adequately. Moreover, park managers should have independence of action, and scientific findings could restrict managerial discretion. Each park was a superintendent's realm, to be subjected to minimal interference. Similarly, the park service was the right-thinking authority on national parks—it could manage the parks properly with little or no involvement from outside groups. Thus, environmental activism was often unwelcome; and legislation such as the Wilderness Act or the National Environmental Policy Act should not interfere unduly with traditional management and operations of the park service.

Overall, the park service developed a highly pragmatic management style that emphasized expediency, resisted information-gathering through long-term research, and disliked interference from groups inside or outside the park service. And when ecological concerns inspired a different perception of the national parks, many individuals who had risen to power embracing the dominant cultural assumptions of the park service adhered to tradition and resisted changing the perceptions and policies they had long taken for granted and upon which their careers and their influence and authority within the organization had been built.

ON THE OTHER HAND, although it admits to a deficiency in scientific management, the park service—as host to millions of tourists who come to the parks to enjoy nature and majestic scenery—has earnestly sought to inspire a greater public appreciation and understanding of the complexities of natural history. In so doing, the park service has encouraged the development of an environmental ethic nationwide, fostering greater knowledge and concern about ecological issues—a truly major contribution to our national life. This influence has been evolving especially since campfire talks, nature walks, and museum displays spread throughout the park system in the 1920s and 1930s. The effort expanded over the years to include a huge and varied array of museum and visitor center exhibits, interpretive talks, guided hikes, and trailside exhibits, augmented by brochures, films, book sales, and other means of enlightening the public. Begun in the 1960s, Director George Hartzog's environmental education programs reached out to thousands of schoolchildren, many of them underprivileged and without access to parks outside of urban areas. Also, through its involvement with state and local parks and the more recent partnership programs, the park service has advanced nature appreciation and understanding. Thus, despite limitations in scientifically based ecological management, the national parks, the National Park Service, and the uniformed ranger have become symbols of a conservation and environmental ethic.

Surely, given the protection they receive, the national parks will always be beautiful places to visit. Park service leaders such as Mather, Horace Albright, and Conrad Wirth successfully championed development of the parks for public enjoyment of park scenery. Moreover, they were builders of the system. They worked with conservation groups, politicians, and private citizens to help create a large and impressive array of national parks—a legacy of inestimable value. Without their determined efforts, many of the very areas which are the focus of contentious debates over management strategies may not even exist today in a protected condition.

Yet, although highly effective leaders, such directors showed little concern for ecological matters. In a classic example of disregard for science, Director Wirth wrote to Horace Albright in November 1956, expressing the need to "slant a practical eye" toward the issue of elk grazing in Yellowstone. In a telling comment, Wirth added that: "Sometimes I find, Horace, and I am sure you will agree with this, that you can get too scientific on these things and cause a lot of harm." Clearly reflecting the views of park service leadership, these remarks came at a time when there was almost no park service research underway in Yellowstone. The director's remarks fell on receptive ears, given Albright's record of opposition to the biologists on numerous wildlife management issues. Albright displayed attitudes similar to Wirth's when he later told a gathering of the National Parks Advisory Board that in the parks "there should not be too much emphasis laid on biology." After all, he added, the people were "the ones who are going to enjoy the parks." The former director asserted that "ninety-nine percent" of the people who visit the parks are "not interested in biological research."

But the wildlife biologists had long held broader, more comprehensive views of the purpose of the national parks. They had written in their 1933 landmark report, *Fauna of the National Parks of the United States* (known as Fauna No. 1), that America's heritage is greater than just scenery, that it 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," they concluded, "is what we would attain in the national parks." It should be noted also that the biologists' recommendation for perpetuating and even restoring natural conditions was, in 1934, accepted by the park service as official, systemwide policy—a policy that was unprecedented in the history of national parks and, likely, in the history of American public land management.

At the same time, the wildlife biologists also recognized the ecological changes that had occurred in the national parks and the impossibility of regaining truly primeval conditions. But they believed, as George Wright stated in 1934, that there were "reasonable aspects to [such a goal] and reasonable objectives that [the park service] can strive for." And they knew that ecological preservation—far more complex than scenery management—requires in-depth scientific knowledge.

But for decades the park service's dominant cultural traditions and assumptions have formed the chief impediment to a full acceptance of science. Nevertheless, the park service has persistently claimed that preservation is its primary goal. If this assertion were valid—and if it had long been reflected in policies and organizational structure, and in such matters as staffing, funding, and programming priorities to establish an overall record of excellence in scientific natural resource management—there would have been no need for the 1991 Vail conference to ponder how the National Park Service could attain "environmental leadership." By example of its own resource management, the park service would already have achieved such status had it faithfully adhered to the recommendations of George Wright and his fellow wildlife biologists made official policy more than six decades ago.

Richard West Sellars, National Park Service, P.O. Box 728, Santa Fe, NM 87504

Driven Wild: The Origins of Wilderness Advocacy during the Interwar Years

Paul S. Sutter

In January of 1935, eight conservationists founded the Wilderness Society, the first national organization explicitly dedicated to the protection of wilderness.[1] Among the founders were such prominent environmental thinkers and activists as Aldo Leopold, Bob Marshall, Benton MacKaye, and Robert Sterling Yard. Most historians of the environmental movement cite this group's formation as a watershed, a point at which wilderness advocacy in this country first achieved a concerted organizational voice.[2] Few, however, have fully appreciated what they were advocating when they talked about wilderness or how they came to their advocacy. This essay examines some of the founders' major concerns and puts them in the context of recent critiques of the wilderness idea.

In the first issue of the *Living Wilderness*, the founders explained their program in language that initially surprised me. In a front-page essay entitled "A Summons to Save the Wilderness," the founders wrote:

> Ten years of warfare in Congress saved the National Park System from water power and irrigation, but left the primitive decimated elsewhere. What little of it is left is passing before a popular craze and an administrative fashion. The craze is to build all the highways possible everywhere while billions may yet be borrowed from the unlucky future. The fashion is to barber and manicure wild America as smartly as the modern girl. Our duty is clear.[3]

The entire issue resounded with concerns about automobiles, road building, and other busy efforts on federal lands, particularly New Deal projects, that were transforming many of the nation's remaining wild areas, often in the name of recreational development and access. Rather than finding a group roundly opposed to resource extraction and the industrial transformation of American nature, I found one with deep-seated concerns about modernization, and the automobile and road building in particular. These advocates, I argue, were driven wild. We cannot understand the origins of wilderness advocacy (defined here somewhat narrowly as advocacy that led up to the passage of the Wilderness Act of 1964 and the creation

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of a distinct system of Wilderness Areas) until we grapple with the changes produced by automobility.

In a recent essay entitled "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," William Cronon ignited a debate about the usefulness of the wilderness ideal. To put it briefly, Cronon argues that wilderness has come to function as something of an opiate—that in the process of saving discrete areas of supposedly wild nature, environmentalists have ignored or abdicated their responsibility for dealing with the nature that is worked and inhabited. Wilderness, Cronon suggests, is an escapist ideal that is incapable of informing our daily interactions with nature. Environmentalists, Cronon intimates, are being led astray by this constructed ideal of a nature that is always "out there," unworked, uninhabited, a day's drive away.[4]

I sympathize with what I see as the spirit of Cronon's piece, or at least part of the spirit: that we need to understand how we have constructed ideals of nature that are based in leisure-time patterns of consumption. But the "trouble," I want to suggest, counter to Cronon, is not necessarily with wilderness, at least as it was conceptualized by the Wilderness Society's founders. Indeed, for them, wilderness was a solution to some of the very concerns expressed by Cronon. The founders of the Wilderness Society proposed wilderness as a new land designation at precisely the time when more and more Americans were coming to know nature through leisure; it was largely in reaction to this process, in all its manifestations, that the founders proposed wilderness preservation.

Cronon's argument represents the climax of a growing critical response to the wilderness ideal. Perhaps the first blows taken at the wilderness ideal were delivered by those who sought to debunk the equation between wilderness and pristine nature. Today, it is almost an article of faith among environmental historians that wilderness is a poor, and ideologically charged, way of describing the ecological conditions of almost any area. Wilderness is a cultural ideal.[5]

More recently, and in a related critique, a number of scholars have suggested the profoundly ethnocentric nature of wilderness. Mark Spence, for instance, has argued that the wilderness ideal was a critical component in the dispossession of Indians and the transformation of their lands into national parks.[6] Mark extends some of the important insights of Francis Jennings's work on colonial New England—that seeing or willing "wilderness" was a convenient way of ignoring Indian ownership, tenure, and history, and that the ideal has worked to erase Native Americans from historical memory.[7] In an extension of Jennings, however, Spence shows how the park ideal (which he equates with the wilderness ideal) continued to dispossess even after it became linked to preservation.

In a sense, the combined insights of ecology, social history, and cultural history have given wilderness a pretty good working over. All of these arguments have tremendous merit. But they also tend to assume that wilderness has been a singular ideal and that those who push wilderness preservation do not understand its constructed nature. In fact, I argue that the founders of the Wilderness Society were doing something quite different with wilderness than were the people Spence talks about, or even those who Cronon discusses. Their idea was less focused on pristine nature—a nature untouched by human activities, unaffected by work or resource

extraction or human management (though it contained these elements)—and more one of a nature resistant to the modern world. Indeed, though Aldo Leopold would later make a plea for the ecological value of wilderness, ecological concerns were but a minor component in the birth of this particular brand of wilderness advocacy. Wilderness, for the founders, was a nature that lacked roads, automobiles, and the commercial structures that catered to the modern tourist and outdoor recreationist. It was a place, these advocates hoped, that would preserve nature and the recreational appreciation of it from the consumer tendencies of the era.

The intellectual histories of these activists belie the easy correlation between wilderness advocacy and a lack of concern for the exigencies of work in nature. A number of the society's founders were trained foresters who gave considerable intellectual and political attention to issues of human labor in nature. Aldo Leopold, for instance, wrote extensively about nurturing the wild fringes of America's agricultural landscape, and he thought critically throughout his career about wise resource stewardship. Bob Marshall combined his wilderness advocacy with strong concerns for sustainable forestry and radical social reform. Benton MacKaye was perhaps the most innovative thinker on this subject. In a 1919 Labor Department report, MacKaye suggested the colonization of portions of the public domain and the creation of sustainable communities based in cooperative resource stewardship and government land ownership.[8] In his famous 1921 article advocating the creation of an Appalachian Trail, MacKaye portrayed the trail as a backbone for regional development and as "a retreat from profit."[9] For none of these three trained foresters was the wilderness ideal an escape from the problems of work in nature.[10]

Finally, I think many critics of wilderness have lost touch with the notion that wilderness activism has almost always been about what to do with *public* lands. It is imperative that we see wilderness as an idea for managing public nature, offered in response to other such political claims, during a period when the remaining public domain was being closed and put under federal stewardship. Wilderness, in other words, was and is a political ideal as well as a cultural ideal, and wilderness advocacy needs to be understood within this political context. The founders of the Wilderness Society deployed the wilderness ideal to make claims on portions of the public domain whose undeveloped status seemed particularly threatened. And during the interwar years the major threat—the main "other idea"—was the development of public lands for mechanized forms of outdoor recreation.

To understand the particular brand of wilderness advocacy put forward by the founders of the Wilderness Society, it is imperative that we understand the contours of the interwar period. Indeed, one of the arguments of my larger work is that we have missed the broader significance of the founding of the Wilderness Society precisely because we have not appreciated the context within which it occurred.

The interwar years were crucial, for a number of reasons, to the rise of outdoor recreation in the United States. The single most important factor was the increasing availability and affordability of the automobile, and its corollary, improved roads. Together, the automobile and improved roads spread the ability to get "back to nature" to a much broader swath of the American populace. Numerous

contemporary commentators referred to the automobile as a "democratizing" force in this regard, as a technology that broke down class barriers that had kept national parks the playgrounds of the rich. In sheer numbers, visitation to the national parks and national forests soared after 1915. From 1915 to 1920, park visitation tripled, from 300,000 to almost a million a year; by 1932, there were 3 million visitors a year to the parks. The national forests saw a similarly rapid increase in recreational visitation.

Much of this increased visitation was due to the rapid introduction of the automobile into the park experience. The coming of the automobile to Yellowstone provides a case in point. As late as 1915, automobiles were not allowed into Yellowstone; horses and horse-drawn vehicles remained the major mode of transportation. The first auto to enter the park did so on August 1, 1915, and, in one of the better ironies of this story, Robert Sterling Yard was one of its passengers. For the 1916 season, park officials conducted an experiment in coexistence. Yellowstone's Grand Loop was made a one-way road, and through the use of newly strung telephone lines and checking stations, park officials kept motorists to a tight schedule so that they would remain at least thirty minutes ahead of stages. Permits for private automobiles in Yellowstone cost $10 that summer, a steep rate for that time. But for all its ingenuity, the system turned out to be too cumbersome. By 1917, the concessionaires had sold their horses and Yellowstone was entirely motorized.[11] By 1920, over 13,000 private automobiles entered the park, and people who came to the park by train usually saw the park by motorized jitney.[12] By 1930, the number of private automobiles entering the park was close to 70,000.[13]

A second important aspect of the interwar period was the willingness of the federal government to fund both road building and recreational development on the public lands—and often these initiatives were one in the same. The creation of the National Park Service in 1916 gave the national parks a policy voice and a strong lobby. The National Park Service embarked almost immediately on a major publicity campaign to attract visitors, a campaign spear-headed by Robert Sterling Yard. By all accounts, it was a tremendous success. The service would also insist on more government funding for the improvement of roads and the extension of the road system within the parks. A series of Federal Aid Highway Acts brought unprecedented federal funding to road building generally. More specifically, these acts provided a disproportionate amount of funding for building roads in and through the national forests and other portions of the public domain.[14] These roads effectively opened these areas to increased recreational use. The Term Permit Act of 1915 facilitated a process of recreational homesteading on the national forests. Americans could apply to the forest service for leases, lasting up to thirty years, for building vacation cottages, hotels, and other recreational structures on public lands.[15] Finally, the National Conference on Outdoor Recreation, which held major meetings in Washington, D.C., in 1924 and 1926, brought together hundreds of delegates in an effort to forge a national recreational policy. All of these phenomena marked a growing federal commitment to sponsor and underwrite recreational development on the public lands.[16]

A third factor that made this era unique was the relationship between nature and

the consumer culture that solidified after World War I. The shifting federal emphasis from resource conservation to outdoor recreation mirrored a shift from a producer to a consumer culture. Outdoor recreation rhetoric was rife with the therapeutic claims characteristic of this shift. The natural world, moreover, was an important source of the authenticity that so many of the era craved, and a contested space in battles over meaningful leisure. With work degraded by the machine and time-discipline, or by bureaucratic office routines, leisure in nature became a new potential source of virtue. In many ways, outdoor recreation replaced the frontier experience as the sculptor of American character.[17]

Critics, among them Benton MacKaye and to a lesser extent Aldo Leopold, noted strong tensions between mass consumer culture and folk cultures supposedly based in local or regional relationships with nature. They were among a number of contemporaries concerned with what they saw as the replacement of nature as a source of community culture with nature as a source of mass leisure. In a modern world, the cultural centrality of intimate working relationships with the land seemed to be slipping away.[18] The interwar craze for outdoor recreation may have struck many as a national effort to reclaim this intimacy, but to the founders of the Wilderness Society it seemed part of the problem. Modern outdoor recreation involved a very different relationship with nature, one increasingly mediated by machines and consumer trappings.[19] Wilderness preservation, as the founders saw it, was a solution—though only a partial one—to these problems.

I TRY TO FOCUS MUCH OF MY ANALYSIS of this period on the rise of automobile tourism and its connection to the preservation of nature because I think many of the era's tensions emerged in the logic and dynamics of tourism. Let me say just a few brief, quasi-theoretical words about tourism. For the tourist, the natural world, like any other tourist site, is something that one visits or goes to see; tourism requires a nature that is separate, distant, and exotic. It also relies on forms of cultural production that work to collapse nature into a manageable canon of sights. It involves, in short, relationships between tourists, sites, and markers. We need to pay more attention to the roles of the many markers in defining a nature "out there," particularly as they were being produced during the interwar period. The cultural production of markers —whether they were postcards, magazine articles, photographs, guidebooks, maps, advertisements, titles of distinction, or literally signs by the side of the road—played a decisive role in structuring nature tourism and outdoor recreation after World War I. Indeed, such production was an integral part of the consumer culture that developed after the war.[20]

I also think it is important to take an understanding of tourist dynamics and turn it on environmentalism in general. How have our tourist and consumer impulses shaped the natural ideals we use to urge preservation? This, it seems to me, was ultimately what William Cronon was after in his piece on wilderness: that we are always working to preserve a nature that is distant and other, a nature that often is part and parcel of consumer habits rather than a challenge to them. The "trouble," Cronon intimated, is that we tend to idealize nature as a tourist destination. Cronon's mistake, I maintain, was to assume that this process and the wilderness ideal were

always one in the same. The wilderness ideal that came out of the interwar period was much more about saving wilderness from tourism than saving it for tourism.

Having said these few words about tourism, let me return to the automobile and road building. How did the automobile and improved roads shape the American experience in nature? What, in terms of outdoor recreation and contact with nature, did the automobile allow? It allowed a lot more Americans a much greater radius in reaching a nature "out there." The automobile also came with a tangible sense of freedom, in particular a freedom from the strictures of hotel-rail tourism and its genteel conventions. Automobility allowed Americans to design their own itineraries, to stop and stay wherever they wanted, and to enjoy an equation of nature and the open road. In a sense, it allowed tourists to escape the strictures of tourism itself—to get beyond the marked sites and experience a "real" nature.

It is difficult for us today, who are so conditioned by the circumscribed nature of roads as public space, to appreciate how open and liberating roads seemed to the first generation of auto tourists. Early auto touring was based in the myth of an open countryside, the notion that the landscape beyond the bounds of town and city was, in a sense, public. In large part, this was because rural roads rarely had the trappings that today mark roads as separate from what are usually private lands surrounding them: fences, signs, landscaped rights of way. In short, in what Warren Belasco has called the "squatter-anarchist phase" of auto touring, motorists before 1920 tended to treat the rural roadside as if it was free and open, as if it was nature itself. Roughing it meant packing up the car with camping gear and heading out to camp wherever the auto left you at the end of the day.[21]

This "squatter-anarchist phase" created a variety of problems almost immediately. Conflicts arose in the countryside between automobiles and horses as a new mechanized form of transport challenged an older, biological form. Discourteous use of private property was a common experience for rural land-owners whose fields were set upon by auto campers. Scenic roadside areas received heavy use and particularly sloppy treatment, and litter (which, I would argue, traditionally has been defined as a roadside phenomenon) became a major problem. There were also problems with water pollution from poor sanitary practices, forest and brush fires, soil compaction, and general wear and tear. This motorized return to nature took its toll on the roadside environment.

Responses to these problems generally involved a sort of broad contractual effort to discipline the behavior of auto campers and delimit the freedom of the roadside. There were a couple of important implications. Contemporaries suggest the era saw the increased posting of the privately owned countryside against trespass. Others responded to the commercial possibilities of this new activity, and the nation saw the rapid rise of provisioning for motor tourists. Of particular interest were the municipal auto camps that sprung up throughout the United States, but most particularly in the West. Other roadside development followed. By 1934, *Fortune* announced that the "Great American Roadside" had become a $3 billion/year industry.[22] All of this—from tin cans to billboard advertising—contributed to the perception of the roadside as a polluted place. The open road slowly creaked shut after World War I.

If the countryside was increasingly off-limits and/or developed and polluted, then auto campers had to find somewhere else to get that pristine experience they often were after. Increasingly, that meant relying on the nation's national parks, national forests, and other public lands. Thus, the excesses of the "squatter-anarchist phase," which worked to limit roadside use and construct a whole new tourist landscape, increased demands for recreational access to, and development of, public lands—places protected from the sprawling commercialism of the privately owned roadside. Thus, the developments along the nation's roads were not only pushing more visitors into the few remaining publicly owned wild areas, but they were also contributing to the hardening of the division between publicly owned wild nature and privately owned worked nature. The intellectual split between working nature and recreational nature that Cronon and other critics of wilderness take to task thus had a physical analogue in a landscape increasingly divided because of automobility.

Hiking enthusiasts, for instance, who had long relied on rural roads for their recreation, found themselves driven into the woods by noisy and dangerous automobiles. Automobility heightened the distinction between the worlds of road and hiking trail. It also played an important role in the conflict that precipitated the formation of the Wilderness Society—the conflict between Benton MacKaye's Appalachian Trail, nearing completion by the early 1930s, and a series of skyline road developments in Appalachia—particularly the skyline drive in Shenandoah National Park and the Blue Ridge Parkway. Automobility forced a definition of what was and was not wild, a definition that often revolved around the automobile's presence or absence.

And lest we think auto camping was a marginal activity, various sources estimated that there were 10–15 million Americans going auto camping every year by the mid-1920s, a considerable number considering there were only about 20 million registered autos in 1925.[23] As national parks and other public lands became the preferred destinations for auto tourists, various boosters demanded the development of these areas for automobiles. This meant roads and campgrounds since auto tourists tended not to stay in the rustic hotels. And there were conflicting calls to either preserve the nature of these places, and/or to develop them in line with the growing attractions on the outskirts of the parks. The dual mandate of the National Park Service—to promote and develop the parks for use while also protecting their natural features for the enjoyment of future generations—was immediately put to the test by a newly mobile nation. Indeed, I would suggest that this was not such a serious conflict until the automobile entered the parks.

Automobility was the essential component in the creation of this new preservationist ideal. It also had a considerable and noticeable impact on the natural world—particularly the public lands—which we should not lose sight of. Though Frederick Jackson Turner had ceremoniously declared the frontier, that identifiable line between civilization and wilderness, deceased as of the 1890 census, there remained as of about 1915 huge areas, many of which were in public ownership, that were wild, undeveloped, and virtually untouched by the modern world. They may not have been pristine, unpopulated, or even unworked, but they were roadless. And, by and large, the greatest threat to the wild condition of these areas, in the late

teens and throughout the 1920s, came from road building and the popularity of outdoor recreation. As recreational boosters called for more roads into these places and more development for tourists, and as the federal government became more and more willing to sponsor these developments, the founders of the Wilderness Society responded with calls to preserve these areas from such forces. These developments became even more of a threat as the energies of a nation in the midst of a depression were redirected to the public lands. More than anything else, the overwhelming New Deal activity on the public lands produced a sense of crisis that forced the hands of wilderness advocates.

More than a decade and a half after Aldo Leopold first proposed that the Forest Service preserve wilderness areas, he published his most biting and thorough critique of modern outdoor recreation and the type of relationship with the natural world it encouraged. "Conservation Esthetic," which first appeared in *Bird-Lore* in 1938 and was subsequently reprinted in *A Sand County Almanac*, was Leopold's most trenchant statement on the irony that defined conservation during the interwar years—that a growing cultural fascination with and appreciation of wild nature was one of the gravest threats to it. The essay was an indictment of a type of nature appreciation that had developed in the company of increased leisure, mechanization, commercial tourism, advertising, and boosterism.[24] It provides a fitting conclusion to this overview.

Recreation became an issue during the days of "the elder Roosevelt," according to Leopold, when urban Americans began turning "*en masse*, to the countryside." "The automobile," Leopold continued, "has spread this once mild and local predicament to the outermost limit of good roads—it has made scarce in the hinterlands what was once abundant on the back forty." He continued:

> Like ions shot from the sun, the week-enders radiate from every town, generating heat and friction as they go. A tourist industry purveys bed and board to bait more ions, faster, further. Advertisements on rock and rill confide to all and sundry the whereabouts of new retreats, landscapes, hunting-grounds, and fishing-lakes just beyond those recently overrun. Bureaus build roads into new hinterlands, then buy more hinterlands to absorb the exodus accelerated by the roads. A gadget industry pads the bumps against nature-in-the-raw; woodcraft becomes the art of using gadgets. And now, to cap the pyramid of banalities, the trailer. To him who seeks in the woods and mountains only those things obtainable from travel or golf, the present situation is tolerable. But to him who seeks something more, recreation has become a self-destructive process of seeking but never quite finding, a major frustration of mechanized society.[25]

In this brief paragraph, Leopold concisely listed the origins and components of his critique of outdoor recreation and its impact on the nation's hinterlands. Here in brief was the etiology of interwar concerns for wilderness.

Recreation had become big business, and increasingly the business imperatives were overtaking the very purpose of outdoor recreation. "In short, the very scarcity

of wild places," Leopold theorized, "reacting with the *mores* of advertising and promotion, tends to defeat any deliberate effort to prevent their growing still more scarce." Perhaps the scarcity of such places made Americans appreciate them all the more, but such scarcity also made these areas desirable and commercially exploitable. Calls for development of such recreational resources were bound to follow. "[W]hen we speak of roads, campgrounds, trails, and toilets as 'development' of recreational resources," Leopold continued, "we speak falsely in respect of this component. Such accommodations for the crowd are not developing (in the sense of adding or creating) anything." True development involved increasing opportunities for perception. And the "outstanding characteristic of perception," Leopold pointed out, "is that it entails no consumption and no dilution of any resource."[26]

"To promote perception," Leopold suggested, "is the only truly creative part of recreational engineering."[27] For Leopold, the most disturbing aspect of modernized forms of outdoor recreation, as they manifest themselves during the interwar years, was that they offered few opportunities to deepen one's perceptive capacities. "The trophy-recreationist has peculiarities that contribute in subtle ways to his own undoing," Leopold posited. "To enjoy he must possess, invade, appropriate." The modern recreationist, according to Leopold, was little more than a "motorized ant who swarms to continents before learning to see his own backyard, who consumes but never creates outdoor opportunities." Such were Leopold's concerns about the aesthetic limitations of modern recreation in nature.[28]

"It is the expansion of transport," Leopold proffered at the conclusion of the piece, "without a corresponding growth of perception that threatens us with qualitative bankruptcy of the recreational process. Recreational development is a job not of building roads into lovely country, but of building receptivity into the still unlovely human mind."[29] It was this "qualitative bankruptcy of the recreational process," particularly as it was manifesting itself on the national forests during the interwar years, which led Aldo Leopold to propose wilderness preservation. And it was his critique of outdoor recreation itself, the very force that undergirded a rising environmental consciousness, that make his early wilderness thought, and the thought of his colleagues at the Wilderness Society, an important example for contemporary wilderness advocates and critics.

Endnotes

1. This paper was a quick overview of my dissertation, "Driven Wild: The Intellectual and Cultural Origins of Wilderness Advocacy during the Interwar Years" (Ph.D. Dissertation, University of Kansas, 1997). I have since published a revised version of that dissertation, *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002).
2. See Roderick Nash, *Wilderness and the American Mind*, third edition (New Haven: Yale University Press, 1982), 206–208; Stephen Fox, *The American Conservation Movement: John Muir and His Legacy* (Madison: University of Wisconsin Press, 1985), 210–217.
3. "Summons to Save the Wilderness," *The Living Wilderness* 1, 1 (September 1935): 1.
4. William Cronon, "The Trouble with

Wilderness; or, Getting Back to the Wrong Nature," in *Uncommon Ground: Rethinking the Human Place in Nature* (New York: Norton, 1995), 69–90.

5. William Cronon's *Changes in the Land: Indians, Colonists, and the Ecology of Early New England* (New York: Hill and Wang, 1983) is perhaps the best example of this effort.
6. See Mark Spence, "Dispossessing the Wilderness: Yosemite Indians and the Wilderness Ideal, 1864–1930," *Pacific Historical Review* 65, 1 (February 1996): 27–59; "Crown of the Continent, Backbone of the World: The American Wilderness Ideal and Blackfeet Exclusion from Glacier National Park," *Environmental History* 1, 3 (July 1996): 29–49. Spence has since published a book on the subject, *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks* (New York: Oxford University Press, 1999).
7. Francis Jennings, *The Invasion of America: Indians, Colonialism, and the Cant of Conquest* (New York: Norton, 1975). See also Cronon, *Changes in the Land*.
8. Benton MacKaye, *Employment and Natural Resources: Possibilities for Making New Opportunities for Employment through the Settlement and Development of Agricultural and Forest Lands and Other Resource*s (Washington, D.C.: Department of Labor, GPO, 1919).
9. MacKaye, "An Appalachian Trail," *Journal of the American Institute of Architects* 9 (October 1921): 325–330.
10. Along with Cronon's essay, another essay that suggests that wilderness is an ideal held by those ignorant of work in nature is Richard White, "'Are You an Environmentalist or Do You Work for a Living?': Work and Nature," in *Uncommon Ground*, 171–185.
11. Robert Shankland, *Steve Mather of the National Parks*, third edition (New York: Alfred A. Knopf, 1970), 66; Stephen Mather, "Progress in the Development of the National Parks" (Washington, D.C.: GPO, 1916), 10.
12. *Report of the Director of the National Park Service* (Washington, D.C.: GPO, 1916), 83.
13. *Report of the Director of the National Park Service* (Washington, D.C.: GPO, 1930), 64.
14. See Bruce Seely, *Building the American Highway System: Engineers as Policy-Makers* (Philadelphia: Temple University Press, 1987).
15. See William Tweed, *Recreation Site Planning and Improvement in the National Forest*s (Washington, D.C.: U.S. Forest Service, GPO, 1981).
16. See "Proceedings of the National Conference on Outdoor Recreation," 68th Congress, 1st Session (December 1924); and "Proceedings of the Second National Conference on Outdoor Recreation," 69th Congress, 1st Session (January 1926).
17. On these themes, see Richard Wightman Fox and T. J. Jackson Lears, eds., *The Culture of Consumption: Critical Essays in American History, 1880–1980* (New York: Pantheon, 1983).
18. On this theme and its relation with various regional ideologies, see Robert Dorman, *Revolt of the Provinces: The Regionalist Movement in America, 1920–1945* (Chapel Hill: University of North Carolina Press, 1993).
19. For an example of these concerns, see Aldo Leopold's essay, "Wildlife in American Culture," in *A Sand County Almanac, and Sketches Here and There* (New York: Oxford University Press, 1987[1949]), 177–187.
20. On tourism, see Dean MacCannell, *The Tourist: A New Theory of the Leisure Class* (New York: Schocken Books, 1976); Jonathan Culler, "The Semiotics of Tourism," in Culler, *Framing the Sign: Criticism and Its Institutions* (Norman: University of Oklahoma Press, 1988), 153–167.
21. The best source on auto camping and motor touring during this period is Warren Belasco, *Americans on the Road:*

From Autocamp to Motel, 1910–1945 (Cambridge: MIT Press, 1979). Much of my discussion on auto camping is indebted to Belasco's work.

22. "The Great American Roadside," *Fortune* (September 1934): 53–63, 172, 174, 177.
23. Belasco, 74.
24. Leopold, "Conservation Esthetic," *Bird-Lore* 40, 2 (March–April 1938): 101–109. Reprinted in *A Sand County Almanac*, 165–177.
25. Leopold, "Conservation Esthetic," 165–166.
26. Ibid., 172–173.
27. Ibid., 173.
28. Ibid., 176.
29. Ibid., 176–177.

Paul S. Sutter, History Department, University of Georgia, 336 LeConte Hall, Athens, GA 30602-1602

Yellowstone's Creation Myth

Lee Whittlesey and Paul Schullery

According to a still-popular tradition presented in literally thousands of publications and public speeches during the past ninety years, the idea for Yellowstone National Park originated with one man on a specific day. As this tradition has come down to us, on September 19, 1870, members of the Washburn exploring party, during a discussion around a campfire at the junction of the Gibbon and Firehole rivers, developed the idea of setting aside the geyser basins and surrounding country as a national park. According to Nathaniel Langford, who published his edited "diary" of this expedition in 1905, party member Cornelius Hedges proposed the idea and his companions heartily embraced it. This "campfire story," promoted and celebrated by several generations of conservation writers and historians, became well established in the popular mind as the way Yellowstone and national parks in general originated.[1]

But as early as the 1940s, historians doubted the tale. Its belief required ignoring known pre-1870 proposals that Yellowstone should be set aside as a public park, as well as ignoring that the process by which the park was established seemed to spring from a number of sources, and denying that the public-spirited sentiments attributed to the park's founders were only one of the impulses driving their actions. In the 1960s and 1970s, Yellowstone National Park's staff historian, Aubrey Haines, and an academic historian, Richard Bartlett, cast further doubt on the story by suggesting, among other things, that even the campfire conversation itself was a historically doubtful episode.[2]

These revelations set off a round of debate and reconsideration in the National Park Service over the validity of the story and its usefulness to park staff as an educational device. In both the National Park Service and among the larger community of managers, scholars, and the public, the credibility of the campfire story has since gradually declined, though it is still often invoked, especially by public speakers and in informal publications and other media about Yellowstone. On August 17, 1997, during his speech at Mammoth Hot Springs as part of the 125th anniversary celebrations, Vice President Al Gore referred to the campfire story, and, though acknowledging that there was some debate over it, invoked its symbolic power. We can't let it go.

The persistence of the campfire story as a part of the culture of conservation should not be surprising. For one thing, though the story has been shown to be simplistic and not at all fair to the complexities of history, it has not, and probably cannot, be conclusively proven untrue in *some* of its specifics. For another, stories this

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deeply embedded in the thinking and self-perception of so many people, true or not, do not yield themselves to easy disregard. Their existence depends upon much more than mere provability: the Madison campfire story has become a part of the historic and even the spiritual fabric of the National Park Service and of the conservation community. And, like any good story, it reveals greater complexities the harder we look at it.

As Aubrey Haines has pointed out, not only were ideas of preserving natural areas a part of the regional consciousness, but also Yellowstone itself had been considered as a possible candidate for such action well before the Washburn party set out. As early as 1865, Cornelius Hedges himself had heard another Montana citizen propose the idea of setting Yellowstone aside.[3]

We have reviewed the twenty or so first-hand contemporary accounts left by members of the Washburn party: a wealth of unpublished diaries and letters, as well as numerous articles and reports published shortly after the expedition returned to Montana settlements. As Aubrey Haines has showed and we confirm, none even mention the conversation or the idea of creating a national park, a term that Langford, many years later, claimed the group used that night.

In his diary, the following morning, Cornelius Hedges himself said only, "Didnt sleep well last night. got thinking of home & business."[4] But in 1904, when Hedges' diary was finally published in an edited version, he added the following critical passage as part of a larger footnote:

> It was at the first camp after leaving the lower Geyser basin when all were speculating which point in the region we had been through, would become most notable that I first suggested the uniting all our efforts to get it made a National Park, little dreaming that such a thing were possible.[5]

Langford's own account appeared the next year, reinforcing Hedges in several paragraphs that contained actual dialogue of the conversation. Langford's diary, now available in a paperback edition from the University of Nebraska, has long been one of the most popular early accounts of Yellowstone, and his account of the campfire story has served as the primary source for almost all later renditions of the tale. But what actually happened that night?

Only four party members left diary entries covering that night, and none mentioned any such conversation. This might seem odd, but is not in itself persuasive proof no conversation occurred; presumably these men talked around the fire on many evenings without feeling compelled to leave an account of it. These diaries, unlike Langford's, were quite brief, generally limited to distance traveled and a few outstanding sights seen; they were not ruminative or conversational. On the other hand, according to Langford, this must have been one of the most, if not the most, energizing, far-reaching conversations of the entire trip, so we might have hoped for some diarist to comment on it. In any case, by June of 1871, members of the Washburn party had published at least fifteen articles, letters, and extended episodes in newspapers and magazines. None of these publications said a word about this great idea that, according to Langford, had them all so excited, and, also according to

Langford, filled them with a sense of mission to spread the word about the national park idea. This is hardly the sort of ardent advocacy that Langford would later claim existed among these men as a result of their 19 September campfire conversation. These publications were their foremost opportunity to convince the public of the importance of protecting Yellowstone, and they completely missed their chance.

Besides this curious lack of talk about the national park idea, there are a host of other minor circumstantial and contextual problems with the story, most discovered and outlined by Haines in his official correspondence as Yellowstone historian in the 1960s and summarized in his book *The Yellowstone Story*. This book was published in 1977 after a several-year delay that seems primarily have been due to the discomfort his challenge to the campfire story caused among powerful National Park Service officials and alumni. These other problems include irregularities in Langford's later behavior relative to the campfire story. For example, in the extensive Langford collections in the Minnesota Historical Society, among the conspicuously missing items is the one diary covering his 1871 Yellowstone trip; it is thus impossible to check to see if he actually wrote his very long diary on the trip, or if some of it, including the discussion of the campfire conversation, was added later. Haines suspected that this was an all-too-convenient gap in the record, and so do we.

But besides this and other irregularities, we must also assert that Langford's discussion of the campfire conversation in his published "diary" of 1905 (which we prefer to think of as a reconstructed account) simply does not ring true. It has a contrived, hindsighted tone about it, as if manufactured later with a thematic tidiness that probably would not have characterized an authentic diary entry. The repeated use of the term "National Park" by participants in the conversation is suspect. No members of the party (including Langford) were to use the term even once in the spate of articles and letters they produced over the course of the next year. It all seems too perfect.

Though historians and other observers are perhaps too blithe and ready to call historical figures liars, such accusations should be made no more lightly than they would be made against living persons fully able to look you in the eye and defend themselves. And yet, we simply do not believe Langford in this case. Perhaps the years between 1870 and 1905 magnified the conversation in his mind until it was more than it had been, and he elaborated on it in his diary. Or, perhaps, to put the most cynical cast on it, Langford was what some have suspected him of being: a dishonest self-promoter. It is impossible to know at this point. But it is also impossible for us to believe his tale.

The evidence that the campfire conversation did *not* occur is all negative. That is, we may lack convincing evidence that it happened as Langford claimed, but we have no proof that it did *not* occur. For support of the existence of the conversation, we are entirely dependent on reminiscences from many years later by two people: one of whom, Cornelius Hedges, stood to gain great glory for originating such an important idea, and the other, Nathaniel Langford, who stood to bask in the considerable reflection of that glory. But while no early Yellowstone booster ultimately proved more energetic at promoting his own heroic image than did Langford, none of the others was more retiring in the face of promotion of his name than was Hedges.

Thanks to Haines's sleuthing, we know Langford to have been a fairly slippery and self-promotional character otherwise, and know Hedges to have been a remarkably trustworthy man.

Based on our review, not only of the sources and of Haines's analysis but also of the sometimes bitter debate over this issue in the National Park Service in the 1960s and 1970s, it seems most likely to us (as it did to Haines) that there may well have been some kind of conversation that evening that dealt with the question of the fate of the wonders of Yellowstone, but that it was not perceived as momentous by the participants.

What matters historically is the impact of that conversation. Did it lead to the establishment of Yellowstone National Park? It is in answering this question that Langford's self-promotion is most revealed and the campfire story most clearly transformed into a myth, or at least a legend:

> Langford and the generations who believed him portrayed the Washburn Party that night as public-spirited altruists, forgoing personal profit in favor of public service. The story portrayed the park idea as having such intuitive force of rightness that it was immediately embraced by all who heard it. For park defenders seeking to justify or enlarge their meager budgets, the campfire story provided a rhetorical position of moral unassailability. It also provided the park movement with perfect heroes: altruists who were so committed to protecting wonder and beauty that they would forgo all thought of personal gain. And it put the creation of the park movement in the hands of the people whose possession of it would have the most symbolic power: regular citizens.[6]

In fact, by the time of the campfire, Langford himself was already at least a part-time employee of the Northern Pacific Railroad, specifically hired to speak publicly on behalf of railroad promotion in his region. His Yellowstone talks in the East the following winter were funded by the Northern Pacific, and said nothing about the park idea; they described and thereby promoted the wonder, not the protection.[7] Hedges did not even vaguely refer in print to setting aside a reservation until early 1872, when he wrote about it in a similarly economically oriented vein, as part of a territorial resolution designed to convince Congress to transfer the Yellowstone region from Wyoming Territory to Montana Territory.[8]

A spirited defense of the campfire story by an assortment of National Park Service staff in the late 1960s and early 1970s emphasized that it was the publicity given Yellowstone by the Washburn party that led to the creation of the park: that, for example and most important, federal geologist Ferdinand Hayden only decided to explore Yellowstone in 1871 because he heard Langford speak in Washington, D.C.[9] Hayden's report on Yellowstone, including William Henry Jackson's stunning photography of features that were only rumored or verbally described before, is regarded as an important factor in persuading Congress to create the park the year after his 1871 survey. But a variety of historical evidence now suggests that Hayden had known about the rumored wonders of Yellowstone for several years, and was already well along in planning the Yellowstone survey by the time he heard Langford speak.[10]

Again and again, the simplistic traditional tale faces complications like these. These were real people, leading lives as complicated as our own, full of conflicting and sometimes complementary impulses:

> The only hope for a reasonable understanding of the origin of Yellowstone National Park is in admitting that none of this was simple. Human nature was not on holiday. The people who created Yellowstone were not exempt from greed, any more than they were immune to wonder. Some cared more for the money, some for the beauty. Some were scoundrels, some may have been saints.[11]

All of this is to say that they sound a lot like us.

The Madison campfire story is a kind of creation myth, which is to say that though it is not true in any strict historical sense, it is still very important, and in its way a valid and even essential part of the life of its adherents. According to one definition, "a creation myth conveys a society's sense of its particular identity….It becomes, in effect, a symbolic model for the society's way of life, its world view—a model that is reflected in such other areas of experience as ritual, culture heroes, ethics, and even art and architecture."[12] In the nearly venerable subculture of the National Park Service, and even in the greater society of the conservation movement, the Madison campfire story is such a model. Like many seminal events seen through romantic filters, it has in it a kind of truth, a loftier vision of human nature than those who admire it would ever expect themselves to sustain, and thus it offers us ideals that are no less admirable for being unattainable.

But even the best myths can wear out. We do not for a minute blame all those loyal, sincere people who happily believed the campfire story and made such good use of it in generating public support and affection for the national parks. They had no reason to believe otherwise. Today we do. Like the famous environmentalist speech attributed to Chief Seattle, the myth of the Kaibab deer population irruption and collapse, and other environmental fables, the Madison campfire story does not do justice to the complex realities we now know to characterize historical, ecological, or political process.[13]

The strongest criticism we received of earlier drafts of this manuscript, and of the more detailed analysis in a much longer paper we are also preparing, was that we are much too easy on the people who knowingly perpetuated the campfire story's inaccuracies. The greatest blame here goes to Langford, of course, who gets the lion's share of blame for the whole mess, but others contributed, especially those who persisted in pretending the story was true long after Haines's work should have convinced anyone to be more cautious. Indeed, Langford's version of the campfire story is alive and well today, in many public pronouncements in the conservation community, often from well-intentioned people who do not know any better. We do not know how to alert the ignorant that they are parroting bad history, any more than we know how to convince the people who simply prefer the story to historical truth that they are doing a disservice to their audiences and to the park. We hope, however, that the saga of the campfire myth will serve as a cautionary tale when all of us encounter similar situations and are tempted to fall back on simplistic views.

Just as national parks struggle constantly to reconcile the realities of scientific findings with the even more pressing realities of social preference, so do they face similar conflicts between historical scholarship, agency folklore, and popular understanding. The Madison campfire story promises to be with us, in one form or another—as historical fact for some people, as heroic metaphor for others—for many years to come.

The appearance of the long-lost 1870 expedition diary of Henry Washburn, unveiled at the humanities conference in Yellowstone National Park in October 1997, should warn us that there may yet be more evidence out there.[14] And whether or not new evidence ever surfaces, some day new analytical techniques may appear and existing evidence may yield new insights. But just as the evidence may grow or become more cooperative, so too will change the cultural temperament of the society that embraced and now doubts the campfire story. In the dynamic state of such things, the campfire story will be replaced or supplemented by other tales, some perhaps no more trustworthy but more appealing to the modern ear and sensibilities.

Endnotes

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2. Hans Huth, "Yosemite: The Story of an Idea," *Sierra Club Bulletin* 33 (March 1948), 72. Carl P. Russell, "Madison Junction Museum Prospectus," typescript dated June 3, 1960, at Orinda, California, 19, cited in Aubrey Haines, letter to Robert Utley, stamped January 8, 1972, 2, authors' collection, courtesy of Aubrey Haines and Richard Sellars. Richard Bartlett, *Nature's Yellowstone* (Albuquerque: University of New Mexico Press, 1974), 198–208. Among the many documents relating to this subject and produced by Haines in his role as park historian in the 1960s, one of the first was his memo to the Assistant Superintendent, June 5, 1963, Yellowstone National Park Archives, Box H-3, "Madison Jct. Pageant." This was his first critique of the then-popular annual theatrical pageant held at Madison Junction ever year to celebrate the campfire story. Haines's more complete telling of the real story of the campfire and how it fit in the creation of the park is in the first volume of his book *The Yellowstone Story* (Boulder: Colorado Associated University Press and the Yellowstone Library and Museum Association, 1977), 1:129–130, 1:163–173.
3. Haines, *The Yellowstone Story*, 1:90.
4. Cornelius Hedges, "Excerpts from the Diary of Cornelius Hedges (July 6, 1870 to January 29, 1871), with a verbatim transcript of that portion concerned with the 'Yellowstone Expedition' from the time it left Helena, Montana Territory on August 17 until the return of the pack train to that city on September 27, Transcribed from the original diary in the Montana State Historical Society Library, Helena, Montana, by Aubrey Haines, Park Historian, November 5, 1962." Yellowstone National Park Research Library, manuscript file, 12.
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7. Haines, *The Yellowstone Story*, 1:105, 1:165; *Yellowstone National Park: Its Exploration and Establishment* (Washington, D.C.: U.S. Government Printing Office, 1974), 59.
8. Louis Cramton, *Early History of Yellowstone National Park and its Relationship to National Park Policies* (Washington: U.S. Government Printing Office, 1932), 107.
9. E. T. Scoyen, letter to Superintendent Jack Anderson, March 23, 1971, Yellowstone National Park Archives, Box H-1, File 196.1.
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11. Schullery, *Searching for Yellowstone*, 61.
12. David Leeming and Margaret Leeming, *A Dictionary of Creation Myths* (New York: Oxford University Press, 1994), vii.
13. Randy Adams, "Chief Seattle & The Puget Sound Buffalo Wallow," *Borealis* 5(1), Spring 1994, 50–54. C. John Burk, "The Kaibab Deer Incident: A Long-persisting Myth," *BioScience* 23 no. 2 (February 1973), 113–114.
14. Lee Parsons, "The Diary of Henry Dana Washburn for the 1870 Exploration of the Yellowstone Wilderness," paper presented at "People and Place: The Human Experience in Greater Yellowstone," the Fourth Biennial Conference on the Greater Yellowstone Ecosystem, October 12–15, 1997, Mammoth Hot Springs, Yellowstone National Park, Wyoming. Proceedings in press.

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Lee Whittlesey and Paul Schullery, National Park Service, Yellowstone Center for Resources, P.O. Box 168, Yellowstone National Park, WY 82190

Part 5

Keynotes

The Lessons and Lesions of History: Yellowstone and Progress

Patricia Nelson Limerick

The phrase, "the lesions of history," originated a few years ago, when I was writing a speech on natural resources management. I had covered the usual survey of challenges and dilemmas, and I was trying to devise a transition to a cheerful conclusion where I would talk about the valuable lessons that Western history could teach us. But the unconscious is a powerful force. *Via* Freudian typing, I transformed a declaration that I would discuss the "lessons of history" into a declaration that I would discuss the "lesions of history." Contemplating this remark sent me to a dictionary, which told me that a lesion was "an injury, hurt, damage, or other change of an organ or tissue of the body tending to result in impairment or loss of function." Lessons of history and lesions of history: surely they are both part of our historical heritage, and the value and trustworthiness of the lessons would surely be diminished if we did not also reckon with the lesions.

The displacement of the Sheepeaters, the Indian natives of Yellowstone, and white Americans' contemptuous appraisal of those people, is certainly one of those local lesions. The ruthless poaching of park animals in the early years of the park; the often well-intentioned errors and miscalculations strung through the history of wildlife management in the park; the exclusiveness, in terms of both class and race, of access to Yellowstone; the bitter and persistent frictions between local ranchers and park officials; the recent both angry and anguished struggle over the bison; the shameful stinginess of Congress in funding the park: it is no particular strain to come up with a sizable list of the lesions of Yellowstone history, with many of them persisting, just as the dictionary said lesions would, as "impairment and loss of function."

The subtitle of this essay, however, contains a word with a quite different spirit—the word "progress." In the olden days of the West, that word was invoked regularly and almost religiously. The ritual use of the word progress once characterized public life in the West, but it has now fallen into disuse and even disrepair.

In that context, it may not sound entirely platitudinous, and it may sound surprising if I take this occasion, the 125th Birthday of Yellowstone National Park, to congratulate the park and its managers on the *progress* they have made. To take one example, even if ecosystem management has sometimes stumbled and staggered in its applications at Yellowstone, it is itself a development that is entitled to wear the label progress. To take another example, when one remembers how exclusive, in both racial and gender terms, employment in the National Park Service once was, it is a very glorious turn of events, and surely a mark of progress, to hear of Robert Stanton's

appointment as Director, as well as to see the growing range and number of people of color involved in outdoors issues. And, as one final compelling example, recall to memory the park's first superintendent, Nathaniel Langford, characterized by Paul Schullery as "a tireless and unethical promoter who left a legacy of shifty dealings and indignant business associates."[1] Now, if you can look at Nathaniel Langford and then look at the current superintendent, Mike Finley, and *not* have the word "progress" come to mind, then you are indeed a very hard nut to crack.

It is, I will be frank, a novel and interesting experience for me to use this word publicly, without apology, without irony, and without quotation marks. When I have used the word progress in the recent past, I have always been thinking of it as an artifact from the earlier times of Manifest Destiny, when many white Americans believed that the settlement of the American West was the nation's clearest demonstration and proof of progress. Indeed, with thoughts of that earlier enthusiasm for the word in mind, it is easy to remember why I, and many others, stopped using it: progress had lost so much of its utility because it had spent so much of its time working in support of questionable, lesion-producing causes. The progress of the nineteenth-century West so often worked to the benefit of one group while working to the injury of many others that it seemed better just to let the word go.

So why reconsider? Recently, I was on a panel with the very gifted science writer Timothy Ferris, who is a man to whom the adjective "timid" has never been applied. In the course of a panel discussion, I tiptoed up on referring to some change in societal attitude as "progress," and then I visibly and noticeably shied away, explaining that the awareness of multiple perspectives on the word's meaning kept me from using it. At that point, Tim Ferris pointed out that the very same people who say that we cannot talk about "progress" are, in fact, often people who are free and easy with the use of the word "decline." In other words, many of us have accepted the notion that calling a line of human activity "progress" is inappropriate, given our understanding of the relativism thinly disguised in the term. And yet, when we want to characterize another line of human activity as "decline," or "loss," or "injury," we strike out the quotation marks and *just say it*, discarding all the fine-tuned sensitivity to point of view that governed us when we surrendered and abandoned the use of the more encouraging and heartening word.

When Tim Ferris made fun of my refusal to say the p-word, I gained a sudden recognition that we are very strict about following the rules of relativism and recognizing diversity of point of view when it comes to good news, and we entirely discard strict enforcement of those rules when it comes to bad news. Mark Twain put this another way: A cat that has stepped on a hot stove, he said, will *never* step on a hot stove again, but she'll never step on a *cold* stove, either. We all learned that progress was a loaded word, and a word that had inflicted more than its share of lesions. So we stopped using it, as we set out to show the public how complicated, how muddled, how multiple in its meanings history is.

What we—and I certainly include myself in this—did not recognize was how much the members of the public still had an enthusiasm, an appetite, and a yearning for something that they can label, recognize, and support as progress. Regular people want to believe that history comes with vectors. Nations get richer; nations get

poorer. Power gets centralized; power gets decentralized. Laws become fairer; laws become less fair. Things get better; things get worse.

In recent years, what many of us saw as a campaign to enrich and enliven history made many segments of the public surprisingly cranky and resistant, and I suspect that this rejection of the idea of progress contributed considerably to the crankiness. Our earnest efforts to recognize diversity and complexity of point of view in history made a complete hash of this understandable desire to know which way things were going, and ideally to know that things were going up and getting better. But we would not say "progress," though we would sometimes say decline, and this now seems, in hindsight, to have been a considerable strategic error. We might do a lot better, in pushing for good causes like the proper funding and support of Yellowstone, if we abandoned this prissiness and used the word progress, and used it actively and intentionally, to enlist support and engagement.

In trying to give up this prissiness myself, I have thought about forming a Prissiness Recovery Support Group, but I am not entirely sure I would like the kind of person who would might appear as a member of such a group. But if I do form this support group, we will have one special division in which I, alas, will have to play a leadership role, a division set aside for Those Recovering From Prissiness Attached to Saying the Words Nature or Natural—those who start to say "nature" and then flinch as they realize how much of what we call "natural" has been transformed by human thought and action.

So I am trying to repossess our right to refer to progress, and to reassert our right to define its contemporary meaning. There is a chance that some readers will put this essay down and report to others, "This may seem incredible, but I just read a piece in which Patty Limerick has become a cheerleader! A booster! An advocate of Positive Thinking! A champion of progress!" To fend off this misreading, let me stress that I am advocating the redefinition of progress into a meaning quite different from the usual booster meanings. Some might say that I have, indeed, been driven over the edge by too many defensive old Western historians denouncing me as "too negative" and "too disillusioning." Whatever the provocation, it is hard to deny that I and other writers have been very effective at noticing, labeling, and announcing dilemma and decline. I would like us to be equally good at noticing, labeling, and announcing progress, intelligently redefined.

Why has this been so difficult to do? In the 1990s, people—particularly people of my age group—have a way of experiencing frustration as if it were personal injury. When we want something, we, at best, get part of what we want. This has been a very common pattern in the history of human undertakings, but it is not uncommon, in the 1990s, for people having an experience of incomplete satisfaction, to act as if they have taken a novel and unique blow. Instead of saying, "It is great that we got *something*; at least we made some progress," we are much more inclined to say, "Phooey, we are getting nowhere." This stinginess in the recognition of progress is partly a function of a long-term habit of mind in the United States that, despite enormous evidence on the other side, continues to hold out hope for perfectability and unambiguous success. While that habit of mind seems, superficially, to be optimistic, it can actually make anything short of a stunning victory into a failure

and a disappointment. But I also think that there is a babyboomer factor at work in this attitude, as well, a part of a surprisingly well-established world view that says that, since we did not get to stay twenty-one forever, we have been ripped off and subjected to cruel injustice.

In that framework, it is not surprising that, when the Denver *Post* ran its "Yellowstone at 125" article in 1997, the sentence that summed up the article, in big letters on the first page, said, "The world's first national park finds its luster fading under pressures of overcrowding, pollution, and game management."[2]

Well, Happy Birthday to You, Too.

If the *Denver Post* were to decide to run a birthday salute for me, in the spirit of their Yellowstone Birthday salute, the headline would probably say: "Boulder's Most Over-Publicized Historian Finds Her Luster Fading Under Pressures of Overcommitment, Depletion of Mental Energy, and Problems of Time Management." I hope, however, that the headline writers' approach to Yellowstone's metric moment does not signal a new trend in birthday cards. I hope that Hallmark is not preparing a line of babyboomer cards that mimic the spirit of many of the media observations of the Yellowstone birthday: "Happy Birthday, You Pathetic Old Wreck and Relic! We Have Been Completely Amazed to Hear That You, Apparently, Are Still Clinging to Life!"

After reading some of these Yellowstone birthday acknowledgments, it is considerably more pleasant, if also a little disorienting, to escape the late twentieth century and return to the late nineteenth century, to read the sentiments of people to whom the designation of Yellowstone as a national park was so recent that they felt obliged to celebrate it, since they certainly could not imagine taking it for granted.

It is a treat to read these accounts of early visitors to the park because so many of them were so profoundly overcome by wonder at what they saw. Every one of them seems to have gone through a ritual of saying that words could not possible capture what the eye could see in Yellowstone, and then every one of them wrote hundreds and hundreds of words, anyway. Near the end of this essay, I will contrast the early travelers' sense of astonishment, novelty, freshness, encounter-with-never-seen-or imagined-phenomenon, with an equally powerful and persuasive—maybe *more* powerful and persuasive—form of perception of Yellowstone available to us today. We should certainly be struck by the way in which early visitors exclaimed, gaped, gasped, and found themselves startled, stunned, and swept away by the sublime. But we need not make ourselves feel bad by falling into the misapprehension that *all* of our nineteenth-century predecessors were so alert, alive, and responsive to sensation that we look deadened, by contrast. We ought to keep in mind remarks like this one, from an early British visitor, commenting on his company as he looked at the Grand Canyon of the Yellowstone: "I saw some tourists viewing this stupendous work of nature with as little concern as they might have exhibited at a show of Punch and Judy."[3] This is a quotation that should, at the very same moment, make us feel better and worse.

While we are attempting to keep from melting into envy of our predecessors a century ago, it is also important to remind ourselves how ruthlessly exclusive, in class and race, early Western tourism was, and later Western tourism often remains.

Yellowstone, one British nobleman put it, "is accessible to all who have leisure, money, and inclination to travel."[4] While an "inclination to travel" may have been very widely distributed in the population at large, leisure and money have been much more narrowly distributed.

It is striking, as well, to see how many early visitors to Yellowstone referred to African American servants. Sir Rose Lambart Price found his trip to Yellowstone made much more comfortable by the services of what Sir Price called "my man," a "coloured trooper," "a capital servant" who, Sir Price said (in phrasing that, as a Past President of the American Studies Association, I am required to find very revealing in its gender and racial politics), "was as sympathetic and attentive as a woman."[5] The famed Washburn/Langford/Hedges party of 1870 included "two colored cooks."[6] A visitor in 1896 remarked on "the staff of coloured waiters in the dining-room" in a park hotel.[7] The 1874 expedition of the Earl of Dunraven, included "Maxwell, a gentleman of colour, who fulfilled the important functions of barber and cook."[8] All of these references to coloured servants remind us that Yellowstone, from its beginnings as a national park, has been anything but an escape from the usual American arrangements of power, as they have been stratified by race and class.

And yet many of the early visitors were profoundly aware that Yellowstone *did* represent a new state of affairs in the arrangements of federal power. "If Government had not promptly stepped in," the Earl of Dunraven put it, Yellowstone "would have been pounced upon by speculators, and the beauties of Nature, once disposed of to the highest bidder, would have been retailed at so much a look to generations of future travellers." This suspension of the free exercise of private property by the creation of a public reserve was, the Earl said, "an act worthy of a great nation."[9]

Touring the park in 1896, the traveler and lecturer John Stoddard compared the wisdom of national preservation policy to the wisdom of God, a comparison that you do not hear every day in our times. The park was guarded on three sides by "lofty, well-nigh inaccessible mountains," Stoddard said, "as though the Infinite Himself would not allow mankind to rashly enter its sublime enclosure"; in this respect, Stoddard concluded, "our Government has wisely imitated the Creator." The Government had received Yellowstone as "a gift of God, and, as His trustee, holds it for the welfare of humanity." Stoddard's favorable opinion of the government correlated directly to a considerably less favorable opinion of human nature. Watching the geysers, he said, "I realized then, as never before, the noble action of our Government in giving this incomparable region to the people"; without that noble action, Stoddard felt, "the selfishness and greed of man would have made a tour here almost unbearable," fencing off geysers and charging viewers for access.[10]

In a slightly more secular version of this claim, Hiram Chittenden noted the extreme good luck in the *timing* of this story. Longer than many other Western areas, Yellowstone remained unknown to most white Americans, and Chittenden thought that this was providential. "Had it been known at an earlier date, its fate would be deplorably different." Instead, the full discovery by white Americans was "delayed until the government was prepared actively to consider the matter," "until the time arrived when the government could effectually reserve it from settlement."[11]

In these appraisals, providence engages in a delicate mission of timing, keeping

Yellowstone hidden from the ravenous American public while the federal government hatches, incubates, and gains strength. While it may make a rather melancholy contrast with public attitudes of our times, this is still a very striking scenario. Waiting for the federal government to reach a state of readiness thus becomes a little like waiting for Luke Skywalker, in *Star Wars*, to undergo his training with Yoda and get himself in shape to fight the Empire. In Chittenden's scenario, the federal government is a promising youngster, watched over carefully as it grows and gains in power (Who was its Yoda? Evidently a consortium of Radical Republicans), until the central government finally reaches a mature power that allows it to rescue Yellowstone.

However this faith may hold up in our times, reading these tributes to the lucky timing of the federal government's actions in Yellowstone is a way of reawakening ourselves to the fact that Yellowstone's status as a national park is nothing to take for granted, that the state of affairs could easily have been otherwise, and, while we are certainly free to grouse over how national parks are mismanaged or overused or underfunded, we also have to be very happy that national parks exist, in order for us to agonize over their condition.

Here, in the same spirit of late nineteenth-century cheer, is Sir Rose Lambart Price reporting in 1898 on his visit to Yellowstone:

> Our American cousins have… conferred a benefit on the entire world by preserving [Yellowstone] for the national use. It makes me shudder to think what might have happened, but for the wise forethought that dedicated this grand property to the people of America and their heirs forever. [12]

Let us make use of Sir Price's observation, as a way to reawaken wonder: let us join him in a "shudder to think what might have happened." Let us take our cue from him in congratulating ourselves on the pattern of progress that has given us national parks to fight over.

Let us turn now to the contention, the fighting. One has to be struck by how many visitors to Yellowstone, in the last one hundred and twenty-five years, have remarked on the way in which the contemplation of this place—its mountains and forests, its geysers and hot springs, its bears and elk—made them feel humble. I am certifiably part of that cohort. Indeed, I did not even have to *be* in Yellowstone in order to start feeling humble, modest, and reduced in vanity. I began having episodes and fits of anticipatory Yellowstone-Induced Humility months ago, back when Susan Neel first asked if I would write this essay, and this humility grew directly from the fact that Yellowstone is as complex as a social institution as it is as an ecosystem. (Honest humility would have had me simply stand up at the symposium, admit that the human history of this place was too complicated for me to figure out, and sit down. Honest humility would make for very brief conference proceedings.)

I have now logged enough of these fits of aggravated modesty to be flummoxed by one of the most puzzling phenomena of the human experience in Yellowstone: namely that some of Yellowstone's visitors have, over the decades, shown an absolute immunity to this site-based humility. I will not offer a list of names here, of those

who seem to me to be carriers of this immunity, but I suspect that employees of the park service could supply a very substantial version of this list. Members of this cohort visit Yellowstone and reconfirm their confidence and certainty. Before, during, and after a visit, they express opinions, especially opinions about how Yellowstone ought to be managed, in a style and manner that no one would ever call humility or modesty.

If I might frame this in a somewhat dehumanizing way, here is the mystery: you have this interesting and complicated species of large mammal, and when you place members of that species in Yellowstone, some of them come down with a powerful sense of their own limitations. In this first cohort, even those who are not formally religious will start speaking humbly about powers and forces that are much larger than themselves. Meanwhile another group—apparently members of the very same species—enter the same habitat, and instantly swell and puff up. Once puffed, they start proclaiming and directing and proscribing in a very remarkable way.

So what could be making the difference? I see no reason to suggest that this immunity to the humbling powers of Yellowstone is genetic; it seems more likely to be culturally acquired. What may be going on here is that this second cohort is composed of people who exercise, develop, and cultivate their self-esteem the way other people exercise, develop, and cultivate their muscles. In the privacy of their homes, they pursue the equivalent of weight lifting, but the weight they lift is their opinion of their own capacity to see the world as others *ought* to see it. Thus they are trained, primed, beefed up, and ready for the challenge to self-aggrandizement posed by Yellowstone. It would take something very extraordinary—an instructive seminar on the limits of human strength, with the instruction delivered by a male bison, or the eruption of a new geyser right beneath their feet—to acquaint them with the humility many of the rest of us feel in response to considerably less stimulus.

Thus we return, to the lessons and lesions of history. Here is one unmistakable lesson of Yellowstone's history: as long as some humans retain this susceptibility to such pathological confidence, however we may redefine "progress," it is extremely unlikely that progress will ever come to mean a cessation of disagreement and an arrival at resolution, consensus, and harmony. It is one form of utopianism, to imagine a peaceable kingdom where the lion lies down with the lamb, the predators make peace with the prey. It may be an equally imaginative form of utopianism, to imagine a peaceful kingdom where the rancher lies down with the federal agency employee (curious, isn't it? it sounded so innocent when the lion and the lamb did it), and the preservationists make peace with the utilizers. Contention and Yellowstone appear to be coterminous, and it is not clear what effect that wishing it were otherwise could have on that situation.

A few years ago, I gave a keynote speech at the Western Association of Fish and Wildlife Agencies. I asked that group to choose one of two statements: 1) Animals turned out to be more difficult to manage than human beings, OR 2) Human beings turned out to be more difficult to manage than animals.

I thought that this poll would generate a fairly mixed response, but, in fact, "landslide" is too weak a term for the results: two or three hands held up on behalf of proposition #1, and about 250 held up on behalf of proposition #2.

I suppose the most cheerful way to approach this is to say that the instructional value of Yellowstone has doubled. We always knew it was a wonderful place to learn about nature, a wonderful laboratory for investigating individual species as well as an ecosystem, a place that could have been, if federal funding weren't turning so anemic, a place of endless and productive employment for natural scientists. What good news, then, to recognize that Yellowstone works just as well as a place to learn about human nature, that it is just as valuable as a laboratory for investigating human behavior, that—funding permitting—it could be as rich a subject of study for social scientists and humanists, as it is for natural scientists.

The human complexity of Yellowstone has become unmistakably one of its features of interest. Contention over the management of the park is so striking a feature that the park has developed unexpected institutional kinfolk. I cannot help thinking, for instance, that there is every good reason for the managers of Yellowstone and managers of New York's Central Park to become pen pals. Anyone who reads Roy Rosenzweig's and Betsy Blackmar's thought-provoking history of Central Park, *The Park and the People*, will have to be struck by how many of their remarks about Central Park look as if they could be picked up and relocated to Yellowstone without much modification. Here is how Rosenzweig and Blackmar summarize some of the basic questions of Central Park's history:

> Who has the authority to control the park and to define "proper" behavior within it? What sort of restrictions should be set? According to what standards should the park be maintained? …Who is permitted to participate in the public decision-making process? Who benefits from and who has the means to make uses of public spaces? Can such spaces accommodate people of different classes and cultures?[13]

It is impossible to contemplate these questions without concluding that Central Park and Yellowstone have turned out to be institutional relatives. However isolated Yellowstone once seemed from the political, cultural, and demographic pressures that, from the beginning, set the context for Central Park, that isolation proved to be remarkably temporary, and now the supporters of Yellowstone and the supporters of Central Park have more to learn from each other than, perhaps, either would have liked.

Central to the dilemmas of management has been a problem of expertise and trust. In its encounters with white Americans, Yellowstone has never been free of a credibility problem. We might call this the Jim Bridger Dilemma. The mountain man Jim Bridger had seen Yellowstone, and he talked about it a lot, but few believed what they heard from him. As Hiram Chittenden put it, "certain personal characteristics of Bridger aggravated the lack of confidence in what he said." Thus, "his reckless exaggerations won for him a reputation which he could not shake off when he wanted to." When Bridger stopped lying and tried to tell the truth, Chittenden says, in a memorable and useful phrase, "the truths he told about Yellowstone…were set down as the harmless vaporings of a mind to which truth had long been a stranger." Getting the jump on postmodernism, Chittenden saw this situation as going well beyond the clearly marked distinction between lies and truth: Bridger's "constant

repetition and enlargement of his imaginary experiences eventually" led "him to believe them true."[14]

One hundred and fifty years after Jim Bridger got trapped in his own "credibility gap," the Bridger Dilemma of Yellowstone Credibility has a whole new cast of characters. The question of whether or not to believe the tales of mountain men has now been supplanted by the question of whether or not to believe the studies of scientists.

When I was in graduate school, one of my teachers told an annoying story about a marriage counsellor, who was being observed by a graduate student. First the marriage counsellor brought in the husband of a feuding couple, and listened very sympathetically to his version of how the marriage went wrong, a version that attributed most of the problems to the wife. The marriage counsellor listened very attentively, and then said, "I think you're absolutely right."

Then he sent out the husband and brought in the wife, who presented an opposite version of the story, attributing most of the problems to the husband. Once again, the marriage counsellor listened very attentively, and then said, "I think you're absolutely right."

Then, after the wife had left, he turned to the graduate student and said, "What do you think of my technique?"

"I have to tell you," the graduate student said, "that I think that was awful. You listened to two conflicting stories, and you said that both of them were absolutely right. It seems to me that you've taken a bad situation, and made it worse."

"You know," the marriage counsellor said, "I think you're absolutely right."

When one is reading about Yellowstone wildlife management, this story is never far from mind. Plenty of experts seem more than ready to answer the question, "What is happening with the elk population and the grazing resources of the northern range?" Everyone seems willing to answer. Everyone has credentials, stature, and expertise. If there is some method by which a humble Western American historian, with a pretty weak personal background in the natural sciences, is supposed to listen to these conflicting testimonies and make sense of them, in a manner more intellectually impressive than imitating the mush-headed methods of the marriage counsellor, I would certainly appreciate directions to that method.

In the most recent issue of *Yellowstone Science*, Sue Consolo-Murphy writes of these conflicts of interpretation. "Contentious issues," she said, "…demand that we consider various scientific viewpoints." She quotes former Superintendent Bob Barbee: "on an issue of any substance at all, the scientists will almost certainly disagree."[15] What to do? I'm sure that Consolo-Murphy is quite right in cautioning us "not to expect agreement." But I wonder if we might, legitimately, expect a little more clarity in the presentation of the disagreements.

At the risk of a somewhat dehumanizing analogy, I think of a dog I once had, a dog of no particular wisdom, but nonetheless a dog named Socrates (his mother belonged to a man who taught classics at UCLA). We used to play a lot of ping pong in my youth, and Socrates had a pretty charming habit of standing up, placing one paw on each side of the ping pong net, and then watching the game, with his head rotating back and forth like the heads of people at a tennis match.

Well, that is what I want for myself, and for many other members of the interested public: I want to stand right at the net, and watch the volleys go back and forth, with some kind of clarity and momentum; and, having a little more understanding of the game than Socrates could muster, after the game, I want to talk to the players and find out what was involved in the contest for them.

What I want, to drop the analogy and speak more concretely, is a visit to what I have taken to calling a "Managed Contention Site." I want to go to historic sites, and to national parks, and I want to visit places where the issues of contention are translated into accessible, spirited, and sometimes even hostile language, and laid out as clearly as possible.

I can imagine a Managed Contention Site that uses primarily prepared text: unfudged, square, no-holds-barred statements of opposing interpretations of historic issues, or in other words, interpretations that go right to the center of those Lesions of History. Should the Little Big Horn Site be a memorial to white expansionism? To the folly of excesses of confidence and shortages of caution? To the resistance of Indian people to conquest? To the universal tragedy of conflicting claims to pieces of earth?

I can also see Managed Contention Sites framed by opposing interpretations of management and policy issues. Is Yellowstone's northern range a mess? Or is it a demonstration that the grazing of wildlife follows different processes and outcomes than the grazing of livestock? Is the problem that there are there too few willows and aspen? Too many elk? Too many experts?

Written text could carry a lot of the burden in a Managed Contention Site, but given the flagging enthusiasm of the public for reading, and given that agitated larger mammals are intrinsically interesting, I would also propose a more animate form of the MCS. Here's how this would work: tourists are invited, though certainly not forced, to visit a three-dimensional, living demonstration of contention. Stationed around the site are people, representing different points of view, placed in flexibly designed booths arrayed, with banners and bright colors, in a manner that suggests the festivity and energy of a public fair. In the center of the plaza are a few, beach-style umbrellas, which, to give them a little dignity, we will call the Inclusive Big Umbrellas of Fair Exchange. The tourists stroll around, stopping at the booths and listening to the various points of view. If a tourist hears one person say that the elk are devastating the northern range, and then hears another person say that wild animals just have a different relationship to forage, then if the tourist wants to hear those people in a direct exchange, the tourist can summon the contenders, out from their booths, to meet under one of the Big Umbrellas of Fair Exchange.

Managed Contention Sites have two rules. The first one is that there will be no physical violence, and anyone even getting close to physical violence will leave. The second one is a little more complicated. Think back to the vice presidential debate between Dan Quayle and Al Gore in 1992, when they both talked and shouted continuously, and neither even pretended to listen to the other. This was a perfect example of what the Managed Contention Site will not support. Thus, the second rule is this: if a contender keeps interrupting and refusing to let his opponent talk, then the offending contender has to wear a Dan Quayle mask (or an Al Gore mask—

we must be bipartisan in this) until he starts behaving better.

There is one other element of preparing a Managed Contention Site, and that involves the preparation of the Contenders. I think we have to assume that the skill level here is pretty bad, and expecting people just to come in and perform this exercise well would be expecting too much. But I believe I have the solution. This idea came from following, as closely as I could, the story of the reintroduction of the wolves.[16] This is a riveting story, an enormously interesting story, and one part that particularly grasped my attention was the notion of an acclimation pen. Apparently this has been a very strong determinant of reintroduction success; wolves that spend time in an acclimation pen, instead of being directly released, have a better chance of successfully adapting to their new location.

As one is reading about this important stage in the acclimating of wolves, one eventually has to ask, how come only wolves get the benefit of acclimation pens? Surely this method could benefit others.

I have some pretty ambitious ideas here; perhaps privately, I would be happy to describe my design ideas for an acclimation pen for visiting members of Congress, though I think it might be best to rename this an acclimation suite. But let me put that aside for now, and concentrate on the plan for the acclimation suites for participants at the Managed Contention Sites.

These suites should be, first of all, pleasant places, with enjoyable meals and comfortable accommodations and a nice view. The major acclimating activity, though, for the prospective contenders will consist of a deeply annoying, and extremely productive, exercise used by professional mediators, by which you can respond however you want to the other guy's statement, but before you can respond, you have to restate, clearly and accurately, what the other guy said.

This, I think, is the missing step in many of our public debates, and especially in disagreements among scientists; they seem to be disagreeing heatedly, but their listeners cannot be absolutely sure that the contenders have a clear understanding of what they are disagreeing about. But that is the rule: you stay in the Acclimation Suite until you can do this repeatedly and satisfactorily, hearing what your opponent actually said, and then stating it clearly and convincingly. Who knows, this may prove to be such a novel pleasure—and a relief—for the contender-candidates that some of them may replicate the behavior of some of Yellowstone's reintroduced wolves: you open the pen, you invite them to come out, and they choose just to stay in the pen, and have their meals delivered to them.

Managed Contention Sites, a wider use of acclimation pens: what next in the way of applications of the lessons of history? I turn down to Strategies for the Redemption of Well-Intentioned Foolishness (SRWIF). What brought this to mind was thinking about the long, and peculiar, history of human beings trying to feed wild animals in this park. It is obviously a very destructive practice; it is not a good thing to habituate a wild animal to a taste for human food (whether that means food that humans eat, or humans *as* food). So I was thinking about how resolutely and persistently goofy human beings have been about feeding wildlife, and in the process of thinking about that, I realized that there is, at the core, really something quite appealing and even admirable in that impulse. The effects may be terrible, but, still, at bedrock, that

impulse to feed a hungry creature is a long ways away from depravity and sin. So why not, then, seek to redeem well-intentioned foolishness? When warning park visitors not to feed wildlife, instead of those stern and scolding signs at the park entrances, why not say to them, "Your desire to feed these animals has, at its base, an impulse to be helpful that we very much appreciate and admire; in truth, there *are* malnourished animals, and—a great deal more distressing, malnourished *people*—in this country who could very much benefit from your generous impulse. Therefore, in honor of that generosity, we have made available to you various collection boxes where you can contribute to programs that will see that those who are hungry receive food."

Why not recognize, honor, and channel in productive directions the appealing qualities of what is otherwise just foolish and destructive behavior? Or, to put this more harshly, human beings are intrinsically and repetitively foolish creatures, and rather than lamenting this situation, the greater pay-off may lie in trying to figure out how the honorable element within the foolishness can be identified, and then rechanneled in more productive directions.

There are quite a number of ways to go with this program to Redeem Well-Intentioned Foolishness. But I want to end by returning to the theme of progress, and calling your attention to one particular, very striking, and very appealing aspect of progress in Yellowstone.

When one reads narratives written by visitors to Yellowstone in the late nineteenth century, it is hard not to feel at least a twinge of envy for their timing. The novelty, surprise, and unexpectedness of Yellowstone receive powerful testimony from those accounts. But now, a century later, there is another kind of testimony which I, in fact, find *more* powerful.

At my request, John Varley and Laura Joss sent me a range of written material produced in the park, including the park employee newsletter. I suppose some of the enjoyment of reading those newsletters came from the intrinsic interest of snooping in other people's neighborhoods. *The Yellowstone News* carries, for instance, a set of classified ads, and through those ads, you can track fashions in automotive vehicles, and you can also track some cultural references very specific to the subsociety of national park employees. "For Sale," one reads in one example, "Custom white Kirsch mini-blinds for Mission 66 house—living room, dining room, bedrooms, kitchen. They were $600 new, $300 takes all."[17] Of course, even if one feels oneself enough of a sophisticate to decode the term "Mission 66 house," one still can't quite figure out if the sellers here have decided just to go without blinds and let the world look in, or if they've come up with a better, if unspelled-out strategy for privacy.

The cultural trend that is unmistakable in park publications is this: there are now a bunch of people who have become intimate with Yellowstone. This makes quite a stunning contrast with the situation one hundred and twenty-five years ago, when surprise, astonishment, and a deep-set sense of "otherness" characterized most visitors' encounter with Yellowstone. One can see this intimacy most clearly in the writing of park employees about the geysers. The geysers all have names, and park employees write about them in a style that suggests that the geysers not only have names, they have biographies. In the *Buffalo Chip*, Mary Wilson reports on thermal activity—and human activity—at West Thumb:

> In addition to the excitement surrounding the renewed activity of Twin Geyser, rangers at West Thumb are quite beside themselves with the news that there is now a predictable geyser in the neighborhood. …[Lone Pine Geyser's] first recorded activity was in 1971, when eruptions were every 20 minutes…Since the early 1980s, eruptions have taken place every 26 to 32 hours, but over the last few months the eruption interval has shortened to 16 to 17 hours.[18]

While I am happy to know that Lone Pine Geyser is erupting at almost regular intervals, it is important to admit that what makes this fact important and compelling to me is that assurance from Wilson: that the "rangers are quite beside themselves with this news."

In the park's early years, visitors took a glimpse at a geyser, stayed in the area for, at the most, a day or two, and then moved on. So here is progress: now there are people who watch these geysers year round, who observe their behavior in a steady and consistent way, and who write about these geysers as if they were neighbors. As if they were neighbors, though still very much "other," very much part of a phenomenon that no one can confuse with human behavior.

I am struck, as well, by the way in which park employees and local environmentalists tell the life stories of wolves and bears. These wolves and bears are always scrupulously identified by number, but they are nonetheless wolves and bears who are unmistakably individuals in their habits, their histories, their adventures, their interactions with human beings, and (dare I say it) their *characters*. I understand that the numbering system has the goal of keeping park service staff properly objective and distanced, prevented from personalizing or anthropomorphizing these creatures. But the human desire to reach to the world is enormously powerful, and fully objective and detached numbering or not, the telling of the stories of these creatures has become unavoidably *intimate*.

When, in the course of the wolf reintroduction program, Number 10 got shot, leaving Number 9 widowed, with a bunch of recently born pups, it was clearly and entirely inappropriate to think of Number 9 as a "widow" and, at the same time, it was clearly and entirely impossible to *keep* from thinking of Number 9 as a widow.

And that, I think, is Progress. It is a wonderful thing, that the wolves, bears, and geysers now have biographers, and biographers who attend to the moods and actions of their subjects as closely as Boswell once attended to the moods and actions of Samuel Johnson. Scientific understanding is not compromised by caring, by neighborliness, by intimacy. While I like reading the exclamations and expressions of astonishment from travelers a century ago, I would *much* rather learn about Yellowstone, its wildlife, and its geothermal features from people who have *lived* in Yellowstone and who have known the wildlife and the geysers as neighbors. I label this state of affairs "progress," for the pure and elemental reason that neighbors and intimates tell better stories—more instructive, more detailed, more compelling stories—than the visitors and transient observers could even glimpse.

I suppose there are those among us, in the 1990s, who would say that this intimacy is itself a sign and symptom of a tragic decline. When geysers have Boswells and wolves are widows, we are, by the judgment of some purists, indeed living in

fallen and impure times. To people with those glum feelings, I would simply say this: in the early years of Yellowstone, ignorance seemed to be the necessary precondition for wonder. The less one *knew* about the features of Yellowstone, the more astonishing and impressive the features were. But ignorance is not the only condition that permits wonder. We live in exciting times, as intimacy replaces ignorance as the foundation of Yellowstone's wonder. Wonder through intimacy is finally a much more lasting and orienting experience than wonder through ignorance. And this is one change ready to be honored with the title, progress.

Endnotes

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Patricia Nelson Limerick, University of Colorado, Center of the American West Macky, 229, 282 UCB, Boulder, CO 80309-0282

How Things Work in Yellowstone

Paul Schullery

I would like to begin by celebrating what this conference means. Those of us who care about humanities issues in Yellowstone have often felt pretty lonely. We have never been able to compete with grizzly bears and geysers, and now we even lose out to microbes. In the Greatest Nature Show on Earth that runs continuously here in Yellowstone, the humanities have traditionally been stuck in a ratty little tent somewhere off the darker end of the midway. But look at all of us here. This is a show of interest, force, and usefulness that may just permanently ratchet our cause up a couple notches.

It only took this conference series four conferences to get around to the humanities, and though some people in the management agencies still giggle the first time they hear the term "historic garbage dump," we must admit that we've come a long way. The conference we begin today is a great sign, even recognizing that two years from now, this conference series will probably go back to arguing over the Great Questions, like whether it's politically correct for Yellowstone's grazing animals to eat actual live plants. In the meantime, the agenda suggests that we're going to do a wonderful job of portraying the incredible richness and significance of cultural issues in Greater Yellowstone.

Let me point out for the record that this conference has had some pretty notable predecessors. Not only have the humanities had a voice at any number of other conferences in the region, but also there was an earlier humanities workshop, an important one, held five years ago at Montana State University. It was entitled "The Humanities and the Greater Yellowstone Ecosystem: Defining a Research Agenda." I suspect that the research agenda we envisioned back then is in good part fulfilled by the agenda of this conference.

At that workshop, historian Dan Flores gave a memorable talk on the "Spirit of Place and the Value of Nature in the American West," where he wondered aloud about the apparently endless "agonizing the modern American West is enduring." He pointed out that concepts like the spirit of a place are helpful devices for, as he put it, "puzzling over the wonderfully diverse ways that women and men have both lived in and reacted to the spaces on the landscape." I think many of us in the northern Rockies found that talk inspiring and helpful, whether we were, like Dan, newcomers to this region or were long-time puzzlers ourselves. We in the humanities struggle constantly with reconciling fairly lofty concepts like spirit of place with much earthier matters, from the vicissitudes of boom and bust economies to the every-day menus revealed by a prehistoric hearthsite.

In case any of you have gotten your hopes up, I'd better explain that by entitling my talk "How Things Work in Yellowstone," I did not mean to suggest that I was

going to tell you. Instead, I offer that title as a justification, of sorts, for what I think we are telling the world at a conference like this. Besides all the other important things about these intellectual marathons, including the great papers, the hallway networking, and the dynamite muffins, we have a big job to do. That job is to help everybody understand just how things have worked here, and how they work here now. We especially want to get through to the people in charge—God knows *we* never are, and I'm not sure I'd even trust us to be—just how much they need us. We want them to know that without us and our often very specialized little messages about how the lofty and the earthy have blended here, they're in a whole lot worse trouble than they are when they come up short on knowledge about the grizzly bears or the bison. Grasping the population ecology of our bison is a necessary start, but it's only a start. Until you have some familiarity with the forces behind our passion for the animal, whether those forces manifest themselves in gift-shop sales, in art, or in gutbuckets, you haven't begun to understand how things work in Yellowstone.

Like most self-respecting, self-absorbed humanists, I tend to make the most sense of these big questions when I can turn them inward and bounce them off my own experience. And I must admit that I become alarmed when I realize how much experience I now have with Yellowstone, and am sometimes tempted to regard that long haul of my own life as a kind of credential, entitling me to hold forth rather more freely than I might really be entitled to. So I try to be careful. A man can live down the road from a nuclear power plant his whole life and never assume he knows the first thing about nuclear physics, but put that same man on the winter range of an elk herd and in three years he's an ecologist. In five years, he's a historian.

Twenty-five years ago, I first arrived to work here with my social conscience still pretty warm from the sixties. Though I was politically naive and socially sheltered, even I noticed that women "rangers" were dressed in embarrassingly impractical little stewardess outfits; that there was a conspicuous and almost total lack of non-white faces at my campfire programs; and that the older museum exhibits still carried some baffling and uneasy interpretive messages about Native Americans. The concessioner's well-intentioned description of Yellowstone as a "World Apart" seemed true at least in these respects: in some ways, the park, like any venerable institution, was in a constant struggle to adjust to a changing world. It still is; it still is a mixture of various imagined Wests, various imagined wildernesses, and various imagined ideals. The essentially male image of the ranger, the essentially white, middle- or upper-class image of the visitor, and the essentially subservient image of nature still played out their complex roles in all our minds. I think they still do. We might all agree that there is a spirit of Yellowstone, but as Judith Meyer's recent book by that title demonstrates, we're a long way from grasping how to accommodate that spirituality in our almost desperate attempts to do justice to this place.

So that's one way how things work in Yellowstone. Like any other human creation, it marches along, sometimes reflecting our worst just as it reaches for our best. And it does so in a bewilderingly involved process of politics, science, history, and religion. No ecological system on the planet can match the human system of Yellowstone for raw, overwhelming complexity. This is why my own questions about how Yellowstone works are so daunting to me.

Eighteen years ago, I sat around a breakfast table over at the Mammoth dining room with Mary Meagher, Nathaniel Reed, Starker Leopold, and a couple other people. Nat Reed was for some years an outstanding Assistant Secretary of the Interior for Parks, Fish, and Wildlife, and Starker Leopold was, of course, Starker Leopold. Mary, who was at that time our chief biologist, was explaining some ridiculous Washington-level snafu that was holding up the funding of the park's fisheries project. When she finished, Starker turned to Nat—neither of them held any federal office at the time—and said, "Nat, surely you know a number you can call to take care of this." I remember at the time thinking, "So this is how it works."

A few years later, during what former Yellowstone Superintendent Bob Barbee called the "five-year bloodbath" over the removal of the Fishing Bridge development, the National Park Service found itself politically hog-tied, unable to act as its best scientific judgment and most affirmative moral imperatives suggested it must. Someone, I don't remember who, but it was one of the park's top managers, spoke *hopefully* of the impending lawsuits from the environmental community, saying words to the effect of "This time, we're just going to have to count on our friends to make us do the right thing." Again, a little light went on in my head, and again, my primitive notion of how things work added another convolution, another shade beyond the simple black and white of high school civics classes.

Then, at the end of the last decade, I found myself on the team of National Park Service and U.S. Forest Service staff responsible for writing the legendary *Vision Document*. I'm sure many of you remember this project and how it was universally hailed for its forward-looking and sensible approach to sustaining the values of Greater Yellowstone. The interest of our regional Congressional delegations was without bounds. Even John Sununu took time out from his busy travel schedule to comment on it.

Well, as our group of eight was working away one day in Billings, one of our team leaders told us about a briefing session she'd just held with representatives of the oil and gas industry. She explained the Vision process to them at some length, and when she finished, one of these people turned to another and said, "Should we kill it now or wait until they finish?" Again, I remember thinking, this time a little bleakly, "So *this* is how it works."

I'm sure many of us here have war stories like these. The longer I spend here, the more I find myself marveling over the chaotic mysteries of how it works, and the exasperations of how it doesn't. I've spent most of my time as a historian trying to sort out the process by which it has or hasn't worked in Yellowstone's resource-management issues, and I've concluded what most of my manager friends recognized intuitively long ago, that there are a lot of patterns here.

Take the park's current crisis of the illegal introduction of lake trout into Yellowstone Lake, which Bob Barbee called an appalling act of environmental vandalism. When lake trout were officially discovered and a campaign was launched to educate the public about them and the threat they were, it was absolutely predictable that some portion of the public would soon respond defending the lake trout—they're good fish, and we lake trout enthusiasts are troubled to see them cast as villains. This is the reality for managers: Every opinion is out there, and will be

exercised in its turn, even if it is utterly irrelevant to the real issue. That's how it works.

The cautionary lesson here for humanities scholars is that managers, knowing that any issue they face will generate a full spectrum of positions among the public, aren't at all sure what use history or even sociology can be to them. "We already know what we're going to face. We know the spread of public opinions will be all across the map. Why do we need to do surveys? What's to study? This is just how things work in Yellowstone; always have, always will."

We can now answer that question by pointing out that the spectrum itself has a lot to teach us. One of the real milestones of wolf recovery was the completion, in 1985, of the first scholarly public survey of visitor attitudes on Yellowstone wolves, which revealed an unexpected and overwhelming national public support for wolves. The whole spectrum was still *out* there, but the bell was skewed really hard to the pro-wolf side. What a surprise, and what a nice thing to know. All of those years we conservationists had been pretty much assuming nobody cared about wolves, the public was out there overhauling thousands of years of attitudes without our help; they outran us.

When similar public surveys were done after the fires of 1988, I think many of us were surprised to discover the extent to which the public had not fallen for the apocalyptic rhetoric of the media, and were actually kind of curious about the fires, rather than just morally outraged the way some of the more intemperate commentators were. What a relief. And what a blessing that we had a way to find that out.

A few years ago, thanks to a conversation with the historian Samuel Hays, I began thinking about the longer-term patterns of our debates over Yellowstone, so I'm especially pleased to see that there are papers being presented here this week on how issues are shaped by the institutional cultures of management agencies. Of course policy analysts have been working on this question for a long time. Not only do public issues tend to sort themselves out along predictable ideological lines; they are often multi-generational, and can be tracked and predicted in ways that hadn't even occurred to me.

For example, it seems to be one of the rules of engagement in most scientific and public controversies, and certainly in Greater Yellowstone, that participants begin by undermining the credibility of their opponents. One of the most outspoken critics of the idea of natural regulation as a philosophy and a policy was recently quoted in the *Bozeman Chronicle* as announcing that "I am the only honest scientist. They have no scientists. They have people with scientific training who act as advocates." All sides tend to move to this level of rhetorical excess very quickly. We seem unsatisfied with our animosities until they have achieved a heroic scale—until we've elevated them to nearly religious issues, which, I suspect, many of them are. Most of us, especially those in the management agencies, are understandably uneasy with coming right out and acknowledging that reality, but there it is. Lurking behind all the expert scientific opinions are deep and warring value systems that most of the participants are too legally constrained, too polite, too cautious, or too blind to acknowledge.

For another example, in Yellowstone's management debates, no tactic is more

consistently successful, nor of greater potential interest to all of us truly objective humanists, than associating an opponent's opinion with a paycheck. Mark Twain once quoted an old man he knew, a former slave, as saying that "You tell me where a man gets his cornpone, and I'll tell you what his 'pinions is." The Cornpone Gambit is in constant use in our issues, most commonly in the claim that such and such a researcher or other position taker cannot be trusted because he received some of his support from the feds.

But the cornpone gambit can as easily be applied to any position holder in any of our debates. It's no coincidence that the people opposed to wolves are agricultural, either by profession or by inclination, or that western land-grant colleges with strong ag departments are more likely to be sources of criticism of natural regulation policy, while more distant universities with different departmental emphasis—which is to say different institutional cultures—have provided many of the researchers who think natural regulation is our best hope.

Moving to another element of Greater Yellowstone's culture of controversy, it's certainly no accident that criticisms of management agencies—or of universities, for that matter—get a lot more attention in the regional media than do compliments or even equivocations. Let me apply the cornpone gambit to the media. Last year, when regional congressional delegations insisted that the General Accounting Office investigate the National Park Service's management policies on the northern range, it was probably predictable that if the GAO had, as the delegations hoped, found great evidence of misconduct and bad management, these revelations would saturate the headlines, but that if they didn't, the whole thing would be pretty much ignored. Sure enough, when the GAO went only so far as to point out that there was indeed a legitimate scientific controversy going on here, regional journalists enthusiastically ignored the report. The GAO report, though vindication of a genuine and important scientific debate, was without question a major milestone in the northern range controversy, but because no witches were burned, it had no future as a cornpone-generating headline.

Of course being an objective humanities scholar rather than a mere scientist or bureaucrat, I realize that it wasn't the greed associated with scandal-mongering headlines that caused the media to ignore this important story. I prefer to give them the benefit of the doubt and assume that the media, like the rest of us, is sometimes just incompetent.

We all, whoever our employer, whatever value system we honor, can be seen cynically, as bowing to the most sinister stereotype of our employer's needs; this is a very comforting way to see one's opponents. And it does comfort a lot of us, and does sell a lot of newspapers, but it also sells short what is really going on here, which is much more interesting than a world view in which half the people are sold souls and Darth Vaders.

It makes a lot more sense, and gives more hope for progress, if we at least see controversy as a great battle over values systems or paradigms. A few weeks ago, Montana Senator Conrad Burns wrote to Superintendent Mike Finley and suggested that Greater Yellowstone submit to a Coordinated Resource Management review by the Society of Range Management. Finley responded, in part, by saying that "Our

skeptical friends tell us that 'putting the Society for Range Management in charge of overseeing range management in Yellowstone would be like putting the Fund for Animals in charge of writing Montana's hunting regulations.'"

Mike was going against traditional fashions here, and speaking more openly about competing value systems. People like Mike could use our help in this conversation. All the participants in Greater Yellowstone's issues are people who, for reasons of temperament and personal interest and disposition and religion and a hundred other things from biochemical imbalances to harsh potty training, are inclined to certain values systems and therefore are attracted to certain employers, whether agency, university department, organization, foundation, or corporation. No doubt a few of us are dishonest. There is always the scumbag factor. There is always the crackpot factor. But no doubt most of us are honest and are trying as hard as we know how. No doubt most of us sincerely believe science is on our side. But the underlying values systems that lead us to our preferred view of things aren't getting near enough attention. It is in areas like this that the humanities disciplines can make the most difference.

We are fascinated, rightly so, with the ethnography of native Americans in Greater Yellowstone; we want to understand their relationship with this place. But we tend to consider our own, current feelings and lifeways as irrelevant to scholarship, not measuring up to earlier residents and their descendants. So perhaps the first question we should ask ourselves, is why do we sell our own belief systems, legends, and folklore so short? After all, these things are driving today's management of these lands, more so than all the laws, policies, and litigation ever will.

Take folklore. Every day you can watch folklore happen here; it would be a great place to track the origin of what are by most definitions authentic folk tales. We saw it taking place within days of the release of the first wolves in 1995. The media happily quoted misinformed ranchers who asserted that the feds had promised that the wolves would not leave the park. No fed ever said that; even a cursory reading of the rule would make it clear the wolves were expected and intended to move far. But I can almost guarantee you that fifty years from now, aging ranchers will assure their grandchildren that the park service lied about keeping wolves in the park. This folk tale will enter our regional lore, to join such other charming legends as the secret ranger gold mine known to exist near Mammoth, and the huge backcountry pits where evil rangers buried hundreds of executed bears back in the 1970s.

Why aren't we studying all of this? Our universal participation in this sort of mythologizing can be seen as a hopeless source of exasperation, but it also should be recognized and even celebrated for its central role in the future of Greater Yellowstone's cultural fabric. This process, this part of how things work in Yellowstone, provides us with one of our finest opportunities to learn more about ourselves and how, as Dan Flores put it, we have lived in and reacted to the landscape. Actual events, gossip, scientific findings, political agendas, religious convictions, and value-charged mythology mix daily here, and place us all in what writer J. R. R. Tolkien has so poetically called the "Cauldron of Story." For what we are dealing with here is in fact Story at its best, with all the richness and exhilarating human drama of any great saga.

Intellectually, I find all this social chaos exhilarating for its variability. But on the other hand, I have to admit that too much of the time these days, I don't find it particularly encouraging. Some days I find myself thinking that if this is all the better it gets, and if all that those of us who are immersed in Greater Yellowstone's controversies have to look forward to is irresolvability borne of ignorance and contention—that is, if all that I and the people I disagree with have to look forward to is another generation of writing gradually better books at each other, then maybe I ought to give someone else my spot in the cauldron and just go play rhythm guitar in a good western band like I always wanted to. After all, the way it works is that we're always going to get pretty much the Yellowstone we deserve, and sometimes we don't seem to deserve all that much.

But then something comes along and it all gets interesting again. Ann Johnson or Ken Cannon will stop by with some amazing new chapter in Yellowstone's fabulous archeological mystery story, or I'll read some new article on the amazing reach of early Yellowstone post cards in American society.

Or I'll find myself wondering about something new, some element of the Yellowstone Cauldron I hadn't given any thought—like how come Yellowstone inspires so much art, but so little music? Why is it that for every thousand beautiful new paintings, we only get one new composition of the quality of Stewart Weber's "Gallatin Jig," or Beth Mackintosh's "Grizzlies Walking Upright?"

Lee Whittlesey recently pointed out to me that in the 1880s, when the first large hotel was built in Yellowstone, dozens of black people suddenly materialized on the scene to work there, anonymous figures in the background of historic photographs we admire without noticing them. How did that happen? Where did these people come from, and what did *they* make of this place? And who else haven't we noticed?

Or wouldn't it be interesting to take Frank Sulloway's controversial new theories on the importance of birth order in establishing personality, and apply them to Yellowstone? What would an exercise like this tell us about the historical community here, or about participants in today's controversies, or about our Congressional delegations?

This process of discovery, and of dismay over all the things I seem to have missed, is how Yellowstone works for me. One morning, I find myself being interviewed about the early years of the grizzly bear controversy, and suddenly realize that back then, when I was a young ranger-naturalist dutifully telling bear stories to park visitors, this reporter who is asking me about it wasn't even born yet. In that moment, I catch a glimpse of my own life as so much of it accelerates into the past and I too become a part of the story. We all drift into the mix, and Yellowstone rolls on.

Micah Morrison referred to those of us who live here and take this place so personally as the Yellowstone Nation. I find myself wondering how our successors will view the Yellowstone Nation, the human Yellowstone. A hundred years from now, if we've saved enough of Greater Yellowstone to justify the study, I assume there will be a bunch of poor overworked schmucks in graduate departments—I'm speaking here as an ex-schmuck—cranking out scholarly analyses of us just as we now study our past. When they come to this year's bison management uproar, they will have an abundance of archives: statistical summaries, newspaper clippings, and tons

of documents to analyze. But will they have any way of knowing what the human Yellowstone of 1997 was really like? Will the statistics and documents and all of that stuff give them an authentic portrait of what a stunned human Yellowstone this has been, full of people feeling betrayed by circumstances into the slaughter of the very animals and values we treasure, and then left heartsick by a relentless series of personal tragedies that were simply beyond the comprehension of any reasoning community? How can future students possibly make sense of what has happened here this year if they don't know these things? How can we make sense of anything that is happening here now if we don't know these same things about our own past?

And so whenever I'm tempted to disengage entirely from the Yellowstone wars, or even renounce my citizenship in the Yellowstone Nation, I come around to the realization that that's *not* how it works in Yellowstone. My all-time favorite Republican and one of the great toilers over the Yellowstone Cauldron of Story was Theodore Roosevelt, who confronted this dilemma of faltering commitment in his typically direct fashion. He had just read H. G. Wells's pessimistic classic, *The Time Machine*, which predicted the failure and doom of all human endeavor. Roosevelt was not discouraged by the prospect. He said, "Suppose, after all, that should prove to be right.…*That doesn't matter now*. The effort's real. It's worth going on with.…It's worth it—even then." I admire that spirit, that hopefulness that has nothing to do with whether or not there is any reason to have hope.

And on those days when my little corner of the Yellowstone Nation seems pretty oppressive, when the flat-earthers, book-burners, and witch-hunters are in full cry, and when even that overwhelming majority of people who I think of as reasonable are getting pretty shrill, and when I'm getting wound up right along with the rest of them, I try to do two things. First, I remind myself that I'm among the most fortunate few, who get to witness the cauldron from the inside, and that I can already look back with great academic interest on a dozen similar episodes I've been through that were just like this one that is still too close for such calm reflection. Second, as soon as I can I try to get out there on that great restorative landscape and remind myself why all of us here care so much in the first place.

Paul Schullery, National Park Service, Yellowstone Center for Resources, P.O. Box 168, Yellowstone Park, WY 82190

A. Starker Leopold Lecture

Consensus and the Camel's Nose: An Inquiry into How Far We Can Go Before the Beast Occupies the Entire Tent

T. H. Watkins

It's a high honor to be given the opportunity to talk to you tonight on the occasion of one of the happiest and longest lasting birthdays in American history. To tell the truth I see no reason why March 1, the date of the signing of the Yellowstone Park Act should not be declared a national holiday. We need a good holiday in the calendar about then—President's Day doesn't quite cut it. And we need it particularly out here, where, they tell me, as the new kid on the block, a new neighbor of the park, I can expect to have rather a lot of snow dumped on me.

I'm equally honored to be speaking to you under the escutcheon of that great conservationist A. Starker Leopold. There's an old saying, "the worst thing that can befall an ordinary man was to have had an extraordinary father." Starker Leopold escaped the curse of being Aldo Leopold's son by becoming an extraordinary man himself. Indeed all of the Leopold children stepped out from their father's magnificent light to cast a glow of their own. Starker's work as chairman of the committee of scientists that produced the monumental report in 1963, earned him a seat at the Immortality Table in the conservation community. And there are few people here in the Yellowstone Park community, I'll bet, who are not intimately, even painfully aware of all the plain, hard, and sometimes controversial work that is involved in the Leopold Committee's principal recommendation that the National Park Service "recognize the enormous complexity of ecologic communities and the diversity of management procedures required to preserve them." Now there's a mandate to be reckoned with.

Yours has been an incredibly demanding and too often under-appreciated and thankless crusade that has brought you too many artillery attacks from dark corners of the land and much too much glib criticism by ersatz ecologists. And even though I reserve the right to stand up on my hind legs and holler at you myself from time to time, as I used to do when I was a dreaded professional environmentalist with the Wilderness Society, I nevertheless salute you.

Okay, now brace yourselves. I was going to have my beard trimmed for this occasion, but I felt a jeremiad coming on and thought I might as well look the part. I should say that the views expressed above, and from now on, are entirely my own and do not necessarily represent those of the state of Montana, Montana State University,

the county of Gallatin, the city of Bozeman, the people of my neighborhood, the family of Wallace Stegner, any known environmental group, extremist or otherwise, any recognized religious organization, Phi Beta Kappa, the Society of American Journalists and Authors, the National Cattleman's Association, the Western History Association, or the U.S. Chambers of Commerce. That lets just about everybody off the hook except my wife, Joan, who's stuck with me.

More than ten years ago I came across a beautifully incised petroglyph of Kokopelli the mythical Anasazi/Hopi flute player in an obscure canyon in southern Utah. It was on a large boulder with a few other less well-crafted petroglyphs. I photographed the Kokopelli and for years the picture hung over my desk. I even made a copy for Tony Hillerman as a tribute to his wonderful novel, *A Thief of Time*, in which the old flute player is featured. I built whole essays around that image, going on at some length about what it all might mean in spiritual terms, what it could tell us of an old relationship between human beings and the natural world and even gave it the gross luminosity of print in my book on southern Utah, *Stone Time*. Well, one of these days I will have to write Tony Hillerman and tell him he might want to toss the photograph; I tossed my copy. A couple of years ago I learned that the numinous Kokopelli image actually had been done in 1976 or thereabouts, not six or seven hundred years ago. The other petroglyphs were genuine, the artist said in an anonymous memo he sent around to a few friends after one of my articles appeared in print. But it was he who had done the Kokopelli, he said, pecking it out himself with a rock. It was, he said, a harmless prank. Me, I think it was plain vandalism, hardly different in character from spray painting a Renoir.

Whether he meant to or not, what the artist had done was an act of mockery; not of people like me, with our trembling literary pretensions, which perhaps deserve to be mocked, but of a people long since vanished, people who had spent enough time in those canyons to have wanted to give their presence there substance and meaning. It was an incredibly beautiful spot; perhaps to those people it also was sacred.

I think about that act of vandalism and I think about the casual destruction by parties unknown of the Eye of the Needle Arch above the Missouri River in Montana last Memorial Day weekend. This was an important place too. Lewis and Clark camped across the river from the arch and it had been one of the most popular natural sites along this beautiful stretch of the Missouri for years. It might not have been holy, but it certainly was worthy of simple respect. The Bureau of Land Management spent quite a lot of time discussing the idea of rebuilding the arch. On one level this offended me because I would rather see the BLM spending that kind of time and energy reclaiming more of the grasslands and riparian areas it has allowed to be hammered by livestock. On another level I was displeased by the very notion of trying to reconstruct the arch, just as I would be if the counterfeit Kokopelli in southern Utah were sandblasted away and we pretended that time had never been corruptive in that fine and holy place.

It now appears that a kind of memorial to the vandalized arch will be erected across the river instead. I kind of like that idea but think we should go even further. Put a fence around the remnants of the arch. Put up a big sign that could be read from Lewis and Clark's old campsite: "this natural phenomenon, which took several

million years of geological and erosional processes to create, was destroyed in the blink of an eye by human morons Memorial Day 1997."

Put a fence around my Anasazi site too, and while we're at it, why not find a good-sized clear cut alongside a road somewhere in, say, Washington State's Olympic National Forest, and have the forest service offer guided tours of the place, showing the eroded soil, the spindly re-growth, the mutilated corpse of a once healthy forest. And hey, what about all those shiny, unexploded air force bombs you see sticking out of the desert at Cabeza Prieta National Wildlife Refuge in Arizona. Wouldn't one of those make a nifty monument?

We commemorate the mindless cruelties Americans have inflicted on one another at places like Andersonville Prison, Georgia, where Civil War soldiers died like worms in the sun, or the Manzanar Relocation Camp in California where during World War II Japanese-Americans learned that the term "guilt by association" had implications they never dreamed of. The theory is that if we call attention to these acts of barbarity perhaps we will never repeat them. Should we do anything less when we have violated the world that time has given us?

I begin with this angry little homily, on the theory that it may help to remind us that there are still Visigoths in the land. But not all of them are just would-be artists ready to profane an ancient site for the sake of an elaborate joke, or holiday drunks out to tear down the work of eons in order to work off an overdose of testosterone. A lot of Visigoths have gone to college and taken sensitivity training, and achieved positions of power. But the Visigothian impulse has only been muted, not eliminated. And we are a long way from paradise preserved when there are respectable people around who can still inspire an environmentalist spin on the old Woody Guthrie line, "some rob you with a six gun, some with a fountain pen."

For the most part, however, these people can be watched, their actions monitored and sometimes rebuffed by the wielding of our own environmentalist fountain pens. But I think there may be a more subtle danger at work in the West today, one that would cause us to doubt our own past, begin to question the importance of the work that has brought us this far, and wonder if the values that have informed and inspired the development of almost all federal environmental law for nearly a century, from the Forest Management Act of 1897 to the California Desert Protection Act of 1994, are still valid.

As I see it, the situation today can be described in a few basic questions: Should the federal government still have the broad legal authority to manage and protect the 623 million acres of national lands—the parks, forests, refuges, and BLM lands—that are the common property of the people of the United States? Haven't these agencies too often abused their power? Haven't they fallen into the hands of ivory tower scientists and social theorists who care more for critters than for people? And isn't it time now for these lands to become the domain not of the general public but of those people who live closest to them and depend on them most directly? Do federal environmental laws stifle progress, cripple free enterprise, subvert local economies, cost jobs, cast a pall on the future? Should economic considerations take precedence over ecological determinations when the fate of any given parcel of land or species population is on the table? And finally, one question that brings a kind

of ironic wrinkle to the age-old tension between the resident West and the federal government, do national environmental organizations like the Wilderness Society, the Sierra Club, the National Wildlife Federation, and the National Audubon Society, based in Washington and committed to the importance of federal law and their own powerful positions in the world, ride roughshod over local conservation groups whose awareness of the land's true needs gives them a greater moral authority in deciding what should be done about managing them?

There won't be time tonight to address each of these questions individually, but I hope I can shed some light, or at least some opinion, on a few of them. First of all, out of this traditional welter of contention, some of it attended by either the threat of violence or real violence, as in the Carson City bombings of 1995, has arisen a new movement, one based on the ideal of community and committed to the notion that there are few important issues that cannot be resolved by the act of getting all parties together and talking the problem out. Come, let us reason together, as Lyndon Johnson used to say, and people are.

Conflict resolution and coalition building over the question of public land use and community economic planning is a growth industry. Groups of local and national environmentalists, government officials, loggers, ranchers, and even urban boomers and boosters, have been sitting down together at big tables in places like Missoula, Montana, to talk about grizzly bear recovery; or Ashton, Idaho, to discuss the future of the Henrys Fork watershed; or Montezuma County of Colorado to influence management policy in San Juan National Forest; or Grays Harbor County in Washington to come up with economic alternatives to replace timber production once the timber was gone; or Quincy, California, to hammer out a management plan for Plumas and Tahoe national forests that will both protect habitat and keep the timber economy going.

No reasonable human being could do anything but applaud the impulse behind these efforts and dozens more like them. Ever since John Muir and the infant Sierra Club took on the city of San Francisco over the question of building a dam in Yosemite National Park at the turn of the century, and lost, the American conservation movement has been characterized by what might be called a barricade mentality. The battles have been necessary, even inevitable. And admittedly there is something almost perversely appealing in the idea of absolute good (Us) being locked in sweaty combat with absolute evil (Them). The conflict gives birth to a good deal of satisfactory passion and the kind of rhetoric that glows in the dark.

But over the long haul, confrontation is exhausting of human beings and of resources. And if the great middle ground of discussion can overcome the weight of history and the monstrous obstacles of human cussedness to truly reach rational consensus on important issues like wolf recovery, grizzly reintroduction, saving what little is left of salmon populations in the Pacific Northwest, reducing the loss of old growth forest, protecting wetlands and grasslands, preserving adequate reserves of wilderness, reforming the general mining law of 1872, and helping western towns find a way through the troubling maze of the economic future, then it will have gone a long way toward achieving a new way of looking at the land and the place of human communities in it.

At the same time, there are pitfalls to be aware of. Many people, for example, questioned the recent management plan developed by California's Quincy Library Group with Tahoe and Plumas national forests. The group's plan, currently in the process of being codified into law by Congress, was no sooner announced than it brought forth a blast of criticism, most of it from environmentalists outside the Quincy Library Group. The objections are too detailed to go into here, and I am not expert enough to address most of them intelligently anyway. But I will say this. There is much to be feared in the fact that the plan as it now stands would validate the power of a single group in a single local community to pretty much dictate how one-third of the public forest land in the Sierra Nevada would be managed from now on. This is not, I would submit, an idea whose time has come.

Maybe it will some day when the West has transformed itself and become, as Wallace Stegner once hoped it would, a society to match its scenery. He also said that the West is the native home of hope. Such an idea is by no means an impossible notion. Indeed, I have said before and I will say again, that I think the future of conservation in the West is regional, that someday organizations like the Greater Yellowstone Coalition will have acquired an even more deeply functional symbiosis with the large national conservation organizations than they already enjoy. That all federal agencies everywhere will have abandoned their territorial and budgetary squabbles, and begun working together and with citizen groups to manage their lands as ecological units, and that decades of educational effort from the grade school level up through college will have produced a conservation ethic shared by all of the West's classes and communities, rural and urban, social and political.

But that utopian ideal, however possible I still believe it to be, is not with us yet. And the national lands are too important a legacy to see their fate put in the hands of the few, however enlightened they earnestly believe themselves to be. For one thing, as Michael McCloskey, an old Sierra Clubber and the point man in the 1968 battle to create Redwood National Park, has warned, local control is especially vulnerable to subversion by the development-minded. "Many community activists like these proposals," McCloskey has written. "They see them as empowering. Many academics praise them too. And industry likes them, but for reasons that can be all too self-serving," McCloskey worries. "Industries," he notes, "prefer dealing with community representatives to having to duel with the EPA experts at the national level or with representatives of national environmental groups. One company spokesman recently told an audience: 'I don't want bureaucrats telling me how to run my business; I would far prefer to take my chances with people from the community.'" "And why shouldn't he?" McCloskey asks. "Industry thinks its odds are better in those forums. It believes it can dominate them over time and relieve itself of the burden of tough national rules. It has ways to generate pressures in communities where it is strong, which it doesn't have at the national level."

As for federal agencies no longer being the proper stewards of the public lands of the West, let me offer a parable. I come from Washington, D.C., where I spent the last 16 years of my life. There are numerous public monuments, museums, and parks in the district, virtually all of them under the management of the National Park Service or the Smithsonian Institution, since these lands and monuments are owned

by the federal government, which is to say all of the people of the United States.

But what about the citizens of Washington, D.C.? They are the people who live most closely with these federal units, they are the ones whose economy and jobs are largely dependent upon the swarms of tourists who come to visit a resource to be mined as assiduously as Crown Butte has just mined the U.S. Treasury. That being the case, why shouldn't the government of the District of Columbia be put in charge of these monuments, museums, and parks? Why shouldn't the city government be allowed to determine how these units are to be managed, how much development should be allowed for parking lots and restrooms and motels and concessionaire stands and roads and signs, how much money should be charged for admission, how budgets are allocated, how staffs are chosen and administered?

Let us now share a moment of appalled silence.

Now I'm not going to claim that the government of any city, county, or even state in the West is as screwed up as the city government of Washington, D.C. I probably would be cut up into small pieces and fed to the wolves if I did. But I would argue that it makes no more sense to think of the national capital park system or the National Gallery of Art being placed in the hands of the city of Washington, than it does to give Kane and Garfield counties in Utah, for instance, control over how Grand Staircase Escalante National Monument is to be developed and managed. And believe me, both counties would love the opportunity.

Whatever the flaws of federal management, and no one who has ever read *Wilderness* magazine will ever have any doubt that I think they have been enormous from time to time, these lands belong to the nation, and it is the national government that should keep them in the manner to which they damn well should have become accustomed. And any time consensus brings forth any other sort of outcome, I think it may be time to get up and leave the table. Come, let us reason apart.

There is another pitfall I think it is important to watch out for in the dream of consensus, and that is its tendency, as is usual in human bureaucratic events, to let the seductions of process, with its smoothly fashioned structures, its beguilingly professional-sounding jargon, its confidence in the attractions of good fellowship, its belief in the inherent virtues of democratic consensus, obscure some important truths, and cause us to lose sight of why it was we came to the table in the first place.

This was brought home to me most forcefully a few months ago, when I read an article on the current wilderness fight in Utah in the second issue of the *Chronicle of Community*, the excellent new publication being produced by the Northern Lights Institute. The article chided the Utah Wilderness Coalition, a gathering of national, regional, and local environmental groups, businesses, educational institutions, and other organizations and individuals devoted to the preservation of wilderness in the state. The coalition's offense, the author maintained, was that its members, as he put it, took their marbles and went home from the table of discussion in the face of a political compromise that would have established just three million acres of wilderness. After all, he said, the three million acres that Representative Karen Shepherd and others would have been willing to accept was three times as much wilderness as the BLM originally proposed.

Well, yes it was. But it also was only a little over half what the Utah Wilderness

Coalition had determined was desirable—5.7 million acres. That figure of 5.7 million acres was no casual number thrown out as a kind of bargaining chip. It was a figure that years of on-the-ground investigation by citizen volunteers all over the state had demonstrated to be the minimum required to have an established and ecologically representative sampling of wilderness in Utah. The figure came to only 26 percent of the total of 22 million acres of BLM land in the state, it should be remembered. And virtually every square foot of what was left would have remained open to development of one kind or another.

I wrote in a letter to the editor following the article's publication: "Perhaps a compromise of the sacrificed 2.7 million acres of potential wilderness put the coalition members in mind of something another old Sierra Clubber, Daniel B. Luten, said almost 30 years ago. 'Whenever the subject of compromise comes up in a conservation discussion,' he wrote, 'beauty does all the compromising. Splitting the difference between beauty and utility, again and again, ultimately will leave nature next to nothing. A half of a half of a half of a half is a sixteenth. So long as that was the kind of compromise brought to the table,' Luten despaired, 'the cause of the American landscape is a losing battle, to be fought from barricade to barricade, but always backward. When will the tide turn?'"

When indeed, I asked in the letter, and I ask it still. For my heart remains sick at the idea that so many people apparently are willing to think of wilderness areas as little more than bargaining chips to be quibbled over, as if they were agenda items in a labor negotiation. You'll have to forgive a little personal passion here. I know the country of southern Utah pretty well, and have been involved at one level or another in the wilderness fight there for more than ten years. And I am here to tell you that those lands are not chits in the socio-political game. They are real. The beauty they possess is real. The diversity of landscape and biology they nurture are real. And if we let 2.7 million acres of them be sacrificed for the sake of political expedience, or the need to get things settled once and for all, or to get someone's career back on track, or simply in obeisance to the holy grail of consensus, the loss will be real too, and irreversible.

I don't know the millions of acres of potential wilderness that remain unprotected in Montana, Idaho, Colorado, Wyoming, Oregon, Nevada, New Mexico, and Alaska, anywhere near as well as I do the wilderness of Utah. But I do know some of those acres, and I know too that in these states as in Utah there are levels of compromise that cannot be accepted if we are to take our duty to the land seriously, no matter how unreasonable that kind of stubbornness may appear to be. A half of a half of a half of a half, damn it all, is still a sixteenth.

I hope you will forgive me yet again if I insist then that our duty to the land still is utterly dependent on wilderness preservation. Until we come up with something that will better maintain the integrity of the land and its species, we had better keep our eyes on the wilderness prize. This kind of simple-minded insistence is not an especially popular attitude in the West these days, if it ever was, even among some academics, the same kinds of people, though not the same individuals, who were foot soldiers in the old conservation wars. They've been thinking a lot lately, these folk, and in the process of thinking have begun to wonder out loud whether the sixty

year commitment to the wilderness idea as a political expression has not blinded us to some essential truths, among them the fact that the wilderness idea is very precisely just that: an idea, an artifact, created not by what is in nature but by what we persuade ourselves to see in nature, a kind of romanticism that idealizes wild places and distorts ecological reality. Wilderness, these voices say, is but a social construct we have inflicted on a helpless nature.

One of the central themes of wilderness preservation, they contend, is based on the false premise that human beings somehow exist apart from nature and especially apart from those enclaves, which we have dubbed wilderness, areas perceived to be in a lyrically pristine state of pure nature. In the first place, they remind us, there was virtually no time in human or even geological history when any major part of this continent was ever truly pristine. Certainly not at that moment when it was first encountered by the European invaders. There were after all, somewhere between ten and twenty million Native American people representing scores of individual cultures in residence at the beginning of the seventeenth century, and human beings had wandered the landscape for thousands of years even before that.

They did not tiptoe through the tulips of the wilderness, all these people. They used nature, altered nature, moved things around, built things up, tore things down. They used fire to change the landscape to their advantage, grafted one plant species onto another in order to produce something they could cultivate and eat, incised complicated networks of trails to the land. In the Mississippi River Valley they built huge urban complexes. In the canyons of the southwest they constructed elaborate and quite sophisticated irrigation projects.

And even before human time, critics of preservation point out, nature itself hardly functioned in the kind of vacuum that the term "pristine" might suggest. Ecosystems were once viewed as static, closed entities, that left alone would achieve a perfect balance of relationships between species and the physical laws that govern them. Not so, ecologists now say. Ecosystems are dynamic, forever changing, spitting out some species, welcoming others in, shifting about the landscape itself with the winds of climate change and the imperatives of survival, a wondrous evolutionary sarabande whose destination we can only guess at. Designating wilderness areas on the theory that we are protecting some unsullied relic of primeval America, then, is both illogical and a little crazy. What we are doing with wilderness designation is protecting an idea, not a place.

To which a committed former professional environmentalist like me is liable to respond, okay. What irritates me about this charge probably more than anything else is the assumption that the people who conceived and wrote and won the passage of the Wilderness Act were a bunch of ecological numbskulls, and that today's movement is mindlessly regurgitating old misconceptions. But Aldo Leopold and Olaus Murie and Howard Zahniser knew perfectly well that there was then, and there is not now much of anything left on this continent that could be described as a place where the hand of man has never set foot, to use the sardonic phrasing of David Brower. And even back in the dark ages of the 1960s, scientists like Murie had long since figured out that the ecological systems represented by wilderness were by no means static, natural enclaves that had remained pretty much the same for whole

geological epochs. This tender belief may still linger among a few clots of ignorant New Age enthusiasts and/or Generation X-ers, many of whom I'm sorry to say, may indeed style themselves professional environmentalists.

But the science that underlies most of the wilderness preservation movement knows perfectly well that natural systems are anything but static. Similarly, the movement has for some time understood, that from the cornfields of prehistoric times to the clear cuts of the modern era, human beings have left the mark of their ambitions on the land.

The fact is the Wilderness Act of 1964 doesn't say anything about "pristine" or declare that human beings are separate from nature or insist that wilderness areas are supposed to be ecological museum pieces. What it does say is this: "a wilderness, in contrast to those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." Nature dominates, human beings touch but do not trammel, which is to say do not bind up in the net of exploitation. Mere traces of past human activity should not be enough to prevent the designation of any given wilderness if scientific, ecological, and spiritual reasons for its preservation outweigh the impediment of human contact.

That was precisely the rationale behind the Eastern Wilderness Act of 1975, an addendum to the 1964 Act that recognized the importance of preserving many natural areas in the American East that had in fact been worked over by human beings to a fare-thee-well at one time or another, but had since recovered much of their original complexity and natural values.

Consider too the fact that in the West one of the arguments the preservation movement puts forth for the designation of many areas, is that they harbor archeological resources of great value to the nation, and in many places of great sacred value to Native Americans. Preservationists also are likely to point out that the first peoples of America and their Indian descendents, however broadly scattered across the landscape and no matter how ingenious, accomplished very little in the way of significant environmental change over several millennia, when compared to almost anything the European invaders managed to do in a few hundred years.

Go down to southern Utah, preservationists might say, as I might say, and walk around in some of the 5.7 million acres that are proposed for preservation and then tell them that wilderness designation is little more than a relic of nineteenth-century romanticism. People have lived here before and you will see the evidence of their lives all around you. And if you want to be truly depressed you can even take a look at some of what modern humans have done there with their roads and their cattle and their isolated dreams of striking it rich. But the beauty, isolation, natural integrity, and species diversity that should be expected of any designated wilderness area can still be found there and should be preserved from the injury we modern folk, with our vastly superior hammers of development, can still inflict. Wilderness is not just an idea, it is a place and we know its name. And if its protection is the result of a social construct, then I say hurray for social constructs, let's have more of them.

At the same time these modern critics of the preservation movement have raised a point well worth thinking about. And it is with this point that I would like to leave

you tonight. Because it is on this point that I think the trend toward the table of consensus is a truly positive phenomenon.

It is becoming increasingly clear that in our zeal to preserve wilderness we must be careful not to relegate all other nature to a kind of second-class citizenship. When investing so much of our philosophical, emotional and political energy in the preservation of wild landscapes, however necessary such efforts are, we should not grow careless about the rest of the world in which we must, after all, live and get a living.

William Cronon, one of the new lights of the new wilderness criticism, has summed up what might be described as the perils of smugness quite succinctly in his now famous essay, "The Trouble with Wilderness": "To the extent that we live in an urban-industrial civilization," he writes, "but at the same time pretend to ourselves that our *real* home is in the wilderness, to just that extent we give ourselves permission to evade responsibility for the lives we actually lead. We inhabit civilization while holding some part of ourselves—what we imagine to be the most precious part—aloof from its entanglements. We work our nine-to-five jobs in its institutions, we eat its food, we drive its cars (not least to reach the wilderness), we benefit from the intricate and all too invisible networks with which it shelters us, all the while pretending that these things are not an essential part of who we are. By imagining that our true home is in the wilderness, we forgive ourselves the homes we actually inhabit."

I would argue, as would many in this room I think, that accepting the wilderness as the essential home of the human spirit does not necessarily bring with it a careless attitude for the world where we spend most of our lives. Nevertheless, Cronon's point is well taken. Too often we are careless, forgetting that our connection to the natural world begins at the threshold of every home and continues into the neighborhood, the town, the state, and the region of wherever it is that we live. We have no reason to be proud of what we have corrupted among all those connections. And if we lose our commitment to the immediate world in a dream of wilderness, we will bring it all down to ruin, wilderness and non-wilderness alike.

It is this single hard lesson, I think, that conservationists must learn in their bones and then bring to the table of discussion. Just like natural systems whose interdependent parts function in a dynamic of change, the arguments for wilderness preservation also must evolve or die. It is no longer enough to identify a landscape, draw a line around it, add it to the national wilderness preservation system, then rest on our laurels, satisfied that we have just saved one more piece of the natural world forever. The brutal fact is that wilderness areas so conceived, even if we monitor their use and management diligently, cannot in the long run survive the pressures of the world all around them. They cannot function forever as islands in a sea of ever-increasing development and degradation, isolated natural systems cut off from one another so completely they might as well be atolls scattered across the boundless void of the Pacific.

And then we must turn the argument on its head and make it clear with all the evidence at our command that just bio-regions and all the lives they hold, cannot themselves prosper, socially, economically, or spiritually without the wilderness that

lies at their heart. Wilderness enclaves must no longer be seen as something outside the real world of American life, whether by preservationists, or industrialists, or academics. Rather they must be accepted as the essential core of regional identity seeking to pursue a truly sustainable dynamic between what is demanded of the land and what it can give, between what human beings strive for and what they cannot have without putting the whole in peril.

Such a balance can only be achieved if all the participants are willing to accept its protocols, its limitations, and its possibilities. And that agreement can only be achieved through precisely the meeting of minds that so many people and organizations are trying to engineer all over the West. There is not going to be any easy fix. And I would urge you to deeply suspect agreements reached too soon or with too much delight. It is too likely that someone in the room will have ended up a whole lot more happy than the rest.

But if it is bound to take hard work and harder time, if we can bring it off I can think of no greater validation of what Aldo Leopold called the community concept in his famous essay on the land ethic in *A Sand County Almanac*. "All ethics so far evolved," he wrote, "rest upon a single premise: that the individual is a member of a community of interdependent parts…The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land," and "changes the role of *Homo sapiens* from conquerors of the land-community to plain member and citizen of it."

Fellow citizens of the land community, it's time to get to work. Thank you.

EDITOR'S NOTE: Our friend T. H. Watkins died in 2000, a great loss to the scholarship and advocacy of conservation. Efforts to locate a written copy of his talk were unsuccessful. This paper is a verbatim transcription from a videotape of his presentation at the conference, and appears here with the kind permission of Joan Watkins. Our thanks also to Gordon Brittan of Montana State University for his help with this manuscript. Every attempt has been made to locate and verify editorial details (such as punctuation and spelling in direct quotations) of the paper so that it accurately reflects Tom's intentions. Readers noting any errors of detail please notify the editors at the Yellowstone Center for Resources, P.O. Box 168, Yellowstone National Park, WY 82190.

Superintendent's International Luncheon

Crossing the Border: The Conservation Movement in Canada and the United States

Donald Worster

Edgar Allen Poe laid claim to being the first postmodernist when he wrote, "The boundaries which divide Life from Death are at best shadowy and vague. Who shall say where the one ends, and where the other begins?" Substitute the names Canada and United States for "Life" and "Death," and we get this revised question: Who shall say where the one *nation* ends and the other begins?

Certainly it is not nature that divides our two countries. Nature's landforms, ecosystems, migration patterns, and flow of waters all ignore the international border. The border is unmistakably a human artifact, a cultural construct imposed on nature. Like all artifacts of culture it varies from mind to mind. However rigid patriots may want to make it, the border must always be shadowy and vague, a permeable line that we cross and re-cross in as many ways as the imagination can conceive.

The hand that drew this long international boundary, running from Puget Sound to the Bay of Fundy, was the nation-state. Its greatest rival in the modern period, the hand of capital, had nothing to do with it. In fact, capitalism has often been frustrated by the border; both nations have set up trade restrictions and immigration patrols to interfere with free enterprise and the flow of labor and commodities to market.

Behind their common border both nations have tried to define and protect a unique "national culture" in which people's identities, loyalties, and values are determined by the rivalries of nationalism. The American nation-state has been particularly energetic in this project. Yet a distinctive "Canada" has evolved too, separate from the United States and all other nations—a "Canada" that is ardently defended against cultural divisions from within and cultural incursions from without. The very idea of a border depends on maintaining these distinctive national cultures against the persistent desire, the irresistible impulse, to leap over the line.

My question today concerns the conservation movement and how the border between the United States and Canada has influenced that movement. Put another way, how does the history of conservation reflect those constructions of national identity? What is its relation to nationalism and the nation-state? Is there a single "North American" conservation movement, or has the border separated different dynamics and different programs—in effect, different movements?

By conservation I mean any organized effort to protect natural resources from loss or depletion. It is a very old effort, far older than we commonly realize. The first chief forester of the United States, Gifford Pinchot, claimed to have invented

conservation in 1905, adapting it from the government-owned forest lands in India which were called "conservancies." That was a bit of egoism. In truth, Pinchot simply added a new suffix to an ancient word, "conserve" or "conservacie," meaning the protection of natural features like rivers or forests from harm or abuse. He did not invent the idea of protection nor did he invent the first movement to protect nature. Conservation in the modern period of history was not even a movement that began in the United States; it originated in England, France, and Germany, and it spread from there to North America. Moreover, it is important to note that, contrary to many interpretations, the conservation movement arrived *simultaneously* in Canada and the United States

Initially, the main issue was protecting forests, though soon protecting birds and game, fisheries and waters, natural beauty and even fossil fuels like coal all became important too. The North American movement for forest conservation dates back to the middle years of the last century. A Massachusetts educator, George B. Emerson, warned about forest depletion as early as 1846, and a Nova Scotia geologist, J. W. Dawson, raised a similar alarm in 1847. Their warnings did not carry much weight.

Three decades later the American Forestry Association was organized in Chicago to beat the drums more loudly, and it was the very next year, 1876, when the Montreal lumberman James Little published his important pamphlet, "The Timber Supply Question of the Dominion of Canada and the United States of America." All the desolation of war, Little declared, would be "as nothing compared to the terribleness of the calamity that will be experienced from a dearth of timber."

When the AFA reorganized itself as the American Forestry Congress, James Little was among those present, and he and his brother William brought the Congress to Montreal for its second meeting. The Canadian delegates shared all the concerns of the Americans: keeping timber lands in public ownership; protecting them from illegal trespass, from cattle and sheep grazing, and from agricultural clearance; putting them under the supervision of scientifically trained conservators. The province of Ontario passed the first act on the continent to prevent forest fires, and Americans traveled northward to see how well it was working.

It would be hard then to claim that one country led and the other one followed in this slow nineteenth-century awakening to forest protection. If there were more Americans present at those early meetings, it was because there were more Americans overall; but the Canadians were as deeply worried and as committed to reform. When it came to forests, the international border was no barrier to anxiety or commitment.

The rise of conservation is sometimes explained in Malthusian terms: population increases, it presses on scarce natural resources, conservation appears. But if that is so, why was Canada in such close synchrony with the United States? The ratio of Canadian people to Canadian trees was then, as it is today, the most favorable in the world. What did Mr. Little have to worry about compared to his American counterparts?

Part of the answer lies in the fact that "forest depletion" at that time meant "white pine depletion," and the supply of that highly desirable species was limited and quickly exhausted on both sides of the border. More important, the supply of

white pines was being gobbled up by a market economy that already, by the 1870s and 1880s, had taken on continental proportions. The capital and labor deployed in cutting white pine was transnational, the market for lumber was transnational, the need and the greed behind forest exploitation were transnational. If Malthusianism was at work, it was Malthusianism that had already transcended national borders.

One of the neglected classics in conservation history is Arthur Lower's study of this cross-border lumber trade, published sixty years ago under the title, *The North American Assault on the Canadian Forest*. Lower pointed out what historians writing from a single-nation perspective have tended to overlook: the entire continent has long been one "great store-house of riches and these riches have been open to any one who had energy enough to seize them." Furs, fish, and forests had all been exploited in turn.

The Canadian forest was first sold to Great Britain in the form of squared timber; then in the form of lumber it began to find its largest market in the United States Never did Canada harvest its trees to meet Canadian needs alone. It dug the Rideau Canal to get the trees of the Ottawa Valley to foreign markets. It threw railroads across Quebec and Ontario to improve connections with those same markets.

As Harold Innis pointed out in his preface to Lower's book, Canada provided "the scaffolding" on which more than one foreign country completed its industrial revolution. As the United States moved west, as cities like Chicago began to rise from the prairies, as foundries and meatpacking plants proliferated, as a growing American population demanded shelter, indeed as Canadians migrated southward looking for jobs and homes, it was Canadian forests that supplied much of the raw material for America's industrial life. Seeing across borders immediately makes this clear, and it removes any surprise from the fact that Canadians and Americans got anxious together about the future of this important resource.

For more than a century then we have had a shared concern about the North American forests, and forestry experts have been regularly crossing the border. They have developed a common language and program.

At the turn of the century the most influential of these experts was Bernhard Fernow, who could not make up his mind which side of the line he wanted to live on. Trained in forest management in his native Prussia, he emigrated to the United States in 1876, and within a decade became chief of the Division of Forestry in the Department of Agriculture. In 1903 he delivered his famous *Lectures on Forestry* at Kingston's School of Mining. Canadians now heard from him the same message the Americans had heard: "The forest is not merely a mine, but a reproducible resource—a living, growing crop, the product of the soil and climate, which can be reproduced *ad libitum* in even superior quantity and quality to what nature alone and unaided has done." A few years later Fernow became dean of the new forestry school at the University of Toronto.

His border-hopping career demonstrates clearly that the idea of putting forests under scientific management was broadly North American and transatlantic. That management, which Fernow defined as "the rational treatment of the forests as timber producers," seems, as far as the scientific experts were concerned, to have been free of all nationalism or national cultural identity. It was cosmopolitan. It was dedicated to ideals of efficiency and productivity that had little to do with being

American or Canadian.

So forest conservation as practiced by professionals has remained down to this day. The graduates of such forestry schools as Toronto, Cornell, and Yale have moved from country to country seeking, in Fernow's words, "an accumulated wood capital lying idle and awaiting the hand of a rational manager to do its duty as a producer of a continuous highest revenue."

If scientific expertise were all that the conservation movement amounted to, forest protection would indeed be stony ground for nationalism. American conservation would be the same as Canadian conservation, and both would be the same as German or Chinese or Brazilian conservation. The movement could be completely explained by the modernizing, globalizing forces of economy, science, and industrial production. It could be summed up in Samuel Hays's influential phrase, "the gospel of efficiency."

Such a gospel exists, of course, and we see it everywhere in the world. But it does not tell the whole story. The conservation movement was never simply an international technocratic movement. Quite the contrary, it was steeped in nationalism, loaded down with nationalistic feelings, and highly charged by nationalistic rivalries. We will never understand this movement fully if we define conservation merely as a "gospel of efficiency."

Despite so much talk of international cooperation among forestry experts, conservation in North America was from the beginning an intensely nationalistic movement and it has remained nationalistic throughout the twentieth century. It sought the survival of the United States and of Canada as separate, struggling nations in a world economy. Even James Little, the Montreal lumberman, was less concerned about his private affairs or his business prospects than he was about the future of Canada as a going concern. So also south of the border the forests were seen as the very foundation of America's hopes.

Nowhere was this nationalism more passionately expressed than in the presidential administration of Theodore Roosevelt, when conservation became the chief domestic policy priority. Roosevelt, like his friend and advisor Pinchot, was a fervent nationalist, and his concern for protecting natural resources was never very far from his concern for safeguarding the nation's power and wealth.

In 1903 Roosevelt stood before the Society of American Foresters to support their efforts "not as an end in itself, but as a means of preserving the prosperity of the Nation." Four years later he told a gathering of newspaper editors that "the conservation of natural resources and their proper use constitute the fundamental problem which underlies almost every other problem of our National life."

Those were only warm-ups for that extravagant outpouring of patriotic zeal called the Conference of Governors, held at the White House in 1908 to promote the cause of conservation. Roosevelt opened the meeting with one of the most important speeches of his career on "Conservation as a National Duty." He took his listeners back to the country's origins to argue that the very drafting of the Constitution itself had been a response to "the necessity for united action in the wise use of…our natural resources." The merger of thirteen separate colonies under one centralized authority had allowed enormous economic growth to occur. But now the time had come to ask,

"what will happen when our forests are gone, when the coal, the iron, the oil, and the gas are exhausted, when the soils shall have been still further impoverished and washed into the streams, polluting the rivers, denuding the fields, and obstructing navigation." The union and the Constitution were both put at risk by the waste of resources. Roosevelt concluded, to thundering applause from the governors and other invited guests, that conservation "is but part of another and graver problem to which this Nation is not yet awake, but to which it will awake in time, and with which it must hereafter grapple if it is live—the problem of national efficiency, the patriotic duty of insuring the safety and continuance of the Nation." Roosevelt succeeded, as no one else had done so well before, in painting the colorless notion of efficiency in blazing national colors of red, white, and blue.

No Canadians were at that 1908 meeting, but several were present one year later when Roosevelt hosted a North American Conservation Conference in Washington. The earlier intense nationalism was tempered a little for the foreign guests from Canada and Mexico. But only a little—this too was a meeting of national patriots, not of mere private citizens or trained foresters or tree lovers.

The declaration of principles that came out of the meeting put the nation-state at the center of concern. "We recognize the mutual interests of the nations which occupy the continent of North America," the delegates declared, "and the dependence of the welfare of each upon its natural resources. We agree that the conservation of these resources is indispensable for the continued prosperity of each nation." They acknowledged that "natural resources are not confined by the boundary lines that separate nations"; nonetheless, their intention was not to do away with those boundary lines. Rather, they assembled because they thought it was in the national self-interest of Canada, the United States, and Mexico to work together to conserve "their material foundations."

The conservation movement, I want to emphasize, was not the child of modern capitalism, which teaches that resources are infinitely abundant and infinitely substitutable. Instead, conservation was largely the child of the nation-state. It spoke the language of boundaries, scarcity, and limits. It talked of citizenship, patriotic duty, and the welfare of posterity.

When Theodore Roosevelt called for protecting resources from the destructive appetites of competition and individualism, from rampant materialism, he was pointedly criticizing capitalism and its ethos. He called for the control of corporations that owed no allegiance to any state. When he held out a hand of cooperation across the border, he was not interested in the survival of forests for their own sake or for the sake of Canada or Canadianism but for the survival of America and Americanism.

Similarly, the delegates Canada sent to the North American conference—Sydney Fisher, Clifford Sifton, and Henri Beland—came not because they cared about forests or nature or even because they cared about humanity in the abstract. They came because they were Canadian nationalists, worried about their country's future.

Economists have sometimes bemoaned this nationalism in the conservation movement. The Vancouver economist Anthony Scott, for example, has complained that the movement has long been a species of economic protectionism.

> Faced with the prospective shortage of some natural asset which has served as source of trade, employment, gold, means of defence, or profit for one social class, each society has collectively taken action to offset depletion. They have justified themselves in a manner reminiscent of advocates of protective tariff policy.…The conservationist, in defiance of the theory that the highest income for the world would arise from the free use of resources without barriers to international trade, in effect urges the existence of legal and social barriers to the ability of labour and other factors to move from place to place.…

Conservation, as he portrays it in those stiff, academic words, is backward, anti-progressive, and conservative. It has interfered with maximizing wealth and economic growth by promoting an introverted patriotism. Never mind that it has often tried to justify itself in the name of science, efficiency, and modernity. In truth, conservation has been part of the nation-state's protective armor, which, in the eyes of such economists, means it has been unscientific and archaic.

Whether one accepts that criticism or not, conservation does indeed seem to have been an international movement that, paradoxically, has been profoundly nationalistic in its outlook. It is *Canadian* forests that must be protected against rapacious American timber or paper companies. It is *American* minerals that must be protected against ruthless Canadian mining companies, threatening the sanctity of such national symbols as Yellowstone National Park.

The conservation movement was born then in a spirit of nationalism, and its mission was to defend the nation-state against its enemies. But every nation defines itself in more than economic terms. It looks to its land and environment for cultural symbols and meanings as well as for prosperity and wealth. It invests forests, rivers, and other landscapes with high patriotic value and celebrates them in song and anthem: "O, Canada! Our home and native land!…we stand on guard for thee." Conservation has been a movement to protect natural resources but also to protect what each nation regards as its unique cultural assets, indeed its very identity.

No sooner was the North American Conservation Conference of 1909 adjourned than those national cultural differences began to assert themselves. The cause of forests gave way to broader themes. In the United States, I now want to suggest, the popular conservation movement came to focus more and more on the preservation of wilderness and wildness, particularly in national parks, while in Canada the movement focused more on the need for urban and town planning. That divergence, which began to appear in the early twentieth century, would endure right down to the present.

A few weeks after the North American Conservation Conference, President Roosevelt left office, and going out with him went a dream that the United States would set up a permanent national conservation commission with responsibility for planning the country's future. Conservation was to be the foundation of a planned society, but now that planning was put on hold.

If the United States failed to take that next step toward national planning, Canada succeeded, at least for a while. In 1909, Prime Minister Wilfred Laurier appointed Clifford Sifton, a Winnipeg businessman, former Minister of the Interior, and staunch trade protectionist, to head a new conservation commission, a position that Sifton would hold for nearly a decade. As Michel Girard explains, the

commission studied forests, public health, energy, mineral consumption, agriculture, water power, and fish and game. It lasted until 1921. While in existence it marked the formal beginning of Canadian environmental planning, leaving a legacy that the United States would not have until after the New Deal.

In 1911, Canada's Commission of Conservation lobbied to establish a new Rocky Mountain Forest Reserve, covering an area of nearly 18,000 square miles, including the Banff, Waterton Lakes, and Jasper national parks. In the words of the commission, the reserve would create "the largest national park in the world." Their motive was in no small measure to show up the Americans, whose largest park, Yellowstone, established in 1872, would be only one-fifth as large.

Yet the proposed reserve in the Canadian Rockies would not be a national park in the sense that many Americans thought of such places—a strictly protected environment of wild, sublime natural beauty. In fact, the acreage that had been part of Banff and the other two parks was actually *reduced* to allow more room for state-supervised economic exploitation. This new "largest national park in the world" permitted, for example, harvesting timber, working mines, grazing cattle, and constructing dams and hydroelectric generating stations. No one on the commission seemed to find those industrial and agricultural enterprises at all incompatible with the idea of a park.

To Americans, that way of thinking would have seemed strange indeed, for in that same period their own conservation movement was torn asunder by a proposal to build a single dam and reservoir within Yosemite National Park in California. The city of San Francisco wanted to put its water supply within the park, in the glaciated valley called Hetch Hetchy; the conservationist John Muir called it sacrilege and led a nationwide protest to stop it. Despite losing the battle over Hetch Hetchy, Muir and followers made sure that never again would such an invasion be allowed within a national park. As Roderick Nash has written, "they had gained much ground in the larger war for the existence of wilderness."

Muir and company fought a campaign to preserve wilderness as a symbol of American identity. America, in their eyes, was a nation born of the encounter of civilization with wilderness, and to preserve some large, intact part of that wilderness was to preserve the nation's heritage. Wilderness, from that point on, became a political cause of extraordinary complexity and power. It became a battle for the soul of the nation, for moral restraint in a consumer society, for human refuge from technology, for the rights of other species to exist, secure from domination or exploitation, for freedom and liberty in both a human and more than human sense.

Canada did not experience such a pivotal battle in the early part of this century, and it showed much less interest in protecting its vast wilderness. The idea of a national park had first entered Canada thirty years earlier in the form of setting up a European-style spa in the mountains, a project to encourage economic development of the West. From that point on Canadians tended to look on parks almost wholly as places of leisure, recreation, and profit. They were never secular temples where the nation could find its soul.

Perhaps that difference of attitude explains why conservation north of the border tended to remain an official, governmental responsibility rather than becoming a

citizen's movement. In the United States the controversy over Hetch Hetchy stirred up grassroots activism and opened a split between activists and government planners that has never quite healed. Muir, who had been excluded from the Roosevelt conferences, left behind as part of his legacy the Sierra Club, while other organizations like the Audubon Society and the Wilderness Society came on the scene, rallying the public to defend wild, untrammeled nature in the name of conservation.

In contrast, Canadians, writes Janet Foster, long had no effective citizen activism to arouse public opinion and preserve nature. "In the absence of a strong public movement in Canada," she writes, "it was left to the federal government to develop an awareness of the need for wildlife conservation." She shows how a few dedicated officials, James Harkin in particular, did bring something like Muir's vision into public policy, but without a strong citizens movement behind them they did not have the political muscle to make wilderness and wildlife preservation the powerful cause that they became in the United States

I submit that this cultural difference, which was already apparent in the 1910–15 era, has survived to this moment. It explains why Canada today protects less than *3 percent* of its gigantic territory from logging, mining, or other forms of economic exploitation (compared to about 8 percent in the United States, if parks and wildlife reserves are included). It explains why the United States has managed to set aside over 100 million acres as wilderness under the strictest protection. It explains why the United States has passed a federal endangered species act and Canada has not. It explains why there still is no nationwide system of wilderness preservation north of the border, though several provinces have made tentative efforts in that direction.

The clear message in these contrasting histories is that wilderness has been a less cherished national ideal among Canadians than Americans, and the reason Americans give for protecting wilderness, as a symbol of their national identity, has been less persuasive across the border.

On the other hand, Canadians seem to have been more interested than Americans in preserving and enhancing the *city* as a symbol of their national identity. From an early point the planning of urban environments claimed a prominent place in their conservation movement. Roosevelt and Pinchot were little interested in urban planning, nor were other early American conservationists, although they did include human health as one of their concerns. In contrast, Canadians moved quickly to incorporate cities into their planning.

Clifford Sifton, the head of the conservation commission, called for setting up "a rational system of Town Planning, a rational system of supervising the conditions in which the people in our great cities shall live," and he described the city as "one of the two or three great problems in the world today." He recruited Dr. C. A. Hodgetts to work for the commission, and Hodgetts immediately defined his job as promoting better housing and more town planning. Hodgetts characterized his country's urban growth as completely chaotic; too much had been left to the real-estate speculator who had no long-term interest in creating a livable community.

For a better model, Hodgetts turned not to the United States and its skyscraper metropolises, which he detested, but to Great Britain and its more human-scale planning tradition. In 1914 the commission lured to Ottawa one of Britain's leading

planners, Thomas Adams, a proponent of the Garden City movement, and put him to work promoting better planning at the local and provincial level. "National prosperity," Adams told his new audience, "depends on the character, stability, freedom and efficiency of the human resources of a nation, rather than on the amount of its exports or the gold it may have to its credit."

The Garden City ideal that Adams brought to North America aimed at integrating industry and agriculture by building new decentralized communities on the outskirts of large urban conurbations and surrounding them with green spaces. It proposed to control land speculation by socializing ownership. It looked back to the medieval English village for inspiration, an organic community that had been destroyed by modern economic individualism.

Much of this British ideal did not travel well to North America. Anglophone Canadians, despite their allegiance to things British, were not really ready to adopt that model for their own, and in fact no true garden cities were ever constructed in Canada, although a company town or two was laid out with some of its features. In the early 1920s, as the conservation commission was disbanding, Adams migrated south to the United States, where he became director of the Regional Planning Association of New York. Ironically, it was the United States during the New Deal that carried out plans to disperse population into several new garden cities.

Canadians were, it would seem, less eager than either the British or the Americans to embrace the small, decentralized community ideal; they turned out to be more accepting of the modern trend toward large, densely settled cities. Nonetheless, Adams and the conservation commission helped make urban planning an accepted public function, and the various provinces and municipalities in particular would come to exercise more power over planning the urban environment than their American counterparts. The roots of this Canadian emphasis on urban planning go deep into the past and defy easy summary, but it would appear that Canadians have long looked on cities more positively than Americans.

Part of the reason for that difference lies in different histories and different reactions to Old World imperialism. According to Gilbert Stelter, "the earliest Canadian urban places were essentially garrisons established in a hostile and overwhelmingly non-urban context. They were tiny outposts of European imperial or commercial expansion." Long after American cities had been given over to laissez-faire capitalism, Toronto, Montreal, Halifax, and Winnipeg were all controlled by imperial officials who saw themselves maintaining beachheads of civilization in a dangerous, uncouth wilderness. Stelter goes on to say that "the elite of Canadian towns usually lived and concentrated their activities at the centre of town, while the lower classes occupied the periphery or outskirts." Because of this elite control Canada's central cities were never so wide-open to real estate speculation as in the United States

The Canadian conservation movement then drew on this legacy of imperial concern for the urban environment. It drew on a long established Canadian cultural pattern of preferring civilization over wilderness, one that made urbanism a key part of Canadian self-identity, one that rested on an organic ideal of society that was different from individualistic America.

Canada, admittedly, has seen some tough resistance to government planning; it has tolerated such intervention far less than have many European societies. But a start had been made back in the early part of the twentieth century, one that linked the conservation of resources to the design of livable, socially inclusive cities, and that start would not be forgotten.

During the past fifty years, the early linkage made in Canada between conservation of resources and conservation of cities seems to have become strong once more. It helps explain what many observers, both Canadian and American, have noted: that on the whole Canada's urban environments have become more safe, efficient, and comprehensively planned than in the United States There are fewer slums, far less crime, fewer guns, better health care for the whole population, more access to mass transportation, more interest in energy conservation, and more urban parks and open spaces.

These characteristics do not all come from the conservation movement; they have other and broader roots. Nor do they necessarily mean that Canadian cities are in every way better than American cities; they are not, for example, less polluted than in the United States But these contrasting cultural attitudes which have influenced what is meant by conservation in Canada do help us understand better why Toronto is not Detroit nor Vancouver another Los Angeles.

These differences should not be drawn too sharply nor reduced to a pat formula of wilderness-loving Americans versus city-loving Canadians. The United States is one of the world's most urbanized countries, it too has a well-developed profession of urban planning, and its environmental organizations have paid increasing attention to urban ills. Canada, on the other hand, has recently expanded its national park system, particularly across the far north, and Canadian life and literature have increasingly been filled with appealing images of the wilderness.

Yet important differences remain—differences of emphasis. Despite more than a century of border-crossing experts and despite so much mutual agreement on the need to protect and safeguard the natural resource base of the continent, these two nations do not always mean the same thing by conservation.

So much for history. Now for the editorial page. This long linkage between conservation and nationalism can be viewed as more than a relic from the unenlightened past that we should try to put behind us as fast as possible. For the foreseeable future, a strong nation-state seems to be required if we mean to safeguard the earth's environment. In this age of NAFTA and powerful transnational corporations, the nation-state stands as the only effective police power that can set up rules and enforce them, that can protect resources from border marauders. There is as yet no global altruism, no global structure of legislation and enforcement, that can be depended on to look out for Mother Earth.

We are, therefore, forced to rely on those traditions of national self-interest, national pride, and national law-making, traditions that can be, as they have been in the past, mobilized for conservation. A world suddenly bereft of all borders would be, at the current stage of human evolution, a world without much conservation at all. I speak now not about protecting jobs or languages, both of which also look to the nation-state for a defense against incursions across the border. I speak only

of protecting the earth and its resources from degradation. Until global capitalism withers away, or until the whole world comes to share a single environmental ethic, backed up by a single international authority, the nation-state remains an indispensable institution.

But if we still need the nation-state as an institution, do we also need to keep promoting nationalism or separate national identities in conservation, which tend to separate us from one another? Do we need to insist on a Canadian conservation movement distinctive and separate from an American one? This is a harder question to answer, and I cannot offer a simple reply.

The nation-state, it seems to me, will crumble without a national culture to support it. We cannot, therefore, expect to protect the environment without, to some extent, protecting national traditions or without firing up national pride. Saving the bald eagle or the Grand Canyon or the cultural life of Montreal will require us, for a good long while yet, to excite passions, and those passions will include the passions of nationalism. Yet we know that those passions can destroy as well as protect. They can turn nasty toward foreigners and strangers. They can be ungenerous and violent. They can transform forests into fortresses.

While the nation-state remains an indispensable institution, all nations seem to be moving toward a more open, shifting sense of their identity, and surely this is a good thing. International borrowing is as active in conservation as it is in music or literature or food ways, and such border-crossing is the pathway toward a more tolerant, peaceful global future. United States should open its borders to *ideas* about conservation that are different from our own; we could, for example, learn much from Canada's success in creating decent urban environments, requiring the expenditure of substantial public funds on mass transit, energy conservation, and decent housing and health care for all.

Conversely, Canadians, who possess so much of the world's remaining wild lands, might profit from the American example and try to protect even more vigorously that wild heritage in the north from economic exploitation. Both nation's environmentalists could cross the international border more often and bring home a few ideas from the other side.

One of the great challenges of the next few decades will be to control the exploitative energies set loose by a border-jumping, transnational capitalist economy while, at the same time, keeping those borders open to the flow of people, culture, and ideas. This is not a challenge posed to conservationists in North America uniquely; it is a challenge posed all over the planet.

If you believe as I do that the conservation movement has become vital to that global human condition, that both the earth and all species, including its most numerous large species, *Homo sapiens*, depend on meeting that challenge successfully, then you must agree that conservationists in both our countries need to be thinking seriously about borders. We must decide how and how often we want to cross that long, shadowy line that divides our common continent.

Donald Worster, Hall Distinguished Professor of American History, Dept. of History—University of Kansas, 1445 Jayhawk Blvd., Room 3001, Lawrence, KS 66045-7590

Concluding Summary

Notes on the Reality of Yellowstone

Gordon Brittan

One who concludes a program always has four tasks. The first is to be brief. I shall.

The second task is just as easy. It is to thank the organizers and everybody who helped them in various ways for a superbly organized and very stimulating conference. As is the case with the best of conferences, I leave with more questions than answers.

The third task is much more difficult. It is to try to summarize what went on. In fact, a great many things went on, too many to summarize briefly or coherently. But very roughly, I would bring them under five headings (at that, not everything fits neatly). Each has to do with our activity as humanists. All are auxiliary to our central aim, heightening self-consciousness.

1. **Clarifying the experience** (very possibly what humanists do best). This involves illuminating the unique and particular, unfolding layers of complexity. Here it had to do with the art about and inspired by Yellowstone and with the history of architecture in the park, what we're looking at, i.e., what it expresses, and how we respond. It also had to do with visitation, how we're perceiving, feeling, behaving and where we lodge, eat, and sleep. Of particular interest were the narratives of women coming early to this place and to this area. Under this same general heading, I would put appreciation and preservation of cultural resources. If nothing else, this conference has underlined their importance and the ways in which they integrate, in the perspective of time, with the more narrowly natural phenomena we first wanted to preserve.

2. **Revising the history**. Of note here were the rejections of the Madison campfire story concerning the origins of the park, of various received truths about the "Sheepeater" Indians and their allegedly marginal character, and of the supposedly monolithic and superstitious attitudes of the Native American tribes who frequented this area. In every case, much more plausible accounts were given to replace them.

   I want to make two further comments in this connection. One is that the revisions were in the interest of getting the history straight, in the direction of

truth. Perhaps it does not need repeating, but history, anthropology, archeology are all truth-seeking disciplines.

The other comment is that the revisions do not necessarily bend to the socio-political winds, or accord with what we would like to be the case. I have told the Madison campfire story a hundred times. Our children were raised on it. It is an inspiring story, and I keep telling it to myself to motivate my own efforts to effect large changes in small ways. I will give it up reluctantly. But it is not true. That is what matters most.

3. **Understanding the science (and its relation to public policy).** Thus the blister rust wars, the Leopold Report, and early ecological rationales for Yellowstone. But we also had, to my immense interest, a session on the indigenous knowledge of nature. Perhaps some day such knowledge, still in the process of being made explicit, will be more widely valued and eventually be brought to bear on the formation of public policies.

4. **Establishing the (cultural, economic, social, political) context.** The context is both immediate, the Greater Yellowstone, regional, the tri-state area around the park, and national. Under this heading I am putting the discussions we heard of wolves, brucellosis, and predator control, all of them appealing to local, regional, and national considerations, as well as the discussions of capital and labor and the bearings of culture, expressive and determining of our understanding of the park and of the roles it has played.

5. **Examining the idea(s)** of Yellowstone Park and of the Greater Yellowstone ecosystem. Under this heading, I'm putting the international comparisons and the various cross-national perspectives surveyed, as well as the motives behind park designation and ecosystemic cooperation and the ways in which these motives might be realized.

All of these headings cut across, as is typical of the humanities, questions of fact and questions of value. At this conference, the answers given to these questions were, generally, so various that some uncertainty concerning the park, and its "idea," was suggested. I will return to this point in a moment.

The fourth task falling to me is most difficult of all: to put the discussion in larger perspective. I must add that however difficult this task, it is part of a philosopher's job description.

One reason for the difficulty is that the discussion, as already noted, has ranged back and forth between the park itself and the Greater Yellowstone, between the Native American and the Euro-American experience of it.

So far as the history of the park itself is concerned, it is so brief, even on a human time scale, that the history we are writing now is virtually contemporary history. I first came here almost fifty years ago, and have thus been witness to roughly 40 percent of

the park's history. My father, still alive, has bridged more than 75 percent of it.

But contemporary history is the most difficult of all to write, since we can gauge the significance of events, and hence their appropriate descriptions, the ways in which they are to be understood, only long after the fact, in the light of what subsequently transpires. One can know to some degree or other what past events have meant, but never, trying to be as self-conscious as possible, what they mean.

So we're still too close, even to the establishment of the park and its early years, to assess their significance with any depth or accuracy. Indeed, I think there's more consensus in this room concerning what we *ought* to do as a matter of policy than on what we *are* doing as future generations might describe it.

Just how close in time we are to the establishment of the park was brought home to me in a session on indigenous peoples and national parks. The discussion was fascinating. It concerned whether and on what terms indigenous peoples could reclaim traditional hunting and gathering rights in the park, and perhaps also a role in its management. I realize that a variety of factors are at stake. Native America, by insisting on its sovereignty, has at long last drawn the attention of a dominant culture ready for the first time to listen to, if not also accommodate it. This conference underlined the fact. But surely an important ingredient in the situation is that firm precedents with regard to the Native role have not yet been set. Otherwise, one would have expected the issues involved to have been thrashed out long ago.

So I, at any rate, have difficulty putting what we have been up to in any more than a very tentative historical perspective. It is too short. No great over-arching themes, no insightful and embracing concepts from this perspective have yet emerged. But a geological perspective is much too long. I suggest, in my typical Goldilocks sort of way, a biological perspective, in the hope that it might be more satisfactory if not just right.

It must be admitted from the outset that it is difficult to apply this perspective in an entirely coherent way. It quickly develops paradoxes.

One paradox, of course, is that the park was set aside as a protected area, a sanctuary or refuge *for* wildlife, open landscapes, thermal features, and *from* the modern world, more or less safe from our depredations, when the argument for setting it aside in the first place was that it would be for us humans' benefit, as if we needed to be protected from ourselves, in our own interest.

This paradox can be resolved if we distinguish between the public good and private benefit, and argue that the designation of this area as a national park had to do with the former and not the latter.

I am worried, incidentally, that the idea of parks, and their protection, as a public good is being undermined just as steadily as we are undermining the idea of public universities as public goods, by raising fees and tuitions on the argument that those who visit and attend them benefit personally, and therefore must pay for the privilege. Small increases in fees, at the very least to stay even with inflation, are justified, but the desire to make this park economically "self-sufficient" undoes one motive for which it was first established. If the designation and preservation of this park is not a public good, then we may well ask what is.

This is one place where, following Tom Watkin's remarks on Monday night, we

have to draw a line in the sand and resist significant fee increases.

But even on this resolution of the paradox, distinguishing the general interest for which the park was established from the private interest of those who would harm it in a variety of ways for their own profit, the underlying idea of removal or withdrawal or protection has led to all kinds of questions concerning the proper role of human beings here, and a variety of attempts, perhaps not yet successful, to answer them. Although these past several days we have been celebrating people in this place, our role remains unclear and unsure.

Everything depends in an obvious way on an understanding of who and what we are, or possibly better, on who or what we should be. The understanding of our role apparently built into the whole idea of the park involves a reconstrual of ourselves as something other than what we are in the biological scheme of things, a dominant predator. But this would seem to nullify from the outset our taking a biological perspective.

One further corollary of this paradox is worth mentioning (I puzzle about it a great deal of the time, particularly since, as will become clearer in a moment, I'm so committed to the scientific view of reality). It is that if we are to understand how natural processes work "on their own," so to speak, we must intervene systematically in nature. Science is not a passive, note-taking enterprise. It requires intervention, among other things attaching radio collars to wild animals, in which case, even if it is a matter of degree, we might wonder about the extent to which the processes are natural.

A second paradox distances us in the same sort of way from other species and from the way in which, at present, we tend to see the park. It is that the park is to one extent or another an "untrammeled" wilderness, where natural processes more or less take their course (forgetting what I just said), and animal populations are "naturally regulated," while with regard to our own species we are not content to let "nature take its course," and have built an impressive array of ethical arguments to support our behavior in this regard.

Indeed, these arguments are sometimes used to criticize the policy of "natural regulation" in the case of other animals, culling or harvesting being held morally preferable (on a calculation of pleasures and pains) to malnutrition and starvation (words which defenders of park policy, like John Varley, claim are at best very misleading).

Let me now start down a different trail, although as is the case except when we lose our way, I hope eventually to circle back to the place where we began.

Listening to some of the speakers at this conference, it is difficult to avoid coming to the conclusion that there are many Yellowstones, each at least in part a function of the way in which it is both construed and perceived. Different generations, different economic classes, even different tribes, each has its "own" Yellowstone, a fact reflected in the widely varying management goals of successive park administrations.

I've just finished reading Paul Schullery's wonderful book, *Searching for Yellowstone*, and even here there's a suggestion that the search is generational, culturally conditioned. Different people look for, and therefore find, a very different place.

Schullery aside for a moment, it has become fashionable, at least among academic humanists, to talk about reality as a "social construction," the way in which different communities give form, largely linguistic form, to their experience. On this reading, the park is a kind of cultural artefact, changing with the times and expressing, as the case may be, nostalgia for a simpler and more pristine America or nationalistic pride in our geographical uniqueness or the desire to conduct animal experiments on an ecosystemic scale, attitudes which themselves derive, at least according to the cynical, from an existing set of power relationships and a half-conscious manipulation of the instruments of public information.

Here, for example, is a sampling of various views along these lines from this conference (not all of them, I hasten to add, cynical):

1. "Yellowstone is, at base, a cultural experience, its meaning and importance varying among individuals and dependent upon interpretation. Over the past 100 years, concessionaires have quietly dictated how visitors see the park."

2. "The tendency to render the thermal landscape of Yellowstone as the site of the feminine/domestic as well as the markedly profane, I argue, arises from a dominant cultural ideology which expressed its revulsion of women's labor in manifold ways, and which, moreover, had long projected feminine stereotypes of erratic behavior upon natural forces inherently beyond the control of human attempts to harness and control them."

3. "Among the patterns I will consider are (1) the layering of acts of looking, in which one person's visual activity itself becomes the object of spectatorship by others, (2) the construction of 'visual authority' as something that moves consistently among different positions in a circuit of desire, (3) the thoroughly destabilized nature of visual experience in modern mass tourism."

4. "The paper will underscore the paradox and limitations of the national park idea and the conservation impulse in America, as well as the predominantly cultural value of Yellowstone wildlife."

5. "In a more general and philosophical sense this paper seeks to understand how national parks can help form nature and our sense of individuality through the regulation of vision."

Perhaps by this time, you begin to get the idea.

In fact, there is something to it. Who can deny that our perception of things is not in part colored by our cultural and personal contexts, a matrix of desire, belief, and attitude? When Susan Neel, for example, argues that "wildness is a cultural construct," it is not difficult to see what she is driving at. "Wildness" is inevitably contrasted with some view of what constitutes "normality," a view which is descriptive and normative at the same time, and changing meaning as the strategic uses to which it is put vary. There is also, as Tom Watkins pointed out the other night, a certain

measure of humility implied by "social construction" positions; each of us is, after all, a child of the times, and no one has a lock on the truth.

It is just that when pushed too far these positions become implausible. I do not want to go into all of the problems with the notion of "reality as social construction," or of the park as cultural artefact, although some of the problems touch on the paradoxes with which we began. It is enough for my purposes to mention two of these problems.

One is that it is difficult to assess the perspective from which the charge of "social construction" is made. Is this perspective not itself a "social construction," mired in its own matrix of belief and desire? If it is not, then on what grounds can this be established? What special authority does this perspective or the person taking it have?

The other problem is that if *everything* is a "social construction," then the notion has no work to do, for (like "wildness") the notion is parasitic upon an implicit contrast with "reality."

Moreover, if one wants to say that our contemporary mainstream Western conception of reality which is based on science is a "social construction," then one must also admit that it is not of the garden variety. For as Donald Worster noted in passing at lunch yesterday, the community rules by which scientific conclusions are reached are uncompromising and universal and in no way arbitrary. That is to say, it is possible to make out a special case for the authority of conclusions made with their disciplined use.

Now back to Schullery. In fact, his book does not simply record generational difference and cultural change, it records *progress* (which is not simply "socially constructed;" at this point I part company from the remarks on this subject made in the last half hour by my friend Susan Neel). We have a much larger and deeper understanding of this area now than when it was set aside in 1872, an understanding informed both by the experience of generations and by science. This greater understanding is manifest in this conference.

By "science," I mean biology. For the reality of the park disclosed by science, however much it has been tempered by social and economic demands (particularly with regard to the *focus* of the research carried out) is a biological reality, the inevitable theme of Schullery's book, as it must be of every thoughtful reflection on the reality of the park.

This hasn't been understood by everybody right from the start. It takes time to come to self-consciousness. But it is an idea to which, once introduced and explained, there is little real resistance. In fact, I think that there is a thread running through all of the various things that people have written and said about Yellowstone over the years, even in the sometimes off-the-wall comments related by Patricia Limerick yesterday evening. It is that it enforced or re-enforced a sense of biological continuity and of our place in a larger scheme of things, although, another paradox, it was often unclear how to frame the terms on which we "belonged."

Philosophy, Aristotle said, begins with wonder and awe. Who has experienced the park in any more than a fleeting way and not felt both? Wonder and awe are, with the right sort of education, transformed into understanding. There have been many

changes in the park since I first came here. But along with more people and more cars, there are also more rangers and story-boards targeted on science, and much less garbage along the roads.

It needs to be stressed how important education is to the development of perception and of understanding. We miss, but for their having been pointed out to us, objects which are otherwise near at hand and we fail, except when instructed, to grasp their complexity. This is true generally, but nowhere more than here. We need much more parks-related education, and I support enthusiastically the efforts of my friend Peter Brinkley to establish privately-supported educational centers in or near the most well-attended of them.

To say that the reality of Yellowstone is ultimately biological is not very helpful. There are so many things we don't understand about natural history, or about evolutionary biology, which is in an exciting developmental stage at the moment, or about the various processes in play here. For one thing, we don't yet really understand the role of fire (or so I would claim) and we don't yet really know whether large mammals, in this landscape and with the set of constraints at hand, will reach stable population levels over relatively short periods of time. Indeed, we don't yet understand our role as dominant predator, or what adaptive value relinquishing that role in places like Yellowstone might have.

But to say that the reality of Yellowstone is ultimately biological does have certain implications.

One implication is trite. As the expression "natural history" suggests, biology deals with change. The park will change, in unpredictable ways, whatever we do, as will the character of our appreciation of it. My own hopeful thought, on the basis of reading books like Schullery's, is that this latter will also continue to deepen. As appreciative as, for example, John Muir was (and Schullery quotes him to great effect at the close of his book), he really did not begin to fathom the complexity of the natural processes taking place here. He only guessed at them.

Other implications are more significant. We move the bears, not because we are worried about the quality of their summer diet or about their increasing frequency around campgrounds, but because in their begging attitudes along the roads, they are no longer bears, addressing us in their own right as animals rightly to be feared, products of their own evolutionary history and with their own demands, desires, and beliefs.

The German philosopher Hegel once wrote that the master who does not recognize and respect the slave as a human being loses his own humanity in the process. His point was that our humanity depends on being identified in a community of others who in essential respects are like us. The "I" requires a "we." In a world where the grizzly, feeding in dumps under the glare of automobile headlights, is similarly incapable of recognizing and respecting us, it is we who lose something of ourselves in the process. At long last realizing this, we close the dumps, however difficult the transition back to a more natural state, in which we and it are parts of an extended biological community, the grizzly must go through.

The wolf demands recognition and respect. It is for this reason primarily, and not for ungulate reduction or tourist attraction, that we re-introduce it. If we were

not worried about them, if they didn't inspire fear, they wouldn't be wolves, and by the same token we wouldn't be, to the same rich degree, human beings.

Taking the biological perspective forces us in this way, I believe, to try to consider other species, even the environments in which they live, on their own terms, for it is on these terms that they enter natural history if not our own. Considering them in this way, we at the same time enlarge the boundaries of our community.

Moreover, in taking the biological perspective in a larger and deeper way, we begin, perhaps, to resolve our initial paradoxes and to bring ourselves closer to the reality that is Yellowstone.

But there's the rub. In bringing ourselves closer to Yellowstone, in becoming part of its history rather than it becoming part of ours (and both have been talked about here the last several days), we have to face up to what seem to be harsh truths: that we are both predator and prey, that nature has little concern for individuals (if indeed she cares for species), and that (although this is at present a matter of great controversy which we are far from resolving) instability, not equilibrium, is the rule. Plato was very possibly wrong—truth and goodness, fact and value, biology and philosophy, may not go together, however much we have tried to make them one in this place for the past 125 years. That we have tried to do so, and will undoubtedly go on trying, says a great deal about ourselves and about the world we inhabit.

Gordon Brittan, Department of History and Philosophy, Montana State University, Bozeman, MT 59715

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