

Preface: Archeology in Wonderland

Centuries before the idea of the world's first national park was discussed around a frontier campfire, the Yellowstone Region was the focus of human activity. American Indian groups had long moved through the area, hunting and living along the shores of the high-altitude, volcanic lakes, rivers, and valleys. Evidence indicates a long history of human occupation and use of the unusual areas associated with the Yellowstone region. The earliest European American activities in the area mirrored those of American Indians, including hunting and trapping. These activities shifted toward scientific studies in the 1870s and, before the end of the century, included recreation, with heavy influence from concessionaires catering to the growing tourist trade. The activities of both indigenous groups and European Americans left behind a rich material record for archeologists to study.

Until recently, however, archeologists have struggled to find an appropriate context to apply to Yellowstone's historical sites. This is due in part to the relatively immense scale of the nearly state-sized study area (3,472 mile²/8992.5 km²) and an extremely diverse historical archeological record. The problem is compounded by historical archeological projects in the park that are typically driven by construction or natural disaster and are therefore necessarily short in duration and narrow in scope. As a result, Yellowstone has been subjected to a constantly changing field of investigators with little time to become familiar with the park, the historical landscape, and regional history. In an attempt to address these issues, a Treatment Plan was developed for Yellowstone's historic archeological sites (Hunt 1993). Drawing from Yellowstone National Park's 1872 enabling legislation as "a public park or pleasuring-ground for the benefit and enjoyment of the people," the plan utilizes tourism as the most logical context to study, assess, and interpret most historic sites within the park boundaries.

Although unprecedented as a subject of historical archeological inquiry, tourism has been a topic of anthropological inquiry for more than 30 years and its appeal to the discipline is both basic and quite timely (Bodine 1981; Nash 1981; Crick 1989). Tourism represents the single largest movement of human populations outside wartime and is a powerful force for culture contact and change (Crick 1989:309–310). Furthermore, the form and goals of tourism are culturally determined, shift through time, and vary between cultures (Graburn 1989). As archeology has traditionally directed the greater portion of its research toward issues of culture

change, tourism would seem a natural and entirely valid subject for archeological inquiry.

This volume contains three studies that trace the history of tourism in Yellowstone National Park through material remains discovered in both terrestrial and underwater archeological sites. A research approach with an archeological foundation opens new avenues of inquiry not available by using historical documents alone. Incorporating archeological materials into our interpretations of historical tourism in Yellowstone can help counter research biases that hamper use of a sometimes-fragmentary archival record. Archeology gives voice to people otherwise missing from written history, and therefore gives us the broadest view of the past.

A Geological Wonderland

Arguably the most popular tourist attractions in Yellowstone National Park are its natural wonders, largely the result of a complex and dynamic geological setting (this discussion draws heavily on Bradford et al. 2003). Western geologist F. V. Hayden (1872, 1873, 1883) pioneered geological studies in the Yellowstone area as early as 1871 followed by A. Hague's classic studies done between 1883 and 1902 (Hague 1899, 1904). However, the area's complexity was not well-understood until the work of Boyd (1957), and studies by Pierce (1979), Christensen (1984) and others have increased and refined knowledge of Yellowstone's complex geology. The most dramatic elements of Yellowstone's natural landscape are due to volcanism. The Yellowstone Plateau has been repeatedly destroyed, altered, and reshaped through geologic time. Beginning about 2 million years ago, a series of volcanic eruptions occurred in the general Yellowstone area creating four large calderas, three of which directly affect park topography. The first caldera eruption, about 2.1 million years ago, produced 965 km³ (600 mile³) of volcanic rock – 2,400 times more than the 1980 Mt. St. Helens eruption. This caldera is centered in west Yellowstone, extending westward into Idaho and eastward to include the area now containing the western half of Yellowstone Lake. A second explosion, the island park caldera, occurred 1.3 million years ago outside the current park boundaries but within the westernmost extension of the earlier caldera. The third caldera erupted about 650,000 years ago in the same vicinity as the first, overlapping and extending the newly formed Yellowstone Caldera 16 km (10 mile) northeast. This third caldera encompassed all of what would become Yellowstone Lake except for the two southern fingers (Southeast and South arms). More recently, about 160,000 years ago, a minor eruption, by comparison to the earlier ones, formed the West Thumb Caldera within the southeast portion of the much larger Yellowstone Caldera (Taylor et al. 1989). This formative geologic activity is caused by what geologists now believe to be the slow, southwestern movement of the North American tectonic plate passing over a stationary thermal mantle plume – a bulbous mass of magma that has risen from the earth's core toward the crust, which is slowly being flattened by crustal plate movement (Good and Pierce 1996:21). This tectonic movement over the mantle plume also uplifted

much of northwest Wyoming, southwest Montana, and southern Idaho, resulting in Yellowstone's 2,450 m (8,000 ft) average elevation (Good and Pierce 1996:21).

The park's history of glaciation is equally important in the formation of Yellowstone's natural wonders. Yellowstone Plateau's glacial history is as complex as its volcanic history. There were at least 10 glacial periods in the Yellowstone region – the most recent began around 70,000 years ago, reached its maximum size about 25,000 years ago, and all but vanished 15,000 years ago. The Yellowstone Plateau ice shield was separate from the North American ice shield and covered the entire area in an almost flat ice mantle for miles in all directions. During this last glacial period, the ice mantle was 1,200 m (4,000 ft) thick above much of Yellowstone. Because of Yellowstone Plateau's modest elevation, early warming significantly affected the area when the Yellowstone ice field began to shrink about 20,000 years ago. As the ice thinned, the underlying volcanism was uncovered; interactions between stagnant ice and hydrothermal features were abundant, resulting in today's numerous hydrothermal features that characterize the Yellowstone Plateau. These include an estimated 150 geysers and more than 5,000 hot springs, hot pools, and steam vents. These geothermal features, particularly geyser basins, are concentrated along streams and on lake shores where the necessary concurrence of heat and water is found. These remarkable features have no peers, and they have made "Yellowstone" synonymous with geothermal activity (Haines 1996a:xix).

A deep public fascination with the Yellowstone region's spectacular natural wonders led to the creation of Yellowstone National Park by the Congress on March 1, 1872, as a "pleasuring ground for the benefit and enjoyment of the people" (Tilden 1951:98). It was the world's first national park. The idea of preserving a vast territory in its natural state for the general public was a novel concept, particularly in a young country where extractive exploitation of seemingly limitless resources was considered to be a natural right. The reality of preserving this large area is even more astounding, although it took almost a half-century of experimentation to learn how to manage such an unparalleled undertaking.

The fledgling park was an exciting, new experiment, but it had a nearly disastrous beginning. Congress failed to define basic guidelines and appropriate funds, which were limited in the post-Civil War recovery era. Park management and protection responsibilities were given by law to the Secretary of the Interior, initiating federal land management policies. The managers believed the growth of a tourist economy resulting from the Northern Pacific Railroad reaching Montana would ameliorate the lack of park operational funds. No railroads were built for the next 6 years, however, which meant no tourist growth, no concessionaires, no fees, and ultimately, no money for park operations (Haines 1996a:179). After the failure of the first two park superintendents, the park soon fell victim to an onslaught of poachers, woodcutters, vandals, and squatters. The Secretary of the Interior, lacking both park funding and a superintendent, enlisted the aid of the Secretary of War, which was allowed under the act establishing the park. Beginning in 1886, the US Army had jurisdiction of Yellowstone, which proved a positive management step for the park. The Army had sufficient manpower for mounted patrols and law enforcement. They posted new regulations in the park, and constant military patrols enforced them.

Congressional appropriations increased, and the Corps of Engineers began a series of improvements that included completion of a road system. The Army's Yellowstone legacy is most visible at their Mammoth Hot Springs headquarters, initially at Camp Sheridan, then at Fort Yellowstone, which houses park headquarters today (Clary 1972:43).

Although the army's record over the next 30 years was admirable, something more was clearly needed. The army was not in the business of running parks, nor could they meet requirements of the rapidly increasing tourists who craved more information about the park. During this period, 14 other national parks were established, each managed independently. This situation caused uneven management, inefficiency, and a general lack of direction. By 1916, it was clear that a government agency was needed to provide coordinated national park administration, complete with professionals able to meet protection responsibilities and other special park needs, including a new concept called interpretation (Clary 1972:44). On August 25, 1916, President Woodrow Wilson signed into law a bill creating the National Park Service (NPS). Yellowstone management and protection responsibilities passed from the army to the NPS in 1918.

After assuming management responsibility for Yellowstone National Park, the NPS emphasized public interpretation and portrayed parks as part of an intricate interrelationship of humans and their environment. The NPS extended Yellowstone's boundaries to encompass related natural topographic features, protect petrified tree deposits, and increase elk winter grazing range. Developers' attempts to impound the Yellowstone River were successfully defeated, and solid research into the park's natural resources provided a foundation for more sophisticated wildlife and forest management policies. A better understanding of park ecology led to better ways of allowing public access to the park's natural wonders without inflicting severe environmental impact (Clary 1972:44–45). This pioneering Yellowstone management style continues today throughout the National Park System.

From Heritage Tourism to a Tourism Heritage

From the establishment of the park to the present, the impetus for development and park operations was to provide access to the visiting public. Therefore, tourism is the theme and the context connecting the studies present in this volume. As Hunt (Chapter 1 of this volume) notes, the majority of historical archeological sites in Yellowstone National Park are in one way or another byproducts of tourism and the tourist industry that developed in the late-nineteenth century. This is true both for sites found on land and those submerged in park waterways. Tourism, as a broad research theme, sweeps across the Yellowstone landscape and encompasses the park's lakes and rivers where distinctive aspects of tourist infrastructure arose to take advantage of visitor interest. In some cases, such as Yellowstone Lake's maritime sites discussed in Chapter 2, the material remains are deliberately nautical and include familiar features of ships, boats, and docks, similar to remains found in

coastal areas. In other cases, such as archeological deposits at the Marshall/Firehole Hotel presented in Chapter 3, the site's location adjacent to a river or other water source led to cultural remains underwater, even though the sites do not directly link to maritime activity. In this sense, the cultural landscape of tourism in Yellowstone crosses seamlessly from the land to the water and unifies archeological resources under a single research umbrella.

The chapters in this volume trace the conceptual progression of historical sites in Yellowstone from the land to the water, including sites that naturally straddle the two. In the first chapter, Hunt lays the contextual foundation for the study of historical sites in Yellowstone, both on land and underwater, by outlining a theoretical framework for an archeological study of tourism. Since the early 1990s, research in Yellowstone was guided by a "contextual model based on anthropological studies of tourism which envisions historical archeological sites as by-products of a park's operations" (Hunt, Chapter 1 of this volume). Hunt divides his discussion of the model into several sections. He begins by outlining tourism as a primary research context. In his second section, he justifies the approach and defines an area of inquiry. Next, Hunt presents a detailed context and developmental model based on the interaction of three primary socio-economic spheres of influence. This is followed by a synopsis of the characteristics and structure of tourism and definition of four periods at Yellowstone beginning with the park's 1872 inception and continuing to the start of World War II. Finally, he identifies a diverse range of potential research topics that may be used to address archeological resources, including aspects of cultural landscape, economics, the tourist system, architecture, subsistence, ethnicity, and health and sanitation.

The volume's second chapter (Russell et al.) highlights the unique maritime infrastructure that operated on Yellowstone Lake in the late 19th and early 20th centuries. The authors begin by developing a specific historical context for Yellowstone Lake, highlighting the role tourism played in creating the structures and vessel remains present in the lake today, as well as how they were connected to the outside world. They then briefly discuss previous archeological work around Yellowstone Lake, serving as a baseline for the survey reported here. The chapter then outlines the idea of a maritime system as a subset of the larger tourist system at work in Yellowstone National Park, and as a framework for interpreting maritime archeological remains found in Yellowstone Lake. A detailed discussion of the archeological sites recorded in the lake follows.

In Chapter 3, Corbin et al. focus on archeological documentation of the Marshall/Firehole Hotel, the first "tourist town" constructed in a national park. The hotel site relates to the national park system's developmental history; it is directly associated with a fundamental purpose of the National Park Service – "to provide for the enjoyment of park resources and values by people of the United States." Until recently, the site was believed to be destroyed by an early-19th-century road barrow pit. Archeological investigations in 1993–1994 demonstrated the hotel's continual existence with nearly invisible archeological features. Archeologists also discovered an unusual riverine component derived from the hotel occupants' disposal of trash in the adjacent Firehole River. Although the land-based portion of the site is

not in excessive danger, vandals are rapidly destroying the underwater component. In response, the National Park Service (NPS) and the PAST Foundation created the Marshall/Firehole Underwater Archeology Project as a cooperative venture partially funded through an NPS-Intermountain Region Challenge Cost Share grant. Participants included archeologists and volunteers from Yellowstone National Park, the PAST Foundation, NPS-Midwest Archeological Center (MWAC), East Carolina University, and the Lincoln (Nebraska) Public Schools Science Focus Program High School. The project combined a variety of research and interpretation goals and offered a unique educational opportunity for the public to participate in and learn about archeology.

These chapters draw together the fascinating historical archeology of Yellowstone National Park into a single volume linked by a common research framework, the archeology of tourism. While oftentimes treated as separate and unrelated resources, historical archeological sites on land, underwater, and in the liminal zone in between, connect in Yellowstone through a shared history and a universal purpose. Situating these sites within the context of a larger tourist infrastructure allows us to broaden our interpretation and enriches the stories the sites have to tell.

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