An Investigation of Historic Euro-American Inscriptions at Madison Buffalo Jump

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AN INVESTIGATION OF HISTORIC EURO-AMERICAN INSCRIPTIONS
AT MADISON BUFFALO JUMP

By

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Thesis

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ABSTRACT

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This thesis explores the cultural significance and interpretive potential of historic inscriptions left behind by primarily Euro-Americans at Madison Buffalo Jump; a Native American bison jump situated in the Madison Valley of southwestern Montana. The inscriptions are analyzed through the lens of Cultural Landscape Theory and their typology, distribution, and content are examined in detail. By looking at these inscriptions in this manner, opportunities for ongoing research are highlighted, the future potential of these types of inscriptions to contribute to a new interpretive is examined, and the challenges of appropriate conservation strategies is considered. This thesis presents the argument that inscriptions such as these aid in telling a narrative of those who came before, and can reveal forgotten aspects of early Euro-American life and cultural practices on the American frontier, while similarly aiming to promote the potential of historic inscriptions to contribute to the cultural significance and interpretation of heritage sites.
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CHAPTER 1 – INTRODUCTION

1.1 Thesis Research Goals and Overview

This thesis focuses on the cultural significance and interpretative potential of historic inscriptions left by Euro-Americans throughout the North American West. In order to demonstrate the potential knowledge that can be gained from these under-recognized resources, this project considers the inscriptions found at Madison Buffalo Jump (MBJ), a Montana State Park located several miles southwest of Bozeman, MT. The site itself is that of a buffalo jump, or *pishkun*, and is known to have been used by multiple Native American tribes in the region for thousands of years. One of Montana’s State Parks that is primarily recognized for its archaeological resources, the site is interpreted for the public in terms of Native American use and its natural setting. But the rock cliff face did not solely attract the attention of pre-European hunters. In addition to the prehistoric features associated with the jump, more recent historic inscriptions are also found.

Throughout the North American West, anthropologists and archaeologists have long pursued the documentation and interpretation of Native American pictographs, petroglyphs, and overall rock art. Yet, often accompanying this indigenous rock art are more recent historical inscriptions that can be found. In the American West these inscriptions from mainly Euro-Americans, dating roughly from the last 200 years, are found scattered across the landscape. The inscriptions are often located either superimposed upon pre-existing Native American rock art, or are found within or near Native American archaeological sites (Whitley 1996; Urbaniak 2014). This type of placement near a Native American site applies to MBJ.

Historic inscriptions can be found carved and scratched into stone mediums across North America. Just as prehistoric rock art carries information about past cultures, these more recent,
and often under-recognized, resources have the potential to communicate valuable cultural information. This information could in turn lead to a broader understanding of colonization and cultural identity in the North American West (Clarke et al. 2010; Christensen et al. 2013; Urbaniak 2014). While there are still those who consider these inscriptions no more than graffiti defacing the site, this thesis makes the case that these inscriptions are important contributing aspects to the site’s overall history. It is imperative that this history not be overlooked; instead, it should be fully investigated.

Inscriptions like those found at the identified site are representative of a changing cultural chronology of people, groups, and cultures, which shaped the landscape during a time of tumultuous transition (Berrocal and Millerstrom 2013; Urbaniak 2014). By looking at these resources as statements left by individuals, we can begin to understand how people consciously presented themselves upon the landscape, why they might have been there, and with whom they were associated.

Inscriptions are a style of persistent communication and information exchange that is placed upon the landscape in order for individuals to impose their values and attempt to connect back to larger identifiable groups or communities (Urbaniak 2014). By understanding these historic resources, we can begin to understand not just trans-national trends in claims of land ownership, but, additionally, the workings of specific groups and individuals, their attitudes and behaviors, and how they contributed in shaping the American West (D’Ambrogi 2009).

The inscriptions left behind at MBJ provide a means in which to study this more recent historic period. This thesis examines in detail the distribution, typology, and content, of the inscriptions left by those Euro-Americans who once visited or lived on the land surrounding MBJ. The inscriptions found within the state park include names, dates, symbols, and livestock
brands. These resources aid in adding to the overall historic narrative of the site and provide information about the individual authors who carved these inscriptions.

Figure 1. Madison Buffalo Jump, showing the jump face.
CHAPTER 2 - THEORIES AND DEFINITIONS

2.1 Chapter Overview

This chapter defines and gives some background on historic inscriptions and the scholarship it has generated, especially relating to those found in the Western United States. Inscriptions such as these, though often overlooked or disregarded by researchers, are now being considered as types of residual communication, allowing a new dialogue to open about the importance of these resources. The chapter continues with a discussion of the past as well as the current treatment of historic inscriptions within archaeology, history, and cultural resource management.

Finally, this chapter focuses on some theoretical concepts that aid research on historic inscriptions. This focus is on Cultural Landscape Theory, a theory built on the insight that landscapes are constantly transforming due to influxes of different groups and people who rework the landscape not only physically but also symbolically, to connect back to a larger identifiable group, which may have cultural, social, and religious dimensions. This theoretical approach calls for scientists to look at places as not just archeological sites with a tightly bounded temporal use, but to consider the entire history of the landscape and to connect those events to their larger significance.

2.2 Historic Inscriptions in North America

Urbaniak (2014) defines a historic inscription as a carved, scratched, or painted figure or a textual assemblage that is most commonly created by European explorers and immigrants. Inscriptions are usually carved into sandstone formations such as cliffs and buttes, often taking on the form of names, dates, texts, and images. Inscribed dates and contextual analysis of these historic inscriptions show that settlers throughout the North American West have been
documenting their presence upon the landscape since the time of the earliest explorers and trappers, and continues with more recent immigrants, such as homesteaders, who migrated to the area at later dates (Knipmeyer 2002; Urbaniak 2014). The act of making etchings on stone is not a practice that ended with prehistoric people; this urge of leaving one’s mark upon the landscape seems to be universal and timeless.

In his 2014 dissertation, Urbaniak describes historic inscriptions as a type of “residual communication,” a form of communication that was informally created and left behind, and that continues to speak for itself long after the inscriber has left. Inscriptions such as these often tend to invite the placement of more inscriptions, or as Rogers (2007) states, “marks invite marks, statements invite response.” This becomes a type of dialogue between two people who are both occupying the same space, but unlike face-to-face conversation, both individuals are not present at the same time (Rogers 2007). Through this style of communication, it is possible for individuals to express their personal identities, values, and beliefs upon an unfamiliar and often stressful landscape. This allows the inscriber and others who pass by to leave behind marks that help connect them back to a broader more familiar cultural, social, religious, or ethnic group (Thomas 2001).

Although many historic inscriptions are text-based, symbols such as livestock brands, hearts, arrows, etc., are also prevalent across the West. Humans around the globe utilize culturally learned graphical representations such as these in order to convey meaning through pictures and signs. These symbols, such as livestock brands, represent learned cultural perspectives, and help to identify the inscriber as one who likely affiliated with the symbol in some manner. These, combined with the text-based inscriptions, help to represent certain ideas and values that the inscriber intended to place upon the landscape. Therefore, inscriptions can aid
in determining who the inscriber was, with whom they associated, and what they intended to communicate to those who passed. Inscriptions further modified the landscape, and make cultural claims to that land. These inscriptions represent archeological signatures of identity, placing these individuals and groups at specific locations and times upon the landscape.

Though often labelled disapprovingly as “graffiti”, historic inscriptions provide an avenue for understanding and interpreting the use of an area during historical times. These inscriptions are representative of changing peoples, groups, and relationships with the environment that shaped the landscape during a time of colonialization and transition (Berrocal and Millerstrom 2013; Urbaniak 2014). This helps to demonstrate that the landscape is a type of medium that can be altered and used in a way to re-create a sociocultural identity (Anschuetz et al. 2001). Those individuals who left behind their mark on sandstone surfaces brought with them a set of values and ideas altering the landscape for those coming later.

In recent decades, the political, social, and aesthetic values of historic inscriptions have begun to be recognized by those in the heritage preservation community. Though often still referred to as graffiti, especially when found in conjunction with Native American rock art and sites, a growing number of professionals have begun to see these resources as a potentially contributing factor to the overall cultural significance of a site and to help complement the already existing site narrative (Merrill and Hack 2012). It is important to note that under Section 106 of the National Historic Preservation Act (NHPA) any artifact or feature generally fifty years or older has the potential to be considered a cultural resource worthy of preservation and investigation (Christensen et al. 2013; Urbaniak 2014).

However, the general treatment and attention given to historic inscriptions at cultural sites in the past has been poor. Inscriptions are often regarded by some rock art researchers as non-
contributing factors to the site’s significance. In certain instances, historic inscriptions have been deliberately destroyed in an effort to “restore” the rock face. Early “preservation” attempts at parks and monuments implemented a now-controversial policy in which all inscriptions and carvings thought to have been created after a set date (often the founding of the park, monument, etc.) were considered to be graffiti and acts of vandalism (D’Ambrogi 2009).

Although well-meaning, this preservation approach led to a loss of an untold number of important historic inscriptions due to much of the removal being undertaken by unsupervised individuals and groups (D’Ambrogi 2009). Though this practice of erasure was mostly conducted in the early to mid-twentieth century, it continues to occur to some degree today. Dr. John Greer, during communications with Tim Urbaniak in 2009, noted the lack of consistency in graffiti removal by agencies such as the National Park Service, United States Forest Service, and the Bureau of Land Management (Urbaniak 2014). These agencies continue the practice of allowing groups, clubs, and non-qualified individuals to indiscriminately remove inscriptions that are presumed to be “graffiti,” often with no formal study of the inscriptions. This results in high potential for historically important inscriptions to be permanently removed from a site. In some instances, even prehistoric rock art has been mistaken as “graffiti” and has been damaged or destroyed by this practice (Urbaniak 2014).

Euro-American inscriptions, even if preserved, rarely figure prominently in either the technical discussions of archaeologists and preservationists, or in the presentation of these resources to the public. One contributing reason as to why these historic resources are often overlooked, and in some instances destroyed, is due to the correlation between historic inscriptions and their placement at many Native American sites. Historic inscriptions are often found superimposed over Native American rock art or are found in association with Native
American sites (Knipmeyer 2002; Urbaniak 2014). The often-destructive nature of historic inscriptions at Native American sites has led many in the cultural heritage field to regard historic inscriptions as nothing more than graffiti or vandalism (Christensen et al. 2013; Clarke et al. 2010; Forster et al. 2012). As discussed earlier, message and response are not uncommon in inscriptions, and that may include Native and Euro-American rock art. More often though, there is no clear indication that Euro-Americans deliberately sought out prehistoric rock art and habitation sites to leave their names and inscriptions; rather, it is simply that many of these sites hold a universal attraction to people. This is due to the frequent proximity of these sites being near travel routes, water sources, or shelter and often their prominence on the landscape. Thus, many historic inscriptions are found in conjunction with prehistoric archaeological sites (Knipmeyer 2002; Urbaniak 2014). It is undeniable that conflicts arose between Native Americans and Euro-American settlers in the Northern Plains, but the act of superimposing in many cases appears to be more out of communication or convenience rather than attempts at subverting the indigenous population. If the main reason for leaving historic inscriptions superimposed over native rock-art was to deface the site and subvert the population, then there should be signs of intentional destruction and full removal of rock art panels (Urbaniak 2014).

Because of this misconception, and the more general devaluation of their significance, historic inscriptions rarely receive equal treatment as compared to other documented cultural resources (Clarke et al. 2010; Forster et al. 2012; Christensen et al. 2013; Urbaniak 2014). When archaeologists make these types of value-based judgments on particular resources, they tend to ignore the potential questions about the broader scope of human behavior, cultural interactions, and the cultural chronology of the site.
In order to fully understand landscapes and the relationships between cultures over time, archaeologists and heritage managers alike must take steps towards a more comprehensive approach when identifying and considering cultural material. They must understand how land management practices, such as the removal or destruction of historic inscriptions, help to reinforce notions that the histories and narratives that lie outside of the officially recognized periods are deemed less worthy of conservation and research efforts (Merrill and Hack 2012).

When interpreting the narrative of a site, researchers should keep in mind Tilden’s Principles of Interpretation, specifically the fifth principle which states, “Interpretation should aim to present a whole rather than a part and must address itself to the whole man rather than any phase” (Tilden 1957).

One way to better understand a site as a whole is by looking at it through the lens of Cultural Landscape Theory. By connecting historic inscriptions to Cultural Landscape Theory, as well as prescribing more holistic notions of cultural significance, heritage managers and archaeologists alike could remedy some shortcomings evident in the field. In the case of MBJ, the shortcomings of past surveys and excavations are demonstrated by omitting or disregarding historical components at the site.

2.3 Cultural Landscape Theory

The intellectual foundations of Cultural Landscape Theory in archaeology can be traced back to the 1920s, but it was not until the last few decades that a renewed interest in issues of space and place has arisen from the social sciences (Low and Lawrence-Zuniga 2003). Early landscape approaches within archaeology were constructed to essentially provide a backdrop against which material traces were plotted and evaluated (Anschuetz et al. 2001). Today, however, archaeologists have begun to shift their perspective, foregrounding spatial dimensions
of culture rather than treating them as background, showing that all behavior is located in and constructed of space (Low and Lawrence-Zuniga 2003). These new landscape approaches allow researchers to accommodate different theoretical perspectives from a variety of fields such as geography, anthropology, history, sociology, and even philosophy (Anschuetz et al. 2001; Low and Lawrence-Zuniga 2003).

Though there are many differing opinions on what exactly constitutes Cultural Landscape Theory, the underlying concept essentially states that through human interaction and various cultural aspects, the natural environment is transformed into a landscape that is designed and intentionally created by humans (Anschuetz et al. 2001). In other words, the landscape is not just a neutral receiver of human action but rather a natural medium for, and a product of, human action.

Traditionally in Western cultural heritage management, cultural sites have been defined in limited ways be it culturally, temporally, or geographically. This process of narrowly defining sites has led some researchers to presume that cultural places are mono-cultural, mono-temporal, or even micro-geographical (Rogers 2007). This assumes that cultural places are defined by reference to a single culture or ethnic group, that the site has a static history defined by a block of time, essentially fossilizing its meaning to single times or points in history, and that the place is defined by its immediate surroundings and not the whole landscape (Date 2012; Rogers 2007). Landscapes, however, continually change because they are a medium across which the interactions of natural and cultural forces play. All cultural landscapes at any given time are a palimpsest of the artifacts and activities that happened in the past, which are constantly modified to meet ever changing personal and societal needs (Rogers 2007). In his The Morphology of
Landscape, Carl Sauer, an important American midcentury geographer who played an early role in the development of Cultural Landscape Theory, states:

Under the influence of a given culture, itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development. With the introduction of a different – that is- alien culture, a rejuvenation of the cultural landscape sets in, or a new landscape is superimposed on the remnants of an older one (Sauer 1925).

Concepts in Cultural Landscape Theory help to emphasize the connectedness rather than the singularity of sites, as well as the importance of landscape and environment in understanding past human behavior (Anschuetz et al. 2001). The traditional monolithic approach to cultural places represents a denial of meaningful cultural, social, political, and geographical understanding of the landscapes (Rogers 2007). In this sense, historical inscriptions can be seen as important resources that can serve as a record documenting the presence of both indigenous and non-indigenous peoples in an area, provide information about the historic and archaeological past, the potential use or re-use of a site, and contribute to an understanding of cultural landscapes when examined in their individual locational contexts (Urbaniak 2014).

When preserving traces of past cultures, what actually constitutes preservation depends on how culture is understood. If culture is viewed as a single pure essence, or an entity functioning like an organism, that is endangered by interaction with other cultures (i.e. western) then efforts to freeze sites in their current state makes sense (Rogers 2007). On the other hand, if culture is viewed as relations between various groups and worldviews, then a culture's essence exists in the dialogues within and between cultures (Clifford 1989; Rogers 2007). As Clifford (1989) writes, “the salvage paradigm, reflecting a desire to rescue 'authenticity' out of destructive historical change, is alive and well.” In this paradigm, authenticity is a central concept, and “is produced by removing objects from their current historical situation.” This assumes indigenous cultures
cannot survive contact with the “modern,” as a result as soon after contact these cultures must be collected and preserved in their most “authentic” state; rescuing them from the inevitable historical decay (Clifford 1989). When we preserve prehistoric rock art sites, the past dialogue is maintained. Yet, while this retains the prehistoric dialogue, it encourages a view of a single rock art motif, panel, site, or style as a container of information about a culture as opposed to traces of the relations and interactions between cultures over time (Rogers 2007). In essence, historic inscriptions are seen as not authentic to the site and would hence be termed graffiti since it defiles the original work.

While historic inscriptions have begun to be more widely recognized as cultural resources among the preservationist and archeological communities, they are still overlooked at many sites. By looking at these resources through the lens of Cultural Landscape Theory we can begin to see how past people used these inscriptions to redefine the landscape in their image to connect back to a larger more familiar cultural group. This in turn can lead to a better understanding of past activities and use of a site and aid researchers in understanding past human behavior. To further this point, this thesis will begin to look specifically at MBJ, a site that contains numerous historic inscriptions that have received little attention in comparison to other archeological features and resources at the park.
CHAPTER 3 - ENVIRONMENT, HISTORY, AND PREVIOUS RESEARCH

3.1 Chapter Overview

This chapter examines the landscape and local geography, local and regional history, and previous research conducted within the project area. First, this chapter delves into the geography and landscape of the Madison Buffalo Jump (MBJ) and the surrounding area. It is important to understand the geologic formations at the site as they were used as the substrate for the inscriptions. Other important features of the area such as the proximity to rivers and open bench lands aid us in understanding why the site was frequented by so many different groups from the prehistoric to historic periods, and how these individuals utilized the area in different ways.

Second, this chapter includes information regarding the overall history of MBJ and the surrounding landscape. This begins by a summary of the pre-history of southwest Montana and an overview of the park itself. The discussion then turns to the historic period of the area beginning in the early 1800s, shedding light onto the early days of Euro-American settlement in the region, and the importance ranching and farming played in sustaining the local economy and providing goods to the bustling mining camps in neighboring valleys.

Last, this chapter focuses on previous archaeological research conducted in the park, and the roles both professional and avocational researchers helped to contribute to the history of the area. This section highlights the driving factors behind the research questions being posed by researchers. While most of the previous archeological research focuses solely on the park's prehistoric use, more recent research conducted by individuals and groups has begun to focus on all cultural factors contributing to the park's past.
3.2 Location and Geology of Madison Buffalo Jump

MBJ is a Montana State Park situated in Gallatin County, approximately 23 miles from Bozeman, MT, the county seat. The jump is located on a steep sandstone bluff on the far eastern wall of the Madison River Valley, south of Logan, MT., in what is part of a hydrological unit known as the Three Forks Basin (Van West 1986). The Three Forks Basin encompasses approximately 1,000 square miles and is the location where the Gallatin, Jefferson, and Madison rivers converge to form the Missouri River (Berry 1943).

![Location map of Madison Buffalo Jump. From: Bachman 2016.](image)

The park itself encompasses 640 acres within Township 1N, Range 2E, Section 34 in the Manhattan SW 7.5 minute series USGS map and sits at an elevation of 4,554 ft. (Bachman 2016). The topography of this river valley is primarily comprised of a series of elevated, sloping, terraced benches that are composed of large alluvial fans (Wyckoff and Hansen 1991). Taylor (1971), as cited from Bachman (2016), explains that here the Madison River has:

Carved out a broad and fertile north-south valley some four miles wide, cut several hundred feet deep from the high plain which extends on either side. The eastern wall of the valley for some two miles on either side of the Buffalo Jump is deeply cut into ravines, rising sharply to the foot of sheer bluffs from twenty to one hundred feet in height.
The geology of MBJ consists of both the Madison Plateau and Madison Valley formations, rock formations that are prominent landform markers in the area. They are primarily composed of tuffaceous sandstone and siltstone, interbedded with marl and other conglomerate deposits (Robinson 1961). More specifically, Dorr (1956) analyzed the composition of the of the Madison Valley Formation finding that it consisted of 64% sandstone, 15% siltstone, shale, and claystone, 14% conglomerate, 5% ash, and 2% limestone. This contrasts with previous reports of the formation claiming it to be a type of limestone (Davis and Brownell 2014; Taylor 1971).

![Typical sandstone outcroppings found throughout the park and the surrounding area.](image)

Overall, the terrain of the park consists of steeply incised sandstone canyons and cliffs, located between upland plateaus, dissected creek bottoms, and flat upland areas. Soft sandstone formations, along with a nearby water source and areas for shelter, make this park an ideal location to find historic inscriptions. However, large sections along the face of the jump, as well as other escarpments in the park, are marked by multiple collapsed sections exhibiting spalling due to weathering, demonstrating the fragility of the sandstone in the area.
3.3 History of the Madison Valley and Surrounding Areas

**Prehistoric Overview**

The greater western Montana region has been used intermittently by human groups for millennia. The earliest established occupations in the area date to the Paleoindian period, approximately 12,000 to 8,000 BP (MacDonald 2012). One of the earliest sites during this period is the Anzick site, located 40 miles east of MJ. This site is representative of a Clovis Culture, and dates to approximately 12,800 BP (Becerra-Valdivia et al. 2018). It is among the most prominent Clovis Culture sites in the country, the only one with a human burial.

This period is generally understood to consist of highly mobile hunter-gatherer groups using large, stylized lancelet and atlatl dart projectile point technology. Adaptive strategies famously include exploiting large megafauna, but that was augmented by smaller game and gathering of plant resources. The high semiarid valleys, such as the Madison and Gallatin, were not traditionally home to large populations of Native Americans. Instead, these valleys were often used as seasonal hunting camps (Wyckoff and Hansen 1991).
The Early Archaic period in Montana, roughly 8000 to 5000 BP, suffers from a lack of well documented and excavated sites. The period began with a shift to a broad-based resource pattern accompanied by population dispersal (Frison 1998). There is also less evidence of communal hunting activities during this time period in comparison to the preceding Paleoindian period, another factor possibly influencing the visibility of Early Archaic archaeological sites in comparison with those that precede and post-date this time period (MacDonald 2012).

The Middle Archaic period, roughly 5000 to 3000 BP, is marked by transition from the broad based subsistence pattern of the Early Archaic to the return of large scale communal bison hunting cultures of the Late Archaic. The period saw a climatic shift to a cooler and wetter conditions, favoring the expansion of grasslands and larger herds of grazing animals. This period shows an increase in sites, possibly due to an increase in population, mobility, or proximity in time to the present (MacDonald 2012).

The Late Archaic period saw further elaboration of large communal bison hunting indicated by a spread in the use of bison jumps and corralling systems, but these communal systems included antelope and bighorn sheep hunting. There is also an increase in stone circle sites, indicating a rise in tipi use (MacDonald 2012).

The arrival of the bow and arrow marks the transition to the Late Prehistoric period, approximately 1500 to 300 BP (Frison 1991). This period continued the use of jumps and corralling in communal hunts.

MBJ and the Madison River Valley have been used as a travel corridor and hunting grounds for millennia, leaving behind well-defined travel routes and camp sites. Although the ethnicity of the earliest users of this area cannot be readily attested, it is clear that historic groups
such as the Shoshone and Crow traveled to this place to kill and process bison, with an increased use of the site during the Late Prehistoric Period (Bachman 2016).

At MBJ, it is reconstructed that runners would stampede buffalo herds, driving them into groups with the aid of rock cairns and logs, eventually driving them over the “cliff face,” consisting of a 30 ft precipice, which is followed by a rolling drop of another 200 ft. Once the buffalo had been driven over the cliff and finished off they were processed and used for a variety of purposes such as for food, shelter, and clothing. The site may have been used by Native Americans for as long as 4,000 years and up until the 1750s, a time when buffalo jumps began to fall out of favor due to new hunting techniques and the introduction of the horse and gun (Van West 1986; Spritzer 1999; Bachman 2016).

This is a broad overview. The prehistory of southwestern Montana has been organized into several different chronological sequences, with general but not perfect concordance concerning the early indigenous populations of the area (Bachman 2016). This has been the focus of multiple researchers throughout Montana and a large wealth of research is available on the subject. For a more detailed examination of southwestern Montana’s, and specifically MBJ, native inhabitants refer to MacDonald (2012) and Bachman (2016).

**Historic Overview**

This region has seen a rich documentation of its historical past, as southwestern Montana was one of the first areas in the state where gold and other precious metals were first located. Areas such as the Madison Valley, though, are hampered by a shortage of available original material and documents, as the valleys were primarily used for mountain valley ranching and farming (Yeckel 1969). Much of the material documenting the area’s early historic period is primarily found among local county histories or from written or oral first-hand accounts of early
pioneers. Many early mountain valley ranchers, with their smaller, more easily manageable herds often found little need for detailed notes or records, leading to a lack of available historic material. This is in contrast to the larger open-range cattle operations in the eastern part of the state that dealt with numerous shareholders and investors, as well as significantly larger livestock herds (Yeckel 1969). Many western historians and writers have likewise chosen to lightly gloss over the history of cattle operations based in the western highlands. Yeckel (1969) describes how Ray Allen Billington, in his influential book *Westward Expansion*, discussed the western mountain valley ranchers with a brief thirteen lines before continuing onto discuss the eastern Montana plains.

For well over a century, the Madison River Valley has been utilized by local and regional ranchers for grazing both cattle and sheep for wool, dairy, and meat, selling those resources on both the local and national scale. It’s with an understanding of the history of mountain valley ranching operations and early valley settlements in southwestern Montana that some light may be shed onto the people who left behind their marks carved into the sandstone formations at MBJ.

*1800s-1900s*

The most recognized and documented account of early contact between Euro-Americans and native inhabitants was in 1805 with the first official expedition of the region by the Northwest Corps of Discovery. The Corps was commanded by Captains Meriwether Lewis and William Clark, and was the first military expedition to explore the upper Missouri River Basin to its source in the mountains of Western Montana (Olson 2001). The expedition left behind journals full of pertinent and valuable information of their travels through the region, including maps and detailed observations on the people and wildlife that inhabited the area (Houston...
1959). It was from this expedition that the Madison River was named by Euro-Americans and the area began to be explored more frequently by fur traders and Euro-American settlers.

Other early accounts of exploration and trade in the area include David Thompson, an early English fur trapper who mapped a vast part of the northwestern United States. Thompson originally worked for the Hudson Bay Company but eventually defected to the Northwest Company (Manning 1983). Though his travels brought him close to western Montana, accounts show that he never quite entered the region. Instead, some accounts state that Thompson sent two French fur trappers, LeBlanc and LaGasse, of the Northwest Company, to trade and winter with the Kootenai Indian Tribe. These two men may have been the first whites to enter the states western region around 1801, though no written records exist, and it is uncertain just how far south they traveled (Bachman 2016; Manning 1983).

One of the first documented accounts of early fur trapping in southwestern Montana, specifically the Three Forks region, comes from John Colter. Colter, a member of the Corps of Discovery, asked to be discharged early from the party in order to return to the beaver-rich country of southwest Montana. Trapping in this area proved difficult, though, as the Blackfeet held control over the territory. One account tells of Colter’s first hostile encounter with the Blackfeet in the summer of 1808 on the Lower Madison. On his homeward bound leg of a 500 mile “sales trip,” Colter encountered a hostile group of Blackfeet. After receiving a severe leg wound Colter made his way back to Fort Raymond located at the confluence of the Yellowstone and Bighorn Rivers. It was on this journey that Colter is rumored to have been the first Euro-American to travel through what is now Yellowstone National Park (Three Forks Historical Society 1983).
By the mid 1800s, southwestern Montana had begun to rapidly change with the discovery of placer gold mines at nearby Bannack, Virginia City, and Alder Gulch, some twenty to thirty miles west of the Madison Valley (Wyckoff and Hansen 1991). These gold strikes provided the first strong markets for the development of ranching and farming operations in the surrounding areas, and thus set the stage for the occupancy and settlement of Madison Valley. Due to their proximity near the gold strikes, valleys like the Madison and others nearby became the “popular feeding grounds for the budding cattle-men” (Yeckel 1969). The abundance of free mountain and valley grasses in this region, combined with high demand and soaring prices for hay and livestock, helped drive ex-farmers and stockman to abandon any plans of working placer mines and return to a familiar occupation. Once farmers and stockmen in the gold camps heard of the promise of fresh pastures and an ever-increasing demand for food, ranching and farming became an intrinsic characteristic of the southwest region of Montana (Yeckel 1969).

Although permanent Euro-American settlement was largely limited prior to 1870, early arrivals to the area began to increasingly make seasonal use of valley pastures and uplands (Wyckoff and Hansen 1991). Early settlers such as William Ennis and Andrew Odell, both disenchanted miners, moved to the northern part of the Madison Valley’s river lands and set to work cutting and stacking the native grasses for hay, to be sold at surrounding mining camps, for what amounted to a lucrative price at the time (Yeckel 1969). These men realized that the booming mining camps to the southwest needed fresh food, and that valleys such as the Gallatin and Madison could become productive agricultural areas. Soon after, irrigation ditches began to be seen crossing across these mountain valley floors, increasing the arable land in the valley bottoms (Jenks 2007).
These early Madison Valley settlers chose their land carefully, making sure that they had relatively easy access to their farms as well as a constant supply of water (Van West 1986). Thus, many of the earliest homesteaders settled along river bottomlands and along several creek bottoms in the northern part of the valley (Van West 1986; Yeckel 1969). The area was chosen by the settlers not only due to the abundance of water in the valley bottom, but also due to its close proximity to Virginia City and the road to Bozeman which passed along the northern edge of the Madison Valley (Yeckel 1969).

Cattle and dairy operations had an immense early economic impact to the region. Some of the earliest cattle operations focused their attention on dairy cows. These cows were not brought in for meat, as they possessed something even more profitable at the time: milk. Early settlers and miners found the surrounding hills and waterways were still bountiful with game, supplying them with enough meat to stock local butcher shops. What these early settlers and miners sought were commodities such as milk, cheese, and butter. Although the dairy market in the Madison Valley flourished at first, the market eventually leveled off as the demands of those in the area were met; thus, many dairy farmers switched back to the practice of raising the beef cow (Yeckel 1969).

It is important to note, however, that although the need for meat, dairy, and hide in the growing mining camps and surrounding communities played the largest role in spurring on cattle ranching production in these valleys, several instances of cattle brought to western Montana before the discovery of precious metals in the area have been identified. Historians have pointed out that small-time cattle operations existed in Montana as early as 1833, likely brought in by fur traders such as Charles Larpenteur (Brown 1975), or other early figures, such as such as Father DeSmet, who brought cattle to the Bitterroot Valley in 1846. In 1849 Richard Grant, a former
superintendent of Hudson Bay Company trading posts, also brought cattle from Salt Lake City to graze in southwestern Montana (Brown 1975).

With the close of the American Civil War in 1865, Texas promptly emerged as a ready marketplace to buy cheap cattle, kicking off some of the first major Texas cattle drives across the country. Due to the growing demand for cattle across the country, a bill was introduced to the United States legislature in 1864 regulating marks and brands for livestock, with the act becoming law on Jan 31, 1865 (Stuart and Phillips 1925).

One of the first herd of Texas cattle to enter Montana were brought in by Nelson Story, a Bozeman resident, in the spring of 1866. Story, a prominent figure in Gallatin county and surrounding areas, had made his fortune by mining in Alder Gulch. At 28 years of age, Story took some thirty thousand dollars in gold dust to New York City, where he traded the gold for forty thousand dollars in greenback currency. Story took these funds to Texas, where he purchased six hundred head of longhorn cattle in Dallas, Texas, and hired cowboys to help drive them north. The party and cattle arrived in Gallatin County in December of that year, and made Story something of a legend (Jenks 2007; Stuart and Phillips 1925). Though these initial cattle drives to Montana did bring cattle to the southwestern valleys, herds in this area rarely reached the large sizes of those in the eastern plains of the state, where much of these cattle were brought due to the large open grasslands (Yeckel 1969).

Although the cattle industry in Montana steadily grew, it was not without its hardships. During the harsh winter of 1886 to 1887, a combination of extreme cold and heavy snows brought the death of nearly 60 percent of Montana’s total cattle population, some 362,000 head. Among the ranchers in Gallatin Valley, one of the hardest hit was Nelson Story, whose estimated loss was between 66 to 75 percent or more of his stock. This major hit lead Story to divest his
cattle stock, and during the next season sold approximately 13,000 head of cattle in what was then one of the largest transactions of livestock in western history (Bates 1985; Jenks 2007).

Fortunately for the area, in 1889, Montana graduated from territory status to statehood, causing yet another wave of migration and settlement into the area by the end of the nineteenth century (Jenks 2007). In Gallatin and Madison counties this increase in population resulted in most of the valley acreage coming under private control by 1890s, while the mountains and benchlands remained under public domain. Although this was public land, the Federal Government did little to manage these parcels (Williams 2005; Wyckoff and Hansen 1991). Changing global markets also affected the area's livestock, culminating in a shifting mix between cattle and sheep productions, depending on the prices and demand. Overall demand for livestock continued to rise in the region which in turn placed an ever-increasing need on sources of available forage, putting a strain on the already impacted environment.

The 1890s was the first decade that notable signs of overuse of the land began to be clearly recognized. With the shift from public to private land ownership, and the dramatic decline in available open range habitat, accompanied by an ever-increasing need for forage, overgrazing on valley bottoms and some private bench lands occurred (Wyckoff and Hansen 1991). To maintain their herds despite the overgrazing in these areas, ranchers were compelled to drive their animals onto these public lands land during the summer months. Yet, prior to the turn of the century these allotments had yet to have any grazing limitations set, causing an overconsumption of forage in these areas (Wyckoff and Hansen 1991).

1900s-1960s

By 1906, several significant changes had occurred in the region which once again changed its economic structure. First the U.S. Forest Service (USFS), which was established a year prior
in 1905, was beginning to have an impact. The USFS, seeking to combat the overgrazing of range lands, began to manage grazing rights on their parcels. Although the Forest Service’s policies still strongly favored increased use of public rangelands in these early years, new leadership and goals began to change these practices. In 1919, due to a severe drought, regulations on public lands shifted towards a stronger conservation standpoint. Still, according to Wyckoff and Hansen (1991), many grazing permits were still being liberally handed out up until the early 1930s. Second, the rise in grain prices, and the lack of available lands in other parts of the West, encouraged many settlers in the northern and central parts of the valley to transition from ranching to dryland farming.

By the 1930s, due to poor land management practices, the region was once again ripe for disaster. Prior to 1934, southwest Montana had seen a continuous increase in its livestock population for more than a half century. This continued increase in livestock populations was in part due to an ever-expanding American economy, as well as policies that encouraged ranchers to maximize their herd size and to use public lands and resources, whenever possible. This was backed by the lax regulations of an accommodating U.S. Forest Service (Wyckoff and Hansen 1991).

By 1934, a turning point in the region’s grazing and agricultural practices was reached. This period marked the worst drought known in the region’s history, part of a much larger drought in the central and western United States. Madison Valley and the surrounding areas were in a state of emergency as the ranges were destroyed from decades of overgrazing. Along with range destruction in the region, dropping livestock prices forced many ranchers in the area to liquidate their herds at unreasonably low costs. For those who remained in the valley, emergency programs were established under the New Deal, which provided some government relief (Jenks
2007; Wyckoff and Hansen 1991). One initiative, driven by the New Deal, was the Montana Extension Services; a project conducted by a cooperative made up of farmers and lawmakers. This cooperative used local farms in the Gallatin and Madison areas as testing grounds for new agricultural initiatives, such as soil conservation strategies (Jenks 2007).

Following the drought of 1934, Madison Valley once again underwent significant changes to its economy, demographic, and environmental policies. Population decreased by 20 percent between the years of 1934 and 1960, though valley acreage remained firmly in private ownership.

In 1934, a new act known as the Taylor Grazing Act was passed, which called for stricter grazing policies on public lands, and eventually contributed to improving range conditions (Wyckoff and Hansen 1991). This act ended unregulated grazing on national forests and remaining General Land Office (GLO) administered lands. This act also set aside some 80 million acres of grazing districts and established the U.S Grazing Service. In 1946, the U.S. Grazing Service and the GLO were combined to form the Bureau of Land Management (Williams 2005).

Due to the greater restrictions placed upon U.S. Forest Service land, as a result of the Taylor Grazing Act, in addition to generally favorable precipitation during these years, the region saw overall range improvement post-1934. These shifts in government policy encouraged shorter grazing seasons, and approved fewer numbers of livestock to graze on allotments (Wyckoff and Hansen 1991).

Though overgrazing was still a common occurrence, range conditions on private land did gradually improve during this time. As ranchers recovered from their hard-learned lessons of poor grazing practices, they began to more realistically look at the carrying capacity for the area.
This led to a shift away from overall herd size to focusing on the size and health of individual animals. Conservation programs funded through New Deal policies also had positive impacts to the area promoting more reliable water resource access, fence building, and reseeding of overgrazed pastures, all of which aided in the rehabilitation of the area (Wyckoff and Hansen 1991).

By the 1960s Madison Valley had shifted once again, this time in favor of increased land management. This shift in the public's regard for land management came about during a time when the attitudes of many U.S. citizens across the country were beginning to transition towards an increase in environmental protection, as well as placing a higher value on local resources and commodities.

During this time, the U.S. Forest Service once again shortened the grazing seasons on public lands, as well as the herd size allowed on the allotments. This gradual shift in Forest Service policy from favoring local grazing interests to pushing for more recreation and preservation on their lands represents a shift in public thinking nationally (Wyckoff and Hansen 1991).

After World War II, broader national trends began to emphasize the value of environmental and cultural resources as new construction and infrastructure projects were rapidly expanding across the U.S. In the Madison Valley, these new projects could be seen through the national highway improvement projects as well as the call for increased preservation of public lands which is reflected in the creation of new parks and wildlife refuges in the region, such as MBJ in 1966. This helped to better preserve and protect the areas natural and cultural resources from destruction and advocated for more recreational use of the land.
It is evident from the historic record of southwestern Montana that livestock production played a critical role in the area. Cattle and sheep production in the Madison and Gallatin Valleys did not just drive their economy but also helped influence the public on the value of their natural and cultural resources in the area. With the economic hardships during the 1930s caused by drought and overgrazing, as well as the building of new infrastructure post-WWII, residents in the area quickly realized the importance of preserving vulnerable resources, leading to the creation of parks and refuges such as MBJ.

Since the 1860s the Madison Valley has been continually shaped by regional, national, and global economic, political, and cultural changes. From new transportation technologies opening up the isolated valleys of southwestern Montana in the early 1900s, to the increase in recreational activities and preservation in the modern era from outside influences, the landscape of the Madison Valley has continued to change to better suit the needs of its inhabitants.

The next section will consider the previous archaeological investigations at MBJ and discuss what contributions previous archaeologists have made regarding the site.

3.4 Previous Archaeological Investigations

Officially acquired by the state in 1960, established as a state park in 1966, and officially placed on the National Register of Historic Places (NRHP) in 1970, MBJ became the first bison kill site in North America to be set aside for public use. Before acquisition of the site, MBJ was heavily looted by “collectors” and could not be properly studied until it became state land (Davis and Brownell 2014). Due to this early interest, the site has seen much destruction of its cultural materials, and countless archaeological artifacts were lost without any proper documentation or provenience provided by artifact collectors. An archaeologist at the site described the primary
bone deposit as “a chaos of pits and trenches dug by relic hunters” (Taylor 1971). This looting unfortunately has left archaeologists with an incomplete prehistory of the site.

Although MBJ has had somewhat different interpretations over its decades of study, archaeologists have come to a consensus that the site contains five attributes that are shared with other bison jump sites. These features are the grazing and gathering area, drive lines (serving to direct the buffalo herd), the jump-off point (below which the buffalo died on impact or severely maimed), the initial butchering area, and the occupation site and final butchering area (Taylor 1971).

The first known archaeological investigations at MBJ are uncertain, but two early archaeologists or collectors are possible contenders. The first is Charles A. Kinsey, an amateur archaeologist from Belgrade, MT. Kinsey worked on and off at the site over several years during the 1930s. His work primarily focused on the main bone deposit at the site, where he claimed to have found a large variety of points and tools. Malouf suggested that some of these points could be typologically dated as far back as 4,000 years (Malouf and Conner 1962). However, it is speculated that the site had seen previous archeological work prior to Kinsey’s investigations. Those previous works are not documented by any known source, and would have disturbed features and artifacts before Kinsey’s collections.

The second archeologist is Dr. Melville Sayre of the Montana School of Mines, who was working at MBJ around the same time as Kinsey, although little information can be found regarding his early excavations during the 1930s. A newspaper article from The Mountaineer dated January 17, 1935 discusses his findings from the site, as well as noting that Dr. Sayre presented his findings to the American Association for the Advancement of Sciences in
Pittsburgh, Pennsylvania. Sayre is predominantly known for conducting the first excavations at Pictograph Cave in Montana (N.A. 1935).

Other prominent archaeologists from this time investigated the site during the late 1930s into the early 1940s. Roy Austin began excavations at MBJ sometime in the mid-1930s, though the exact date is uncertain. Taylor (1971; based on Lewis’s notes from 1947) stated that Austin seemed familiar with the site when he directed a field crew from the Carnegie Institute in 1939. Austin and his team found what he referred to as “Yuma-like” projectile points at a depth of 6.5-7.5 ft.

H.P. Lewis and F.F. Sparks continued excavations into the 1940s where they excavated a six-foot deep pit in the main bone deposit. Both Lewis and Sparks noted the presence of these “Yuma-like” projectile points, and they were the first to note the presence of hearths eroding out of gully walls (Bachman 2016; Taylor 1971).

Lewis “Lew” Napton spent much of his career investigating MBJ, researching and reporting on the site for over 20 years (Bachman 2016). Napton, in 1944, began focusing his attention on the stone circles and drive lines located on the drive plateau on top of the jump (Taylor 1971). Like past researchers, Napton also focused heavily on the primary bone deposit. Between 1950 and 1958, Napton again conducted several surveys, mapped drive lines and tipi rings, and conducted testing at the jump and bone deposit. Napton believed that uncontrolled looting and digging at the site had severely damaged the integrity of the primary bone deposit.

In 1958 Dr. Carling Malouf led an archeological field school from University of Montana to MBJ, excavating 10 sampling trenches (Malouf and Connor 1962). Malouf placed a number of trenches and test pits in the primary bone deposit. Here they found several layers of bone deposit separated by sterile sections. Other important discoveries by Dr. Malouf include noting the
presence of two “unusually large rock piles.” These were thought of by Malouf to be eagle catching pits or old forts, though they had previously been severely looted. Malouf was also the first to document several score of tipi rings or stone circles located one-half mile from the jump. Dr. Malouf is responsible for procuring one of the three known assemblages from MBJ that display the wide variety of artifacts present at the state park. These are now housed at the Museum of the Rockies (Malouf and Connor 1962).

In the summer of 1962, Dr. Wesley R. Hurt, Director of the University of South Dakota Museum, published “A Survey of Buffalo Jumps in the Northern Plains,” at the direction of the National Parks Service. Hurt visited all the major buffalo jumps in the geographical area and reported the MBJ as being of “exceptional value” and the one best located for development as an important attraction. Little else is known of Hurt’s time at MBJ and it appears he based most of his opinions and findings on Carling Malouf’s earlier work a few years prior (Three Forks Area Historical Society 1983).

In 1968, Dee Taylor began excavations at MBJ, and as a result produced another known artifact assemblage from the site. Taylor broke his assemblage into three classes: chipped stone, abraded or ground stone, and ceramics. This is a common practice among archaeologists in order to analyze an assemblage in a more systematic way (Bachman 2016).

It was not until 1996 that any type of inscription was recorded. This was the result of a survey conducted at MBJ led by John and Mavis Greer. Their objective at the site was to search the sandstone cliffs and escarpments around the jump for potential signs of Native American rock art. They were the first to note the presence of what they called an inverted “X” petroglyph, likely depicting a tipi. This “X” was located directly below the rim of the jump. The Greer’s did
note that they found the inscription to be more historic in origin; no other information or explanation was given (Greer and Greer 1996).

In May and June of 2014, the University of Montana conducted the most extensive archeological survey, inventory, and mapping of the 640-acre park to date. Though this site has seen a number of archaeological inventories that investigated the parks prehistory, only the 2014 survey by the University of Montana describes in detail the presence of any historic features at the site, including a historic dump and the first documentation of the historic inscriptions found at the site. This survey was the first investigation that sought, from its inception, to include and account for the more recent historical use of the site.

As mentioned in Chapter 2, the survey was conducted to identify the adverse effects on cultural resources that might result if the land was returned to cattle grazing (Bachman 2016). This was the first investigation holistically examining all cultural resources at the site, and made attempts to search for rock art as well as historic inscriptions. In total, nearly eighty historic and modern inscriptions were documented and recorded at four distinct areas within the park.

It is clear from the previous archaeological investigations at MBJ that prehistoric artifacts and features have taken precedent in re-telling the past. Not until recent years has the presence of historic inscriptions been noted, and their presence and current condition should cause alarm. These inscriptions are fragile resources that need immediate preservation and documentation before the soft sandstone cliffs erode or collapse. For archaeologists to tell the full story of MBJ, it is imperative to consider the site as a whole, not just a single period.

There are several factors as to why these inscriptions at the site had not been previously mentioned prior to the surveys conducted by the Greer’s and the University of Montana. First, both Carling Malouf and Lew Napton were known as prominent rock art researchers in
Montana. This could account for some biases on their part, as many early rock art researchers found historic inscriptions to be nothing more than graffiti, and thus seen as something that could be ignored because it would not contribute to our understanding of the past. This is despite the fact that Malouf was a pioneer in historic archaeology in Montana; in this case, he could not see the value.

More broadly, many archaeologists active in the 1960s felt that the recording of rock art, including Native American rock art, failed to stand up to the test of scientific worth, and that no scientific information could be extracted from it (Whitley 2001). Esthetically, they were drawn to prehistoric artifacts and utilitarian features, and they had no compelling overarching framework to place overall rock art or historic inscriptions, and therefore they were unworthy of study. This bias in recording reflects the attitudes and archeological theories of the time, such as Binford’s New Archeology, also known as processualism. Common processual archeological dismissal of rock art was based on that the rock art, at that time, could not be dated, and that symbolism and cognition were epiphenomenal and therefore were of little importance to the materialist paradigm of the time (Whitley 2014).

Second, many of the previous archeological investigations focused primarily on the bone deposit bed and excavations around the site. It could be that many of these researchers simply did not have enough funding within their budgets to adequately record the inscriptions in the area or they were not in the scope of work outlined by previous projects. John and Mavis Greer (1998) state that “different interests between recorders and available time seem to be the biggest influence on recording methods used… The best recording method for any project must still depend on time available; site contents, location and access; and available budget.”
Last, the majority of inscriptions found within MBJ appear to date from the mid 1910s to 1940s, though some may be older. Even though the NRHP regulation fifty-year rule was not yet penned during some of the early archaeological work at MBJ, these inscriptions may have felt intuitively too recent to warrant serious scholarly work by these archaeologists.

While the previous chapters focused primarily on historic inscriptions in general, and the history and environment of MBJ and the surrounding area, the following chapters focus in on the inscriptions found within the park itself. These following chapters will help to demonstrate how these inscriptions within the park are important cultural resources that contribute to the overall cultural significance of MBJ, as well as how these cultural resources can aid researchers in helping to understand the historic landscape of the area.
CHAPTER 4 - RESEARCH METHODS

4.1 Chapter Overview

This chapter presents and evaluates the field methodology and techniques used in this thesis to record and research the inscriptions found on the MBJ state park’s sandstone escarpments. Documenting the techniques used in the field allows the basis of this study to be evaluated.

Though many studies have been conducted on indigenous rock art, and a significant, although smaller number of studies on historic inscriptions, insufficient recording in the past has limited comparisons, understanding, and long-term documentation of these non-renewable and fragile resources. Recording methods are constantly debated, and there is still no standardized recording technique laid out to document inscriptions (Greer and Greer 1998). Some recording methods practiced a decade ago are now considered detrimental, but basic methods such as field forms, notes, photography, and location with GPS points are common for most recorded sites, leaving the details of methods up to the individual recorder themselves (Greer and Greer 1998).

4.2 Recording Strategies at MBJ

This research project recorded inscriptions in two separate sessions. The first session was conducted between May 17 and June 1 of 2014 during an archeological inventory of the 640 acres of MBJ State Park. The archaeological inventory was managed by Douglas MacDonald, Ph.D., and Sara Scott, Ph.D., under the cooperative agreement between the University of Montana (UM) Department of Anthropology and the Montana Fish, Wildlife, and Parks. The project was intended to document previously undiscovered features and artifacts at the site, as well as to reexamine all features and artifacts that had been recorded by prior field work. The 2014 session was the first encompassing systematic survey known to have occurred at the park.
(Bachman 2016). The inventory was commissioned for resource management purposes, specifically to understand the potential impact to the site’s archeological resources if cattle grazing was reintroduced within the park boundaries.

It was during this first inventory that the historic inscriptions at MBJ were officially documented for the first time. The inventory results found three separate locations within the park where historic inscriptions were found, and one area consisting of modern inscriptions.

Several graduate students from the 2014 UM Archeological Inventory recorded the four different inscription sites, but due to the large scope of the project and the number of inscriptions, a more detailed inventory of the inscriptions was planned for a later date. During the 2014 recording of inscriptions, most of the techniques relied primarily on digital photographs of specific inscriptions, overall photographs of wall panels, and broad overview shots of the sandstone escarpments that the inscriptions are carved on.

The following year in April and May of 2015, Brandon Bachman, M.A. and I returned to MBJ to record the inscriptions in greater detail. Bachman was part of the 2014 archeological inventory of the site and aided in relocating the four areas of inscriptions. For each inscription, several digital photographs were taken from different angles to achieve the best lighting conditions, a UTM and elevation were taken for every inscription with a GPS unit, and a sketch and basic description were made for each. This was completed for all the inscriptions at the site, except for the modern inscription area, as we were unable to relocate the specific location and thus relied on the previous year’s recordings. All photographs in this thesis are from one of these two recording sessions. All inscriptions recorded are within the park, but this likely an artificial limit created by land ownership patterns and the limits of the study, because it is likely that more
inscriptions exist past the park boundaries located on private land surrounding the park (Montana Cadastral 2018).

4.3 Historic Background Research

Along with field observations, a thorough historical background research was conducted in order to understand the time period and the historical context for this specific location in which these inscriptions were created. The background research was compiled from several local county histories including both Madison and Gallatin Counties. Along with these county histories, additional historic articles including newspaper clippings and other documents were provided by the Montana State Historical Society (MSHS). MSHS also provided an important document on microfilm that catalogs all cattle brands registered in the state of Montana. These livestock brands have also been digitized and can be found online through the Montana Memory Project (Montana Memory Project 2019).

From this historic research, several inscriptions at the park were able to be attributed to individuals from the area. A few brands were found in the livestock brand index, but several symbols could not be matched. This could be due to the vast number of brands contained in the index, or that earlier entries into the index are hand written and hard to decipher. Further research into specific brand identification is warranted at MBJ.
CHAPTER 5. HISTORIC INSCRIPTIONS AT MBJ

5.1 Chapter Overview

While previous chapters have looked at defining or discussing historic inscriptions in a broad sense across North America, this section specifically addresses the inscriptions associated with MBJ. The following section discusses the typology, content, and distribution of inscriptions found around the park. Based on the assumption that archaeological information provides clues to the underlying human behavior, and, with appropriate cultural understandings, potentially the intentions of that behavior, these three categories of information can help potentially explain who might have left these markings, what the inscriber was trying to convey at that spot, and why, if any reason, these inscriptions were placed at specific locations. In short, these physical characteristics help to better understand why these inscriptions might have been left at these locales.

This chapter looks at and includes individual inscriptions left at the site, especially those inscriptions from which specific historical information could be ascertained. Many of these specific inscriptions pertain to names of people that were known to be associated with the site at some point in its history, while others, such as the livestock brands, can potentially tell us which specific ranching operations might have utilized the area around the time.

5.2 Typology, Content, and Distribution

Though MBJ is rich in prehistoric features and artifacts, there are also a number of historic and modern inscriptions that have been documented across the site. Although the site contains no identified Native American rock art, the historic inscriptions here have been mostly overlooked. Some of the engravings at MBJ were likely made by passersbys, campers, or visitors to the prehistoric archaeological site who wanted to leave some trace of themselves behind—that is,
behavior connected to archaeological tourism—while others may be unrelated to the remains of
Native American activities, but instead connected to other historical trajectories of the area,
including potential military personnel passing through, information about who the prior
landowners were, who herded livestock in the area, and other individuals who have impacted
MBJ region in some regard.

**Typology**

Historic inscriptions often come in a variety of different types and styles, depending on the
tools available in their production. A typology of inscription techniques can include those made
by scratching, tar, graphite, paint, and burning. After the site inventory of MBJ, it is clear that all
inscriptions still present at the site were produced by some act of scratching or etching with a
hard, sharp object, likely a metal nail, knife, or similar tool. These metal tools were used to carve
the known inscriptions into the soft sandstone cliffs and other formations, which create the
topography of the area. Though cases vary, scratched or carved inscriptions often appear to be
more spontaneous in nature, given that it requires less premeditation on the inscribers' part, who
likely had easy access to scratching implements such as knives or nails, as opposed to paints, tar,
etc. It was noted, however, that some carved inscriptions at the site appeared to be of higher
quality, taking more time and care to carve the inscription into the sandstone surface. This
contrasts with most other inscriptions at MBJ, which seem to be more impromptu in nature.

**Distribution**

Historic inscriptions, all well over fifty years old, have been located at three separate areas
around the state park; one additional area contains “modern” inscriptions. I use “modern” in a
comparative sense only—those inscriptions, described below, likely are from the late 1960s or
1970s, and post-date the founding of the archaeological park. Thus, these inscriptions, if not yet
50 years old, are only relatively modern, and will fall in the standard “historic” category in preservation in a decade or so.

The spatial context of the historic inscriptions help to highlight patterns of use at the site before the park’s founding. The distribution of the inscriptions at MBJ reveal that two of the locations are isolated areas, out of sight and in hard to reach places. These would likely represent inscriptions meant to be more private in nature, and likely not intended to draw attention from those passing by.

![Figure 5](image.png)

Figure 5. Historic inscription locations within Madison Buffalo Jump. From: Bachman 2016.

However, the highest density of inscriptions, Inscription Area 3, is found in a highly visible area, along a sandstone escarpment overlooking the bench lands below. These inscriptions are more public in nature, making statements to those who passed by. These inscriptions extend for nearly a quarter mile along the escarpment and likely continue onto private land surrounding MBJ.

The area of modern inscriptions is located just south of the jump in an isolated wooded area of the canyon. These inscriptions, found in the area dubbed the “Mushroom Shelter” by the first UM survey team, were likely left by visitors participating in recreational drug use. They
may have endeavoring to experience something like a “vision quest,” speculatively, the Park’s connection with ancient Native American activities might have precipitated its use.

These inscriptions are presumed to be of a more modern origin due to their context, location, and design. During the first survey, a rudimentary lean-to type of shelter made up of branches and local vegetation was located near the cliff face where these inscriptions were found. As stated previously, these inscriptions mostly include depictions of mushrooms, names, initials, and possible nicknames such as “coyote.” The location is important; found in a very secluded section and located in a canyon bottom, it is a place where people could camp and be relatively unseen by park personnel or other visitors. Their designs, especially those of the mushrooms, look to be of a post-1960 style. The fresh look of the engravings, and the possible counterculture symbolism of mushrooms, also bears consideration. Though it could be due to their sheltered location, the inscriptions found at this inferred modern area do not show as much erosion due to weathering as inscriptions located in other sections of the park.

The first of the three areas containing historic inscriptions is in a canyon north of the jump in a band of soft white sandstone, and contains one name and two sets of possible initials, with associated dates. The area is very secluded and is rather difficult to access. It appears these inscriptions were not intended to broadcast identity to later audiences but more so for the individual inscriber to leave their mark, documenting the time they spent at the site, physically placing themselves upon the landscape.

The second inscription area is located about a quarter mile away from the area of modern inscriptions and southwest of historic inscription Area 1, along the rim of the jump itself. This area is particularly difficult to access due to the steep scree embankments at the bottom of the cliff face. Though placed in one of the most viewed areas at the site (the cliff face), the
inscription is not well defined and cannot be easily seen from below the cliff. This inscription once again appears to be that of a last name, and placed there by the inscriber to likely commemorate his or her time at the site.

The third and most abundant area of historic inscriptions is located west of the jump, just south of the park entrance. Here a sandstone escarpment runs for nearly half a mile, north to south, near the southwestern corner of the park. The historic inscriptions in this location are predominantly found on boulders and overhangs along the face of the ridge. These overhanging rock faces and cliffs face west, overlooking the valley bottomlands where cattle and other livestock would have likely grazed. Due to the high number of inscriptions left at this location, it seems that these were left for others to see. These were likely left to either record an event or to let others know who was there.

Content

The content of historic inscriptions can come in a variety of different forms, depending on the events that took place at the site. Often, historic inscriptions consist of initials, names, dates and symbols (Urbaniak 2014). Some inscriptions contain references to hometowns, graduations or marriage dates, statements, poems, and drawings. At MBJ, the overwhelming majority of inscriptions are initials, names, dates, and symbols, including livestock brands; two unusual inscriptions that may be related to military service. The content found at the modern inscription site include both names and initials as well as some crudely rendered drawings, such as the previously mentioned mushroom depictions.

Inscription Area 1 has both the names and dates of people that once visited and/or worked at the site, unlike Area 2 which consists of what is likely a single last name or possibly some other indecipherable word. But, the clear majority of the names and dates are located at
inscription Area 3, along the large sandstone escarpment. These appear to be related to ranching or a communal gathering place, as is evidenced by the livestock brands associated with some of the names and initials and the abundance of initials found at the location. It appears that the main motivation behind etching many of the inscriptions at the site was to confirm the existence of the writer, a way to simply state “I was here” (Urbaniak 2014).

5.3 Interpretation of Inscriptions at MBJ

Modern Inscription Area

South of the jump, in a wooded area of the canyon, a series of modern inscriptions can be clearly seen as carvings in the walls. NPS regulations for implementing the NHPA makes 50 years of antiquity a normal threshold to elevate inscriptions and other cultural features to a historical status regarding their potential significance. Though no date has been found in conjunction with these inscriptions, it is assumed that they are modern, potentially less than thirty years old and were likely made by recent visitors to the site. In this 50 m stretch of canyon wall two distinct locations of inscriptions can be found. The “Mushroom Shelter” area includes three depictions of mushrooms as well as several inscriptions of initials or names. The inscriptions at the first site mostly include names or initials such as “EVE” and “AJ” while the rest of the inscriptions are too worn to accurately decipher. The second area of modern inscriptions lies several meters away along the same canyon wall. Here inscriptions such as “D Ross,” “JMG,” and “COYOTE” can be found.
Historic Inscription Area 1

In a band of soft white sandstone, the inscription “C.A. KINSEY 4. 26. 1936” was found carved into the worn rock. As previously stated in Chapter 3, Charles Albert Kinsey (b.1874-d.1949), of Belgrade, MT., is best known for his early excavations at MBJ. He conducted these excavations over several years during the 1930s and early 1940s, and was a well-known photographer in the Belgrade/Bozeman area (Mulvaney 2009).
About 15m away from the “Kinsey” inscription, two sets of initials and a date are carved into the same sandstone band: “LT CK 84.” It is speculated that this set of initials could potentially belong to a lieutenant that passed through the area in the late 1800s, but no data has been found identifying to whom these initials belong, or what role or connection this person may have had at MBJ, if any.
Historic Inscription Area 2

The second historic inscription area is located approximately a quarter mile away from the area of modern inscriptions and southwest of historic inscription Area 1, along the rim of the jump. Only one inscription has been found at this location, and over the years has been highly worn and eroded. Earlier discussions in 1996 by John and Mavis Greer interpreted the inscription as an off-centered X with horizontal parallel lines beneath. They concluded that the inscription depicted a “Tipi,” but that it was more likely a historic inscription and not made by Native Americans (Greer 1996). The UM fieldwork identified the inscription as a possible name. The inscription appeared to depict an undecipherable name beginning with the letters G and A (the A previously thought to be the Tipi), along with at least four other letters too heavily eroded to definitively identify.

Figure 10. Historic inscription located on the face of the jump, note the second character from the left loosely resembles a tipi.

Historic Inscription Area 3

The third and most abundant area of historic inscriptions is located west of the jump, just south of the park entrance. Inscriptions in this location are predominantly found in rock shelters
and overhangs, and placed upon boulders along the face of the ridge. Many of the inscriptions in this location depict initials, livestock brands, symbols, and dates. It is likely that ranchers, herders, and residents from surrounding areas used these rock shelters over the past century to weather the elements or as a communal gathering area. This area also overlooks the benchlands below, where cattle and other livestock would have likely grazed, making this an ideal spot to keep watch over livestock herds. Christensen et al. (2013) refers to inscriptions of this nature as “cowboy glyphs.” These inscriptions are usually made up of initials, dates, and directions of travel, along with livestock brands. These inscriptions occur along routes of travel, near water sources, and in rock shelters where they camped or cached supplies.

While the majority of inscriptions found at this location consist of two letter initials, some have three letters making it more likely to potentially connect them back to an individual that once lived in the area. Unfortunately, with livestock brands, many consist of just two initials (i.e. GM), making it difficult to tell if they are initials or brands. Brands with more stylistic features such as a “halfmoon” or “+,” are more likely to be properly identified.

Several of the first three lettered initials identified belonged to two individuals who are connected to the land. These initials “C.A.D.” and “R.E.D.” located near the southern end of inscription Area 3 were likely the initials of Carey Allan Darlinton (III) and Ralph Edwin Darlinton; the two youngest of four brothers associated with the land. The county history provided much detail on this family, as they were prominent figures in the local community. Another inscription between the two initials gives a date, placing them after 1900, presumably in the earlier portion of the century, but unfortunately the date is too worn to make out the last two numerals.
The Darlington family first came west when Carey Allen Darlington Sr. and his son Carey Allen Darlington Jr. left Marion, Ohio in 1864 at the ages of 64 and 16 respectively. They left on a wagon train accompanied by a military escort that was leaving for Virginia City, arriving in October of that year. At the time, there were some 2,500 people in Virginia City. Due to the futility of staking out a claim, the Darlinton family moved around to several other gold strikes, including Last Chance Gulch outside Helena. As mining did not “pan” out for either of the two
men, they took on several different jobs, such as hauling freight between Bozeman and Dillon as well as operating a stamp mill for crushing ore (Three Forks Area Historical Society 1983).

In 1878, Carey Darlinton Jr. married Mary Frances Patterson and had four sons: George, Harry, Carey (III), and Ralph. They moved to a small log cabin on a ranch in the lower Madison in May of 1882 (Three Forks Area Historical Society 1983). A GLO search of property records shows that Carey A. Darlinton Jr. eventually purchased property near MBJ in 1892, and his sons George and Harry purchased both the north and south sections of MBJ in 1919 and 1920 (Bureau of Land Management 2019).

Figure 13. Photo of the Darlinton family. From: Three Forks Area Historical Society 1983.

Carey Darlinton Jr. passed away in 1906, and in an attempt to keep the ranch, both George and Harry began buying and selling cattle for Cunningham and Biering, one of the largest cattle operations in Gallatin County at the time (Yeckel 1969). George eventually went on to serve as County Commissioner for Gallatin County and later as its representative in the House in Helena (Three Forks Area Historical Society 1983).
Carey Darlinton III was born on the lower Madison in July 1890, and after serving in World War I, he returned home, where he and his brother Ralph took over the ranch on the Lower Madison, which has been family operated to the present. Carey Darlinton was also very active in both the local Masonic Lodge and American Legion (Three Forks Area Historical Society 1983).

In addition to the inscriptions written by the Darlintons, a third and fourth inscription, both similar in nature and both depicting the letters “F.J.S.” were found near the same area as the previous two inscriptions. These two sets of initials were likely carved by Francis Joseph Sloan, son of Joseph Bernard Sloan, a prominent rancher who settled in the Lower Madison Valley in 1890. Francis Sloan worked on his father’s ranch known as the “Johnny Ranch,” and served as a local community bus driver in the early 1920s (Three Forks Area Historical Society 1983).

Figure 14. Carved circular depression with F.J.S. placed in the center.
One other set of initials, “V.P.S.,” was found at some distance away from the first three sets of initials. These likely have a connection to Virgil P. Smith. Though not much could be found on Smith, the Heritage Headwaters County History states that he was born on March 21st, 1921 in Butte, MT. He attended school in Butte, and in 1941 joined the army to fight in the European Theatre. After the war, he re-enlisted in 1948 and moved throughout the country and Europe, living at several different army posts. After retiring from the army in 1965, Smith worked for Burns Detective Agency, which provided security for the Anaconda Mining Company. In 1972 Smith and his wife moved to Three Forks, and died in 1973.
As stated previously, the vast majority of inscriptions along this sandstone escarpment consist of two lettered initials such as “JD” or “GM” for example. Although these could be livestock brands, it is more likely they belong to local residents and families who likely had some connection to the land, be it through ranching or farming, or who once used these rock shelters and cliffs as shelter from the weather or as a sort of communal gathering place to rest while livestock grazed.
In contrast to personal inscriptions and initials, livestock brands have been meticulously recorded since the late nineteenth century, in accordance with state law. These can be searched in a database, as opposed to matching initials from a county history. The Montana State Historical Society in Helena has a repository of Montana livestock brands in a microfilm collection available to the public. These images can also be found on the Montana Memory Project (MMP) website. By searching the microfilm and the MMP website, several livestock brands were found that either match or closely resemble inscriptions found at MBJ.

The first brand that was positively identified was the “UK+” brand. The brand was first acquired by Marcus L. Crowley on September 18, 1928. Marcus was born November 6, 1894, and was the eldest son of John Crowley, another prominent figure in the early days of the rural community surrounding MBJ. Marcus attended several schools growing up, eventually dropping out to take up ranching full-time. In 1976, in celebration of the bicentennial founding of the United States, Marcus was chosen to speak on a Montana radio station about the homesteading
and cowboy days of the early 1900s in Montana. One of his stories was about a cattle drive from the Lower Madison homestead he lived on as a child to Manhattan, MT.

Figure 19. Cattle brand of Marcus Crowley.

Figure 20. Montana Livestock Brand Registration entry for the “UK+” brand. From: Montana Memory Project 2019.

No other brand was as clearly identified with a specific family ranch as “UK+,” primarily due to the fact that ownership had been transferred multiple times, or the records are vague or unreadable. In some instances, the carved inscriptions and the recorded brands have some slight stylized differences. This weakens the link to the recorded brands, but could be attributed to artistic ability or difficulty in carving into the sandstone.
This can be seen in the “R hanging D” brand. While similar in nature, the “D” is slightly skewed, this could be attributed to the formation of the rock, and where it was easiest to carve into the stone. This brand was used by several ranchers throughout Montana from as far north as Hill and Liberty Counties to as far west as Dawson and McCone. One entry in the official records states that C.W. Voger of Big Timber, in Sweet Grass County, came into possession of the brand on December 15, 1921.

Figure 21. The “R hanging D” cattle brand.

Figure 22. Montana Livestock Brand Registration entry for the “R hanging D” brand. Several entries were found for the brand. From: Montana Memory Project 2019.
Another possible livestock brand is the “M.” While this could be associated with a name, the inscription has no other letters or markings in its immediate vicinity and matches closely to a known livestock brand.

![Possible cattle brand “M.”](image)

Figure 23. Possible cattle brand “M.”

![Montana Livestock Brand Registration showing the “M” cattle brand.](image)

Figure 24. Montana Livestock Brand Registration showing the “M” cattle brand. From: Montana Memory Project 2019.

The possible brand “E8” was also located in this area, and much like the others, had several different owners and transfers. The brand symbol and the carving, though similar in nature, do not perfectly match stylistically, although this could be due to the difficulty had when carving the inscription. Though the brand has several owners throughout different counties, one of the more probable owners of this brand is Anna Neslund of Whitehall, MT. in Jefferson County, as Whitehall MT. is relatively close to MBJ. She acquired the brand on November 18, 1926.
Two brands found close together in this area are the “EW Halfmoon” and the “WW Halfmoon.” While these, like the other brands, may be initials from two people in the area these inscriptions also match known brands. The “EW Halfmoon” while found in several other counties is likely associated with Ed Walsh of Stillwater County. Walsh acquired the brand on May 7th 1931. The “WW Halfmoon” found directly below the “EW Halfmoon,” is likewise found in several counties including Blaine, Rosebud, and Fergus County. While all other brands
are located either in Gallatin County or in surrounding counties, this brand is found mostly in central to eastern Montana, some distance from MBJ.

Figure 27. Potential cattle brands “EW and WW Halfmoons.”

Figure 28. Montana Livestock Brand Registration entry for brand “EW Halfmoon.” From: Montana Memory Project 2019.

Figure 29. Montana Livestock Brand Registration entry for cattle brand “WW Halfmoon.” From: Montana Memory Project 2019.
A last symbol found at the site is that of “JEK.” While this symbol appears to have many similar designs to other livestock brands it could not be found in the Montana Livestock Brand database. It’s possible that this is just a stylized version of initials or that this brand was used in another state. Next to the inscription a “99” is carved and is likely referencing an early date.

![Figure 30. Possible livestock brand depicting “JEK 99.”](image)

Other inscriptions in the area that may relate to ranching in the area include more generic inscriptions such as arrow signs or scratches. These types of markings are common among historic inscriptions in North America. They are regularly made to provide direction, or may have been inscribed solely out of boredom and made to pass the time. One inscription found in this third area is the “USMC.” This abbreviation most often stands for the United States Marine Corp and likely points towards some military personnel that visited the area, likely around WWI or II. Accompanying this inscription is an “SH” found directly above it, as well as several arrows and scratching marks. This is likely the inscriber’s initials.
Figure 31. “SH” and “USMC” inscriptions, likely depicting the inscribers initials as well as their affiliation with the United States Marine Corps.

There are several inscriptions that were undecipherable and their exact nature could not be properly determined. These undecipherable inscriptions largely relate to two different factors. First, they were lightly carved or pecked into the sandstone and no great effort was put into creating them. Second, others are so severely weathered and eroded that they can no longer be accurately deciphered.

5.4 Discussion

As presented in this chapter, the clear majority of inscriptions at MBJ consist of initials, dates, symbols, and livestock brands. These cultural resources shed light on activities and events that continued to take place centuries after the site fell out of its original use as a buffalo jump. These aid in retelling events that took place during the last two centuries: from ranchers and field hands who worked and lived in the surrounding areas, to the first archaeological investigations occurring in the mid 1930s and 1940s.

MBJ’s soft tuffaceous sandstone provided a perfect medium for early settlers to readily engrave their mark upon the landscape. Although it may be easily carved into, this sandstone is
also prone to erosion, as evidenced in many of the documented inscriptions. Rain and moisture have caused the sandstone, siltstone, and conglomerate deposits to degrade, coating the cliff face and other escarpments at the site, creating clean white faces (Greer 1996). Earlier inscriptions by Native Americans and previous inhabitants may have once been present at MBJ, but a century's worth of erosion and weathering has caused them to fade or disappear. Rock shelters and cliff overhangs are beneficial in preserving inscriptions, but even these can suffer from erosion.

While many of the inscriptions at MBJ are severely weathered or cannot be assigned to a specific person or group, the information gained from relevant inscriptions strongly indicates the presence of early homesteading and ranching activities at the site and surrounding area. From dates found from the cattle brands and from dates found at the site, it appears inscriptions left at MBJ potentially started as early as the late nineteenth century, and increased during the 1920s to 1940s.

It is evident that MBJ has a lot to offer in terms of both prehistoric and historic archeological resources, making additional research necessary to protect these valuable cultural resources. Before MBJ was acquired by the state of Montana, heavy looting of artifacts damaged many of the archeological features. Sadly, this type of behavior is commonplace at many sites, although since the 1960s new state and federal antiquities laws protect sites such as MBJ. Despite the protections, adverse effects like vandalism and artifact collecting on the property still occur, while grass fires and off-trail foot traffic may also contribute to erosion at the site, potentially exposing shallowly buried and surface artifacts. Preventative measures must be taken to protect all resources located at the site for ongoing and future research.

The inscriptions here tell of a different use of the landscape during the historic period. While the Native American features associated with the park such as rock cairns, drive lines, and
tipi rings reflect the past use of the area as a buffalo procurement site, the historic inscriptions reflect the sites use by early cattlemen and ranchers, as evidenced by the presence of livestock brands and the initials of known ranchers that were carved directly into the stone. This was a time where the landscape underwent drastic change, as those living on and utilizing the land shaped it to fit their needs, bringing economic development to this once remote part of the state and supplying the burgeoning gold mines, such as Bannack and Virginia City, and the people who lived there, with a steady supply of food. These early pioneers of the area changed the land, turning it into pasture for cattle grazing or irrigated fields to supply hay. They also suffered environmental threats to their way of life, created by overgrazing and extreme drought. These new Euro-American settlers used the land to aid in feeding those of the local and regional community, and in the process of shaping the land, left behind marks indicating their presence on the landscape, whether it was to simply leave a piece of themselves or to connect back to the larger ranching community.

As preconceived notions about the treatment of historic inscriptions as graffiti begin to change in both academic and public archaeology, researchers can use these resources as an additional way to examine the historic landscape, finding new avenues of research to help fully tell the story of these archaeological sites. It is important for archeologists not to dismiss certain resources as lacking research potential. Just as landscapes and cultures change over time, so to do the techniques and theories applied in archeological research.

Bearing these interpretations and narratives in mind, the historic inscriptions at MBJ are contributing factors to the site's overall significance by emphasizing social, cultural, and aesthetic values. Like any other cultural resource, these inscriptions play a crucial part in telling the story of MBJ, and allow for a better understanding of the recent past. For every inscription
that is potentially known at MBJ, there are many more whose stories will remain lost to the annals of history if further research is not undertaken. Ongoing research and fieldwork at MBJ is vital in the preservation process of this culturally rich site. It is imperative that the site be preserved in its current state and the site narrative be further developed to provide a complete picture, demonstrating the landscapes value in terms of both Native American and Euro-American use in the past (Bachman 2016).

From a communal bison kill site in prehistoric times, to local valley ranching in the historic period, and finally a state park in the modern era, the landscape of MBJ has continued to change to benefit the societal needs of the different cultures and groups that have come to utilize this site for millennia. It is the duty of a preservationists working from a cultural landscape perspective to tell the whole story and to continue conservation efforts so that future generations can continue to visit and learn from this public treasure.
6.1 Chapter Overview

This chapter presents ways in which current archeologists and researchers are recording inscriptions. Preservation techniques that were once thought to be beneficial to inscriptions are now seen as dated and harmful to these cultural resources. Technological advancements allow for better documentation of new and previously discovered inscriptions, as well as new non-invasive techniques to mitigate the destruction of the cultural resource. New techniques, ideas, and observations have developed contemporary ideas regarding the preservation of these often-fragile resources.

6.2 Recording Strategies among Contemporary Archaeology

In today’s social environment, land and heritage managers have begun to pay more detailed attention to all matters concerning resource management and conservation than in past decades. Despite advancements in methodology, further work remains to be done to improve efforts in the field of cultural resource management. If these cultural resources are not properly conserved and attended to in their decaying state it is likely that we could lose these priceless resources forever (Olson 2001).

With research into historic inscriptions finally gaining traction in the archeological field, it is important to arrive at a consensus regarding the recording and preservation of these fragile resources. The first step to be taken in recording these resources is how best to document their presence. It is important to note that recording methods that were once thought to be advantageous a decade or two ago are now considered detrimental to the site’s overall integrity, and are no longer advocated (Greer and Greer 1998). Today, an ever-increasing number of sites containing historical inscriptions and native rock art are being recorded, and it is imperative that...
researchers set about with a proper plan to record these sites without causing unnecessary damage. Witkowski (2014) states that along with recording the resources it is necessary to document the site’s current condition as well as any threats the site might face to better preserve and monitor these resources. With new technological advancements, archeologists and preservationists no longer need to physically touch the fragile rock art or inscriptions, instead many new techniques are hands off and can better preserve the information documented about these resources in perpetuity.

One of the greatest changes to rock art recording methods comes from integrating new computer technologies into the process. Since the 1990s, digital photographs, panel drawings, and maps have been routinely put into site forms and reports. Computer software such as Adobe Illustrator and Adobe Photoshop also aid in photo clarity and photogrammetric images are often utilized as the foundation layer for interpretive illustrations, ensuring the accuracy of drawings.

Another computer software tool, DStretch, a plugin for Image J, is now widely available thanks to Jon Harman, its creator (Harman n.d.). This software tool digitally enhances photographs to make the pictographs clearer and is able reveal elements that are no longer visible to the naked eye due to erosion and weathering. Unlike other programs such as Photoshop that are costly and require considerable basic knowledge and finesse to use, the DStretch program only needs the user to upload a photograph into the program and select different pigment contrasts. Because it works with pigmentation, it was not relevant to the MBJ incised designs, but can be used with historic pictographs.

Other techniques currently being employed by archeologists include the use of LIDAR (Light Imaging, Detection, and Ranging), also known as 3D laser scanning. This technique creates a three-dimensional scan of the inscriptions and their landform setting that can be saved.
and compiled into a database (Urbaniak 2014). This technique is not only noninvasive, but the finished product is a 3-dimensional replica of the stone face with the inscription(s) that can be looked at and manipulated to change lighting and viewing angles, and allows other researchers the opportunity to view these resources without having to be physically present at the site. This opens up data sharing between researchers allowing for more information to be distributed regarding rock art and inscriptions.

Many of the new technologies that are beginning to be utilized in recording historic inscriptions and native art work involve no physical manipulation. This allows the user to record the rock art without having to physically touch the features, in contrast to previous recording methods such as etching over or filling with chalk. Some of the techniques, particularly LIDAR, creates three dimensional models, which means that the placement of the inscriptions on the natural surface is not lost, as it is in a two-dimensional photograph. These new recording strategies also digitize the images, allowing for assembly into a database that can be used by both archeologists for research potential and by the public to better educate themselves on the importance of historic inscriptions and rock art.

6.3 Preservation Strategies

Many rock art sites, including both Native American and Euro-American sites, are prone to environmental and human disturbances that may cause severe and permanent damage to a site. The most common among these in the American west is rock spalling, water erosion, fire damage, public visitation, and vandalism. To properly preserve a site, these issues need to be addressed. Though many are natural occurrences, there can still be some form of preventative measures taken to ensure that these sites remain intact for future generations.
Some general solutions to preserving rock art and historic inscription sites is to monitor and control access at certain locations and sites. This has been accomplished at locations such as the Grand Canyon and other sites throughout the American West (Witkowski 2014). In order for this to be an effective technique of preserving a site, the site must undergo a baseline recording of all resources associated with it. This baseline recording can help the researchers in understanding what resources are at the site, the condition of the resources, and any contemporary graffiti that has been added at the site. With the continued monitoring of the sites, researchers can see which resources are the most threatened, and if any new graffiti is being added to the area. This would allow land managers to first know if there is an increase in vandalism at a site, and secondly how best to deter vandals from placing new inscriptions/graffiti in the area (Witkowski 2014). It is imperative to find solutions to deter visitors from vandalizing culturally significant locations. These sorts of inscriptions tend to cause a snowball effect, leading others to believe it is acceptable to do the same.

Other development concerns archaeologists have is the proximity of roads constructed near rock art and historic inscription sites. These are often detrimental to the integrity of the sites, due to dust and other particulates that may be kicked up by vehicles on the road. Over time, these particulates can slowly build up and obscure images and panels (Tacon and Marshall 2014). Continued monitoring of sites, especially those near busy dirt roads, will ensure that this does not go unnoticed or unattended, and thus some kind of restoration, or amelioration, such as paving or otherwise modifying the road, can be undertaken to preserve the site.

A third possible solution, especially for highly visited sites, is stronger Wi-Fi coverage at these locations. As contemporary population grows more reliant on cell phones, computers, and other electronic devices, there is a higher likelihood of taking pictures of the art, instead of
defacing the historic features. Stronger internet connection at sites could also provide visitors with additional information found online to gain further background knowledge about these sites. It is no longer necessary to carve names or other inscriptions to prove attendance; it is nearly effortless to snap a picture and put it on the internet. A thesis by Oscar Escudero about graffiti in bathroom stalls located on college campuses shows that as society has become more reliant on electronic devices, the amount of graffiti in bathrooms has drastically decreased, this concept could result in a similar outcome at archeological sites (Escudero 2013).

Last, implementing interpretive signage at locations of rock art and historic inscriptions could prove beneficial in protecting archeological resources. Interpretive signs have long been used at cultural resource sites. MBJ is no different, having signage already in place at the Visitors Center describing the pre-historic components of the site.

Although signage has long been associated with these types of sites, literature pertaining to their usefulness in curbing site vandalism is few. Nickens, Larralde, and Tucker (1981) presented a small scale small-scale study on the effectiveness of signs. The study indicated that signs will not deter serious artifact collectors or vandals, but will have some positive effect on new residents or visitors to the area. A 1993 study by Nickens concludes that “signs, if properly employed, can be used to effectively reduce the effects of depreciative behavior to cultural resources.” The author then notes that this is contradictory to the general attitude towards signs help by many archaeologists that by focusing attention on resources, they may contribute to increased vandalism.

The Nickens (1993) study also states that “signing, to be effective, should be combined with other resource protection strategies.” Nickens concludes that signs should include more than interpretation, possibly including messaging about resource protection, or preservation ethos
and/or a law enforcement warning. Accompanying these interpretative panels, additional signage may be beneficial outlining archeological laws such as ARPA, and the legal consequences of disturbing archeological sites. This solution though is specific to sites that receive funding, as remote or hard to access sites would likely not receive funding for interpretive signage (Witkowski 2014).

Added signage could help further public understanding of the past, and provide the public with information regarding the integrity of the site. This may help deter additional degradation of the site helping visitors understand how graffiti detracts from the site’s authenticity.

While increased public education and continual site monitoring provide some protection to these sites and resources, protection is still not ensured. It is in appreciation and respect for these cultural resources that help to promote greater self-restraint in destruction and vandalism (Witkowski 2014). It is up to us to honor our obligation to nature; leaving the landscape as found, leaving only our footprints (Christensen et al. 2013).

6.4 Future Research Potential at Madison Buffalo Jump

Regarding the inscriptions located at MBJ, several steps can be taken to ensure their preservation and proper documentation. As stated above, in recent years, new technologies and advancements in recording strategies have opened ways to better preserve these cultural resources for future research.

First, the inscriptions at MBJ are carved into eroding sandstone walls, and it is evident from the spalling and erosion that these resources are highly vulnerable. In using similar techniques as Urbaniak, digital records could ensure that highly detailed documentation of these fragile resources can be preserved for years to come on a digital platform. The non-invasive LIDAR technique could be used to catalog all the inscriptions and panels found within the park,
allowing them to be stored electronically and give access to both researchers and the public. It is possible that lighting and image manipulations of these models might allow some of the harder to read inscriptions to be read, and possibly lead to the discovery of inscriptions unable to be seen by the human eye. Additionally, more precise and higher quality photographs should be retaken, using modern technology. This baseline recording used a common digital camera, taking colored photographs. These photos, as well as 3-D images, if undertaken, should then be compiled into a type of database for future researchers as well as for the public to access.

Second, the photos taken of the inscriptions should be analyzed by using Adobe Photoshop to enhance existing images for better clarity and resolution. Additionally, programs such as Photoshop and other image enhancing software can pull out or find inscriptions that have eroded over time or that cannot be readily seen by the human eye.

Finally, further research needs to be conducted at local historical societies and public records around Gallatin and Madison counties to see if any more inscriptions can be matched to individuals who once lived or visited the area. This research can help further the story of MBJ’s historical past and aid in bringing together a full picture of the area's past use.

The inscriptions at MBJ are vulnerable and will likely continue to fade with the passage of time. It’s imperative that researchers make a good faith effort into researching these resources before they are lost forever. Recording these inscriptions digitally and making an online database could save these resources for future research long after the physical inscriptions are gone.
CHAPTER 7 – CONCLUSIONS

Perceptions of historical inscriptions as graffiti or vandalism have come to influence decisions regarding preservation and interpretation of cultural resources. These resources, much like Native American rock art, have the potential to show how early Euro-Americans in North America consciously viewed themselves in the landscape, as well as convey information about who they were, how they lived, and how they viewed their surroundings during this time. As time passes and the pressures of development and land use increase, the need for preservation becomes urgent. Unfortunately, these resources still go unrecognized, or, worst, may even be actively removed from sites. By removing, or even by ignoring historic inscriptions at these places and therefore removing them from consideration in preservation efforts, valuable information about cultural change is lost, and discussion of the rich history of rock art sites as forums for dialogues is stymied. Promoting consideration and study of these sites will generate a positive effect on future and ongoing rock art research, both regionally and globally, which include allowing for a new understanding of the interaction between Euro-American and indigenous inscriptions (Urbaniak 2014).

Traditionally, have been perceived in a mono-temporal, mono-cultural, and micro-geographical fashion. This approach is inadequate in archaeology and represents a denial of meaningful cultural, social, political, and geographical understanding of the landscape through time. For researchers to move beyond the current restrictive framework, the views of Cultural Landscape Theory should be utilized, which emphasize the connectedness rather than the singularity of sites. This concept calls for archaeologists and researchers to consider all cultural and temporal aspects of a site and broaden perception of cultural authenticity.
The use of Cultural Landscape Theory in analyzing these sites allows for a rethinking of how cultural resource management is conducted, by incorporating the dynamic relationships of people, natural resources, and places on the landscape (Witkowski 2014). These landscapes are not atomized into isolated sites of human activities, but rather taken by people to be modified or reshaped, physically and intellectually, into something new to suit their societal needs. By physically marking, using, and defining the space, people express their values and infuse the landscape with meaning. Historic inscriptions, just like Native American rock art, are intrinsically tied to the land. By leaving behind these visual images, individuals can express themselves, and their communities and beliefs, directly onto the land, and portray the relationship between humans and their environment (Witkowski 2014).

The sheer number of inscriptions at Area 3 demonstrate that this area held some type of significance and meaning to those living in the surrounding countryside. With many inscriptions ending in the same letters it is possible that these were from families that once visited or utilized the area, and the occurrence of some inscriptions carved into the sandstone multiple times such as “F.J.S.” demonstrates that individuals were likely coming back to, and use this area to mark their continued claim to the land, not as just passing individuals. The presence of cattle brands and names of people associated with local ranching operations show that this landscape held particular importance to the ranching and farming communities of the area.

While the vast majority of the inscriptions could not be deciphered or associated with a specific person, those that were identifiable suggest a community that came together and that shared a common group identity. These inscriptions are just one more resource that can be utilized in understanding the early influx of settlers across the American West, and how they formed the cultural and natural landscape into their own during a time of social change.
The inscriptions at MBJ help to provide researchers with yet another resource to fully tell the history of this rich cultural landscape. These cultural resources help in retelling stories and events that took place long after the site fell out of its original use as a buffalo Jump. While many of these resources have been severely weathered or were unable to be assigned to specific people or groups, those with accompanying dates and those inscriptions that could be correlated to other historic information help retell a story of early Euro-American settlers to the valley, who they were, their professions, and what their ties to the land might have been. In the process of shaping the land to fit their specific needs, Euro-American settlers to this area left behind marks indicating their presence on the landscape, whether their intentions were to simply leave a piece of themselves or help establish a larger ranching community. By utilizing these cultural resources, researchers can begin telling a full story of MBJ.

To arrive at a consensus regarding historic preservation techniques and perceptions, theories and methodologies must be developed that recognize, record, and make sense of cultural change as an active process that shapes the current landscape for the future. Cultural landscape preservation needs to encompass much more than the conservation of historic fabric; it also needs to comprehensively include the preservation and interpretation of the process, identities, and meanings that have made the landscape what it is today.
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