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Metal and Glass: An Investigation of Possible Historic Period Native American Sites in
Wind Cave National Park

By
Morgan Beyer

A THESIS

Presented to the Faculty of
The Graduate College at the University of Nebraska
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Under the Supervision of Professor Effie Athanassopoulos

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METAL AND GLASS: AN INVESTIGATION OF POSSIBLE HISTORIC PERIOD
NATIVE AMERICAN SITES IN WIND CAVE NATIONAL PARK

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University of Nebraska, 2016

Adviser: Effie Athanassopoulos

The Black Hills region was one of the last areas of the American West where Native tribes were able to escape the intervention of the federal government. Because of this and the cultural ties that many Plains Indian tribes hold to the area, this region would seem to be one where non-reservation historic period Native American sites are abundant. The goals of this research were to identify markers that could be utilized by archaeologists to differentiate Native American sites and Euro American sites from the same historic time period in the Black Hills Region, positively identify the occupation of certain sites within the boundaries of Wind Cave National Park, and determine if metal detection and pedestrian survey could be used effectively in the field to achieve these two goals. The investigation was comprised of both historical research and archaeological fieldwork that included metal detector survey and artifact collection. Findings, unfortunately, indicate little about the possible occupation of these sites, though there is hope for future research on these and other similar sites.

Acknowledgements

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found my park at WICA. (The ice cream definitely helped with that!) In fact, I've already pestered Anne about adding me to her field crew for summer 2017.

The support system of friends that I have made in Lincoln is one that I know will be with me for years to come. I couldn't ask for better people to porch drink with, go to pumpkin patches with, and live with 24 hours a day for weeks at a time during field season (and sometimes vacations.) Thank you for becoming a part of my ever widening family. You have kept me sane for three years and the memories that we have made with Lincoln as our home base are some of the best times of my life and I look forward to many more Plains Conferences, road trips, and sushi Sundays with all of you.

To my friends and family at home in Kentucky, especially to my parents, brother and my best friend Kristen, you are the backbone of who I am as a person. I love you all and without you, none of what I do would be possible. Your encouragement, love, and unwavering support mean more to me than you can possibly imagine. To know that I have the entirety of the extended –and even sometimes unrelated - Beyer clan behind me has given me the courage to be strong and to chase my dreams. Thank you, from the bottom of my heart. And Dustin, you have made the final months of this process so much more enjoyable. I love you and I'm glad that I stuck around past date three, that's for sure.

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CHAPTER 1: INTRODUCTION

Problem statement

Early historic and protohistoric Native American sites are underrepresented in archaeological research even though they have some of the highest potential to provide information about a key time in our nation's history. Though historic Native American sites have been explored, particularly in the Great Lakes region and Canada, many of them are late historic sites from many years after Native American tribes were forced to move to reservations. Because early historic Native American sites are not bound to reservation borders it can often be difficult to differentiate between these sites and historic Euro American sites during pedestrian survey, particularly in the Black Hills.

Because this area was one of the last hold-outs for plains tribes who were resisting government control and restriction, particularly the Sioux, having a baseline for the types of artifacts found at historic Native American sites in this region could be extremely beneficial to archaeologists who work here. The goals of the project itself were: 1) to identify markers that could be utilized by archaeologists to differentiate Native American sites and Euro American sites from the same historic time period in the Black Hills Region, 2) positively identify the occupation of certain sites within the boundaries of Wind Cave National Park, and 3) determine if metal detection and pedestrian survey could be used effectively in the field to achieve these two goals. In this chapter, I will present a review of literature that spans the growing inclusivity in historical archaeology as well as archaeological and historical studies of historic Native American lifeways.

Historical Archaeology: Striving for Inclusivity

Historical archaeology has come far since its relegation to “handmaiden to history” by Ivor Noel Hume (1964). Historical archaeologists participated in a heated debate, starting in the 1960s that determined the orientation of the discipline. This period, known as “crisis of identity” defined historical archaeology’s relationship to the parent disciplines, anthropology and history (Deagan 1982:156). The debate has lessened in recent decades, as historical archaeology became closely associated with anthropology, while maintaining a strong relation with history (Little 2009:363). The biggest advantage that historical archaeology has against its naysayers, who find little value in this hybrid field, comes in its ability to explore the lives and histories of groups of people who seem to have been lost to time.

Because history consists of many lives, cultures, religions, races, and genders, attempting to recount events without including these perspectives is only telling a portion of the story, and often that portion is quite inaccurate. The nature of history means that it is most often told by those who are “on top” in society. For American history, this typically means powerful, wealthy, white men – men who, in reality, only comprised a small portion of the population. A movement in both the fields of history and archaeology to change this perception of our history comes together in historical archaeology – a field that is able to combine historical documentation with archeological excavation to unearth the “real” truth of American history.

This sentiment was echoed by Kathleen Deagan (1982) who offered one of the first introspective looks at this sub-field of archaeology. Deagan explored the work of

many important researchers, such as Stanley South, Ivor Noel Hume, and James Deetz, who built the foundation and determined the direction of the field of historical archaeology. Deagan stated that “the unique potential of historical archaeology lies not only in its ability to answer questions of archaeological and anthropological interest, but also in its ability to provide historical data not available through documentation or any other source” (1982:171). This, in Deagan’s opinion is particularly useful in relation to minority groups that, for various reasons, are often left out of the historical record.

More than a decade later, Barbara J. Little (1994) brought up similar points in her inquiries into what makes historical archaeology important as a field. Little has continued her introspective examination in how historical archaeology has evolved and what it has become (2009). In 1994 Little addressed changes in historical archaeology since the 1960s, as well as trends and new directions for the future. She also argued that capitalism should become one of the main foci of the discipline, in order to understand the development of dominant ideology, including the disregard for Native American cultural history. Little states that “the failure to recognize ethnogenesis as an option and a process (of the formation of historic Native American culture) is a direct result of failing to consider the dynamics of the contexts of capitalism in our analysis” (1994:63).

Though the analysis of historical cultures has expanded and the representation of “people without history” – Eric Wolf’s (1982) term for those minorities often left out of historical documentation – has come a long way since 1994, this subfield of archaeology is still continuing to grow, a fact that Little has returned to examine in later publications. In 2007, Little provides an in depth look at multiple research areas within historical

archaeology, including the development of public archaeology and the importance of public involvement for the growth of the field (Little 2007).

Little argued again in favor of public archaeology in 2009, stating that “scholarship no longer resides solely in the academy, but also in ‘think tanks,’ many businesses and corporations, not-for-profit organizations, government agencies, and other entities” (Little 2009:377). A goal for historical archaeology, as Little sees it, is to not only be in dialogue with other fields such as anthropology, archaeology, history, and historic preservation, but for historical archaeologists to be “intentional about the impact of our practice” (Little 2009:377), so that our field may grow in its influence of these others. These sweeping ideas about what historical archaeology could be rings especially true to archaeologists seeking to represent many of the “people without history” that Little referenced.

People of color are being more accurately represented in the histories of our nation than at any other time and it is thanks, in part, to historical archaeology. The debate on the state of historical archaeology and its place within the archaeology/history/anthropology triad has been ongoing since the 1960s and the previously mentioned works are only a small portion of the literature dedicated to this subject. The role that historical archaeology plays in portraying the American narrative has been explored from many angles by many people over the last few decades (Little 1994, 2007, 2009; Deagan 1982; Lightfoot 1995, 2006, Orser 2010). Historical archaeology is well on its way to becoming a more inclusive field contributing to a more complete history of the United States, which is evident in the scholarship that has been developed by historical archaeologists in recent decades.

Indigenous Archaeology

Because the focus of this research was related to potential historic Native American sites, this section will introduce some of the past archaeological research related to indigenous sites in regions across North America. Kent G. Lightfoot, for one, has published extensively on the relationships between history and archaeology; he provides models for an accurate retelling of American history, specifically in relation to the history of Native American relations with colonizers. This especially, even in a new era of inclusive historical archaeology, is an underrepresented area of study and one that many archaeologists are eager to contribute and expand.

Lightfoot and Simmons (1998) note that interactions between Native Americans and European settlers have often been ignored by both historians and archaeologists in favor of individual analyses of the two separate cultures. Unfortunately, this type of analysis does not yield a truly accurate picture of what life was like for either Europeans or Native Americans. As the authors point out “the integration of both archival information and archaeology can provide a powerful perspective for considering the use and meaning of material culture during early encounters” (Lightfoot and Simmons 1998:140). This article was related specifically to the history of California, but Lightfoot also published solo on a broader research zone (1995, 2006).

For instance, Lightfoot (2006) notes that there are “significant shortcomings in the historical archaeology of Native Americans and our ability to make informed decisions about tribal histories and cultural affiliations” (2006: 272). This could be remedied, he

believes, by focusing on the period of cultural contact between colonists and Native Americans. Lightfoot refers to this period as “an archaeological blank page” (2006:288), a term that seems to be quite apt.

Lightfoot and Martinez (1995) examined the core-periphery models used by archaeologists and how they are ineffective for studying the nuanced relationships between settlers and Native Americans. The authors point out that in many cases, archaeologists focus solely on the culture changes taken on by Native American groups during these interactions, showcasing them as submissive or passive people. This is not the case, however, and limits not only the researcher but also the possible results. Lightfoot and Martinez argue that archaeologists must employ multi-scalar approaches in relation to temporal and cultural scale and reassess many of the concepts related to frontier boundaries in order to accurately view the cultural interactions and exchanges between colonial and Native American groups in the west (1995:487-488). This is a common theme in recent archaeological research (Jordan 2009, Panich 2013) and is a positive change compared to earlier culture change models that viewed Native Americans as passive.

The view of passivity within Native populations during the time of culture contact with Europeans and Euro Americans is quickly becoming an outdated analytical tool. Whether this was common to among researchers to begin with because of a sense of white guilt or simply because of the legal loopholes that are often present since the Native American Graves Protection and Repatriation Act (NAGPRA) was signed into law in 1990, it is not clear. However, I do believe that acknowledging the parts of our history that we would often like to forget is one of the most important tasks, and one that

archaeologists have taken steps to correct in more recent years. Jordan (2009, 2016) is one proponent of this movement whose work has been central to the expansion of the field in the 21st century and points out that in order to adequately represent native cultures archaeologists, who are often white, must be conscious of re-creating the hierarchy of colonialism (2009: 43). By involving descendant communities through consultation and collaboration, archaeologists can facilitate the involvement of these communities in their own histories and take the next step toward broadening indigenous archaeology.

Jordan (2016) also reiterates the importance of a holistic approach in regards to analysis of historic indigenous cultures. The interplay between all various cultural groups must be taken into account by researchers who are seeking to develop the scholarship related to historic period sites and, if possible, non-Native archeologists should seek to alter their vantage point when possible and “use indigenous concepts in their interpretation of archaeological data by engaging with published works on the subject and interacting with community representatives about the use and meaning of various details of cultural heritage (2016: 68).”

The genesis of this project in Wind Cave National Park came from a desire to explore the differences in historical Euro American and historical Native American lifeways as they are displayed in the historical record. Because the Black Hills were among the last regions of the country where Native Americans came under government control (Lazarus 1991, Spence 2010), it would be the ideal place to explore the lives of post-contact Native American groups, if the locations of such sites could first be identified. This project, as a preliminary research step, focused on basic determination of

the occupations of previously discovered sites rather than the large scale identification of sites or in depth analysis of particular assemblages.

During routine fieldwork in previous field seasons, crews from the Midwest Archaeological Center, National Park Service, identified three sites that were possibly occupied by Native Americans during the historic period and relocated one historical Lakota encampment site. These sites, as well as one known historical Euro American site, were investigated in June 2016 in an attempt to better understand the archaeology of historic Native American sites in this region. The heritage management nature of archeology conducted by the National Park service means that the majority of sites are identified strictly based on evidence found on the surface and though there can be thousands of sites recorded in a National Park, very few of them will have been subjected to true investigation.

Most sites are documented on site forms, with GPS coordinates, and site forms that include a brief description of surface artifacts, features, site size, and site location. Because the veneer of Native American sites from the post contact period is often so similar to that of Euro American sites from the same time period, it is important to have a baseline of archaeological knowledge for both types of sites so that they are not erroneously attributed to the wrong cultural occupation in these types of forms.

The goal of identifying markers that can be used to classify historic period Native American sites has largely been accomplished in other parts of the country, particularly in the Great Lakes region. Quimby (1966) compiled multiple years of research on the history and archaeology of historic period Native Americans in the Western Great Lakes

region into one source for basic trade object identification. Quimby divides historic trade related artifacts at Native American sites into seven categories useful for dating a site. Artifacts are separated into these categories based on three identifiers; the type (new to Native people or traditionally used), the material (native or traded), and the origin of the artifact (traded or made by Native craftsmen). Modified trade good types are generally limited to metal and glass artifacts. Though many trade goods were available to Native Americans, these two materials are generally able to withstand burial (or surface exposure) with little to no damage.

Though Quimby's (1966) publication is certainly not recent, the descriptions provided of modified artifacts are still applicable. Artifact types described by Quimby that may be found during this project include "triangular arrowheads and end-scrapers chipped of bottle glass instead of flint (10)" and "objects made of sheet brass from broken kettles consisted of tubular beads, hair pipes, conical tinklers, and arrowheads of two forms (71)."

These basic identifiers seem to cover the types of artifacts found in other regions as well. At the Bryson-Paddock and Deer Creek sites, Wichita villages in north central Oklahoma, many artifacts were noted that obviously originated from trade with colonists but had been modified to serve a different purpose than originally intended (Leith 2008: 557-560). Leith notes that "little archaeological evidence has been published concerning material changes caused by the interaction between Europeans and Native Americans on the Southern Plains during the protohistoric period" (2008:551-552). This is equally true for the Black Hills and even the Northern Plains. Leith's study was only a first step,

essentially data collection, to fully understanding the protohistoric period in the southern plains.

Similar modified artifact types have also been discovered by other researchers in multiple areas of Canada. Pyszczyk (1997), for example, explored similar sites related to Plains Indians in Central and Southern Alberta and their use of fur trade goods. Rather than analyzing the cultural exchanges that are signified by these artifacts, this publication focused on determining the rate at which Native people adapted to and replaced traditional material culture with these trade goods. Though Pyszczyk determined that the archaeological evidence pointed toward a gradual adoption of trade goods and retention of traditional material culture, he does point out that compared to the staggering number of goods traded inland over the course of the fur trade, this sample is rather small for drawing inferences applicable to many in relation to all protohistoric Native American sites. Calculations supplied in this article estimate that the number of protohistoric or late prehistoric Native American sites that would need to be sampled in order to fully understand the types of artifacts traded in this region is between 41 and 596 sites (Pyszczyk 1997:78). Pyszczyk uses these numbers to encourage archaeologists to focus more frequently and more in-depth on identification, collection, and analysis of protohistoric Native American artifacts and sites.

Other investigations into protohistoric and historic period sites in Canada (Trigger 1969, Beaudoin, Josephs, and Rankin 2010) were related less to artifacts and more to existing and prior structures at the sites. Because of the nomadic way of life adopted by Plains Indians after the adoption of the horse (Jablow 1950, Spence 2010) these investigations into longer term occupations are ultimately of little value to the

investigations carried out for this research. No permanent structures, only tipi rings, are left by Plains Indian tribes before their interactions with American colonists, thus artifacts are the most important source of data for this time period.

Trade between Native Americans and Euro-American [or European depending on the region and time period] settlers has also been investigated by historians and cultural anthropologists. Jablow (1950), for instance, explores the trade relationships between the Cheyenne and settlers. Though the Cheyenne and the Sioux were not always friendly, they followed a similar path from the Great Lakes region where they encountered trappers and traders as early as the 1700s. These tribes then began the move west as dogs, and later horses were adopted to assist with the transportation of materials. Interactions between the tribes and traders were far later in the west than those in the Great Lakes.

Roper (1989) explored protohistoric Pawnee sites in the Sandhills of Nebraska, an area and time period that coincide more with the Black Hills. Because the Pawnee share a similar background with the Sioux and Cheyenne, changing to a more nomadic lifestyle with the adoption of the horse, it is interesting to see indications that the Pawnee were trading with the French in the mid-seventeenth century (1989: 75), a time period that is considerably earlier than the known beginnings of trade between the Sioux and Europeans or Euro Americans.

The sons of fur trader Pierre Gaultier de Varennes are documented as traveling as far south as the Black Hills in the mid-1700s (Encyclopedia of the Great Plains). However, this was not a regular occurrence and trade routes were not cemented in this region until well into the 19th century. Railroads did not arrive in the Black Hills until the

turn of the 20th century and the “booms” that led more settlers to this area, gold and cattle, had both ended by 1910 (Hudson 1973). It is interesting to note that historians and cultural anthropologists (Jablow 1950, Lazarus 1991) have, in the past, seemed more likely to describe Native dependence on trade goods than archaeologists working at similar times. Quimby (1966), for instance, determined that the modification of trade goods for use as traditional tools is a manifestation of continuing traditional practices and life ways, but not a dependence on them. These differences in opinion could be related to the dependence of cultural anthropologists and historians on historical documentation, whereas archaeologists are able to access material remains that tell a different story than primary source documents. Similar patterns were noted by others, for example Rubertone stated that “the direct-historical approach underscored the widely accepted opinion that European contact signaled the inevitable demise and eventual disappearance of native cultures (2000:427).”

Though it is accepted that white settlers did attempt to wipe out Native cultures across North America, to assume that they succeeded indicates excessive trust in historical literature. In an ethnographic account, Racette (2008) makes it abundantly clear that not only did Native cultures survive their interactions with white settlers, they are still continuously evolving while remaining true to their traditional roots. In relation to Native beliefs and practices, Racette states that in the face of potential cultural shifts “settings have changed, but meanings persist” (2008:77), a fact that is evident in the modified trade goods from historic Native American sites that were discussed earlier in this chapter. In relation to modified trade goods Quimby stated that “the forms have not changed, but the material of manufacture is new (1966: 11).”

The studies explored in this chapter were central to the planning and hypotheses of this project. Because of various constraints that will be discussed later, this project is merely the first step toward expanding the archaeological knowledge of historic period Native American sites in the Black Hills. It is my hope that metal detection and pedestrian survey will be effective tools for locating artifacts that could assist in positively identifying the occupation of these sites. Because this is only a preliminary study, future research potential for these and other similar types will be revisited in the discussion and conclusions provided in the final chapter of this thesis.

CHAPTER 2 – BACKGROUND

Historical Background

Generations of Americans have grown up on stories of the West. From the tales of the Lewis and Clark expedition, to the television heroes Roy Rogers and The Lone Ranger, to the school lessons on Manifest Destiny, American children have been inundated with tales of brave men and women who conquered nature and hostile savages to tame the west and make their lives there. While playing cowboys and Indians, most children have no clue how contentious, and often deadly, the history that they are reenacting.

Western expansion began in earnest after the 1803 Louisiana Purchase by President Andrew Jackson. This deal with France added over 11 million acres of land to the United States' holdings and opened up a vast expanse of seemingly untouched wilderness for exploration. The following year, the Corps of Discovery, headed by Meriwether Lewis and William Clark, set out on what would become a two year journey to map a route across the plains and mountains to the Pacific Ocean (Lewis 1803). Though they were not the first to cross this wilderness, not even the first Euro Americans, they are undoubtedly the most famous, even now in the 21st century.

Less famous, but prior to Lewis and Clark, were the fur traders and trappers who had been exploring the heart of North America for generations when The Corps of Discovery set out on their expedition. Though the Black Hills were not a common area of exploration for early trappers and traders, there are records that indicate their occasional presence starting in the mid-1700s. The first contact between Sioux bands and traders,

however, appears to have taken place in the Great Lakes region long before their movement west after the adoption of the horse (Spence 2010, Encyclopedia of the Great Plains).

Though public interest in the West began early in the 19th century, it wasn't until 1842 that the first wagon trains left from Missouri and started their trek across the plains. (Lazarus 1991: 13). The 18 wagons that left Missouri in 1842 were the beginning of the Oregon Trail and were followed over the next two decades by thousands of other settlers. Soon the Oregon Trail was joined by the Mormon Trail, the Sidney-Deadwood Trail, and the California Trail – to name a few. These trails crisscrossed the Plains, leaving wagon ruts, broken gear, and carcasses – both animal and human – behind them. The first map below (Figure 2.1) indicates the location of the Oregon Trail (yellow), Mormon Trail (purple), and the Pony Express Trail (green) in relation to the Black Hills and Wind Cave National Park while the second map shows trail routes that left the plains and moved North through the Black Hills in South Dakota and Wyoming (Figure 2.2).

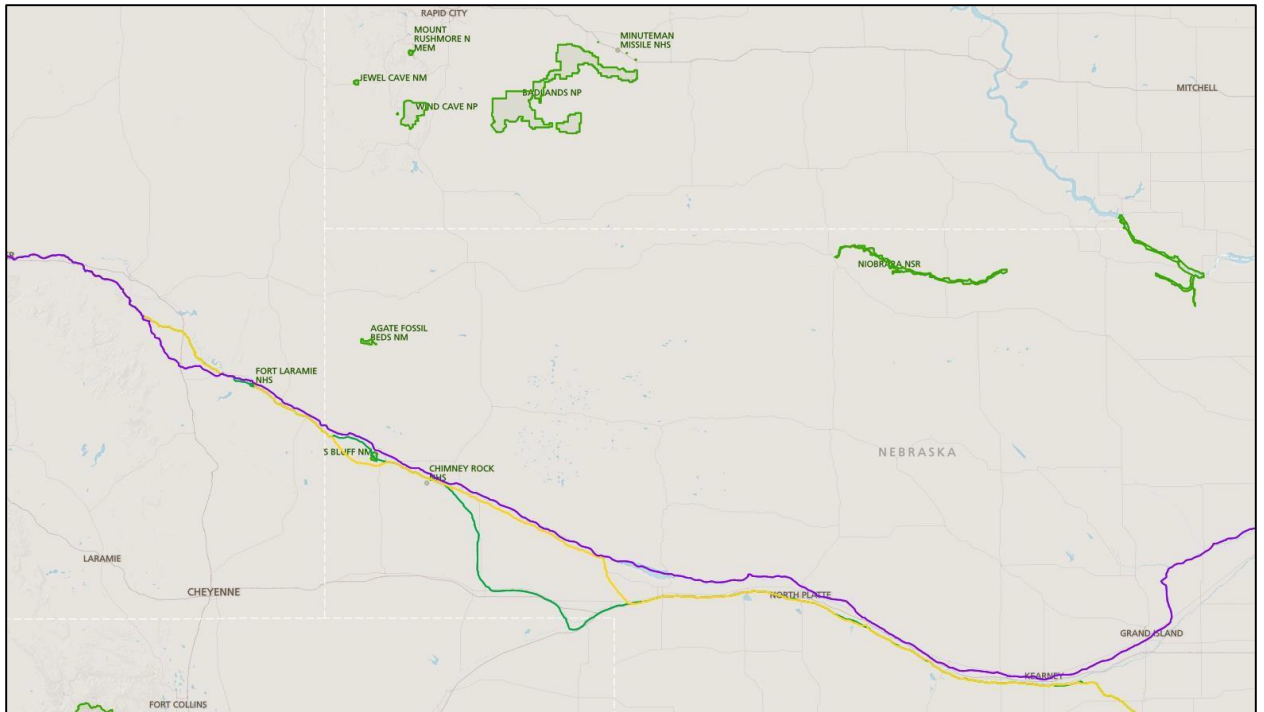


Figure 2.1 Map of wagon trails, courtesy of National Park Service

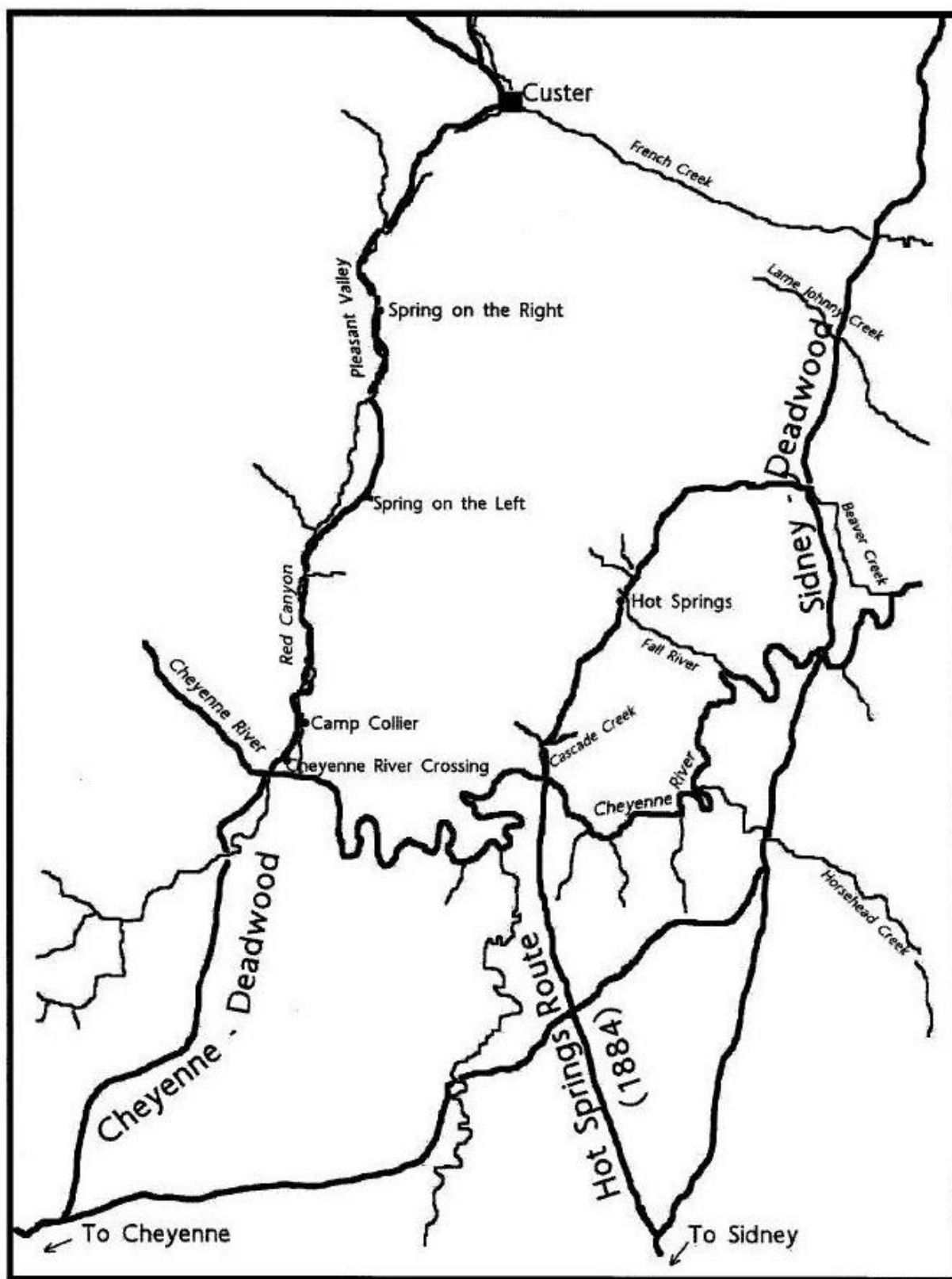


Figure 2.2 Map of Southern Black Hills showing Sidney-Deadwood and Cheyenne-Deadwood Stage and Wagon Roads (Spence 2010, 123)

The remnants left by travelers along the pioneer trails made them easily detectable and almost unavoidable. Bison learned to steer clear of the trails, and therefore the rivers, meaning that the traditional hunting grounds of the Plains Indians changed as well (Lazarus 1991). Because the Sioux and other Plains Indians were largely dependent on bison hunting, this created friction between the settlers and the Native Americans. Driving the bison farther from the rivers meant that the Black Hills became an even more important locale, particularly before the winter when tribes would follow the herds of bison into the Black Hills through what is now known as Buffalo Gap.

Now the home of the small town of Buffalo Gap, South Dakota, this large natural opening was the easiest passage through the hogback surrounding the Hills, through the Red Valley, and into the protection and winter shelter of the Hills themselves. This natural protection would not only be useful for the Sioux during the winters (Ostler 2010: 14), but also eventually as a last holdout against US military forces attempting to consolidate tribes of Plains Indians to reservations and agencies. (Lazarus 1991; Spence 2010)

During the 1700s the Sioux began pushing west, driving other tribes from the Plains and taking over the land. By the time American wagon trains were crossing the “Great American Desert,” as it was called by Major Stephen Long, the Lakota Sioux were the predominant tribe controlling much of the Central and Northern Plains as well as the Black Hills (Lazarus 1991:10-13). Because of this, this section will focus predominately on the history of the Lakota Sioux people, their relationships with American Settlers and the Federal Government, and their spiritual and cultural ties to the Black Hills. At this time I should note that because different names for this tribe are used

in different publications, the names Sioux and Lakota will be used interchangeably throughout this paper. Though these are not the only names for this tribe and the separate bands within it, they are the most common throughout historical, archaeological, and anthropological publications and, therefore, are the most recognizable.

The cultural and spiritual ties that bind many Native American tribes to the Black Hills are deep and long standing. For generations, the Sioux specifically have held many locations in the Black Hills as sacred; two of these are within the southern hills and are at least partially included within the boundaries of Wind Cave National Park. The cave itself, protected by the National Park Service because of its rare and beautiful boxwork formations, is known to the modern Lakota as *Makoce Ohloka* or “the breathing earth.” Because of the small size of the natural entrances to Wind Cave, the pressure inside the cave changes in relation to the barometric pressure on the surface. This ultimately creates an in-and-out effect, as though the Earth itself is breathing. Though there are likely multiple entrances whose locations may never be known, the entrance closest to the visitor’s center at the park is not large enough for a full grown man to fit through. This particular location is an important part of the creation story told by the Lakota.

According to Lakota lore, as recounted by Sina Bear Eagle, people lived below the Earth’s surface in the Spirit Lodge waiting until the Earth was ready for them to live on it. Two spirits who lived on the surface took down gifts to lure the people from under the ground, buckskins and dresses and meat. Some of the people took the gifts and came out from the Spirit World, but some did not eat the meat and stayed below the ground. The Earth was still not ready for people to live on it and the Creator became angry at

them for disobeying his orders. In retaliation, he turned the people into four legged beasts – the bison. This was the first bison herd.

The story continues that after many more years under the surface, the Earth was finally ready and the Creator called the people out through the breathing hole – Wind Cave – to come live on the surface. He told them that they could get everything they needed from the bison; food, clothing, shelter, and tools. They could even follow the bison to water. When the people were all on the surface, the Creator shrunk the hole from the size of a man to the size that it is today, a reminder of where they came from. (Bear Eagle 2016)

Though it is a large part of the creation story, the cave itself is not the only sacred area inside the park. The red valley, or racetrack, is also part of a story that tells how the Lakota became who they are today. Nicholas Black Elk recounts the story of the race between people and the animals to see whether the two legged or four legged creatures would be dominate. The story says that the Thunder Beings made all the animals and people race around the Black Hills and that the race was so long and so ferocious that the hogback was pushed up and the valley was created. The valley's red color comes from the blood shed by the race participants.

When the two legged creatures won, thanks to the magpie, the Thunder Beings gave them bows and arrows to hunt the bison and other four legged animals. They also told the people that the Black Hills and the location where the race happened was sacred and “the promised land” and that they should remember the land for the future (Wind Cave National Park). Because much of Lakota history has been passed down orally for

generations, there are many variations on both of these stories (Ostler 2010:4; Spence 2010:16-17, 91) though they all generally include the fact that the bison and the people came from the cave and that the red valley was created in a race with the animals.

Having such culturally important locations within this area would seem to make the establishment of a National Park both great and terrible. Though the cave itself and the small section of the racetrack within the park boundaries will be protected from development for the foreseeable future, the establishment of the park also made it impossible for Lakota people to use the sacred land as they once had. Jeffrey Ostler (2010) explored this relationship in depth as did Edward Lazarus (1991). Because the history of the Sioux and the Government, even specifically related to the occupation and ownership of the Black Hills, is a history far too extensive to fully explore here only key events and treaties will be covered in this chapter and the previously mentioned texts may be consulted for a more detailed history.

Because the Black Hills, known as *Paha Sapa* to the Lakota, are a sacred space, it made their seizure by the federal government even more intolerable for the Sioux people and a battle is still raging to return at least a portion of the Black Hills to the Lakota. One small battle has been won, and in 2016 Harney Peak, the tallest peak in the hills and originally named for U.S. Army General William Harney who was well known for his hatred of Native people and for quotes such as “By God, I’m for Battle – no peace” (Spence 2010:105-106) in his dealings with the Sioux, was changed to Black Elk Peak in honor of Nicholas Black Elk (Nord 2016). This victory is a small one, but on the heels of a 1980 decision by the Supreme Court that the “government’s seizure of the Black Hills violated the Fifth Amendment’s prohibition against the taking of property without just

compensation” (Ostler 2010: xiv), it gives hope that one day the Hills will be returned to the Lakota people.

The troubles between the Sioux and the government started as they did with many tribes; with the movement of American wagon trains westward. As people took advantage of “manifest destiny” in increasingly larger numbers, the encounters between the settlers and the Lakota, as well as other tribes, became more frequent. This was true in the Black Hills as well as other areas of the Plains. The Sioux were, at this time, the strongest of the Plains tribes and controlled the largest portion of the land that wagon trains were passing through.

It was the relationships between the Sioux and the settlers that initially caused the government to step in, and one of the most important treaties regarding this relationship was signed in 1851. In looking at historical documentation it is quite easy to see the Laramie Treaty for what it was; a simple and official way to keep the Plains Indians reliant on trade with white settlers and also to cull their traditional ways of life. For allowing railroads, wagon roads, and settlers through their land and keeping peace among themselves the government promised an annuity payment of \$50,000 every year for 50 years to each tribe and to protect them from “marauding frontiersmen” (Lazarus 1991: 16-20). Unfortunately both this protection and money was a promise that was not fulfilled and ultimately relationships became more strained after the signing of the treaty.

In 1857, the entire Sioux nation – perhaps as many as 7500 people including the great leaders Red Cloud, Crazy Horse, and Sitting Bull – gathered at the foot of Bear Butte to pledge to stop the encroachment of the white people and to protect their land.

This meeting came about after a survey party was found exploring the Black Hills, an area that at the time was a part of the Great Sioux Reservation and not open to white colonial expansion (Lazarus 1991:23-25).

This pact between the bands of the Sioux Nation and the increasing expansion of the white settlers eventually led to the beginning of the Sioux Wars in 1862. Though this war was raging concurrently with the American Civil War and the atrocities committed were often more heinous, the Sioux did not receive the same kind of attention as the Yankees and Rebels. Following the Sioux Wars, when the Black Hills were a refuge for the tribes, interest in the Black Hills by whites began to grow and though a treaty was signed in 1868 to keep possession of the Black Hills with the tribes and to keep white settlers out, this too, lasted only a short while (Ostler 2010:68-70).

In 1873 George Armstrong Custer, most famous for his eventual defeat at the Battle of the Little Bighorn, led an expedition into the Black Hills. Though this was not allowed according to the 1868 treaty, little concern was given to the Sioux who called the land home. It was Custer who named Harney Peak and who discovered gold in the Hills, leading to a small but destructive gold rush that began in earnest in 1875 (Figure 2.3), once the government had begun to rationalize the reasons for taking the land from the Lakota (Ostler 2010:80-103).

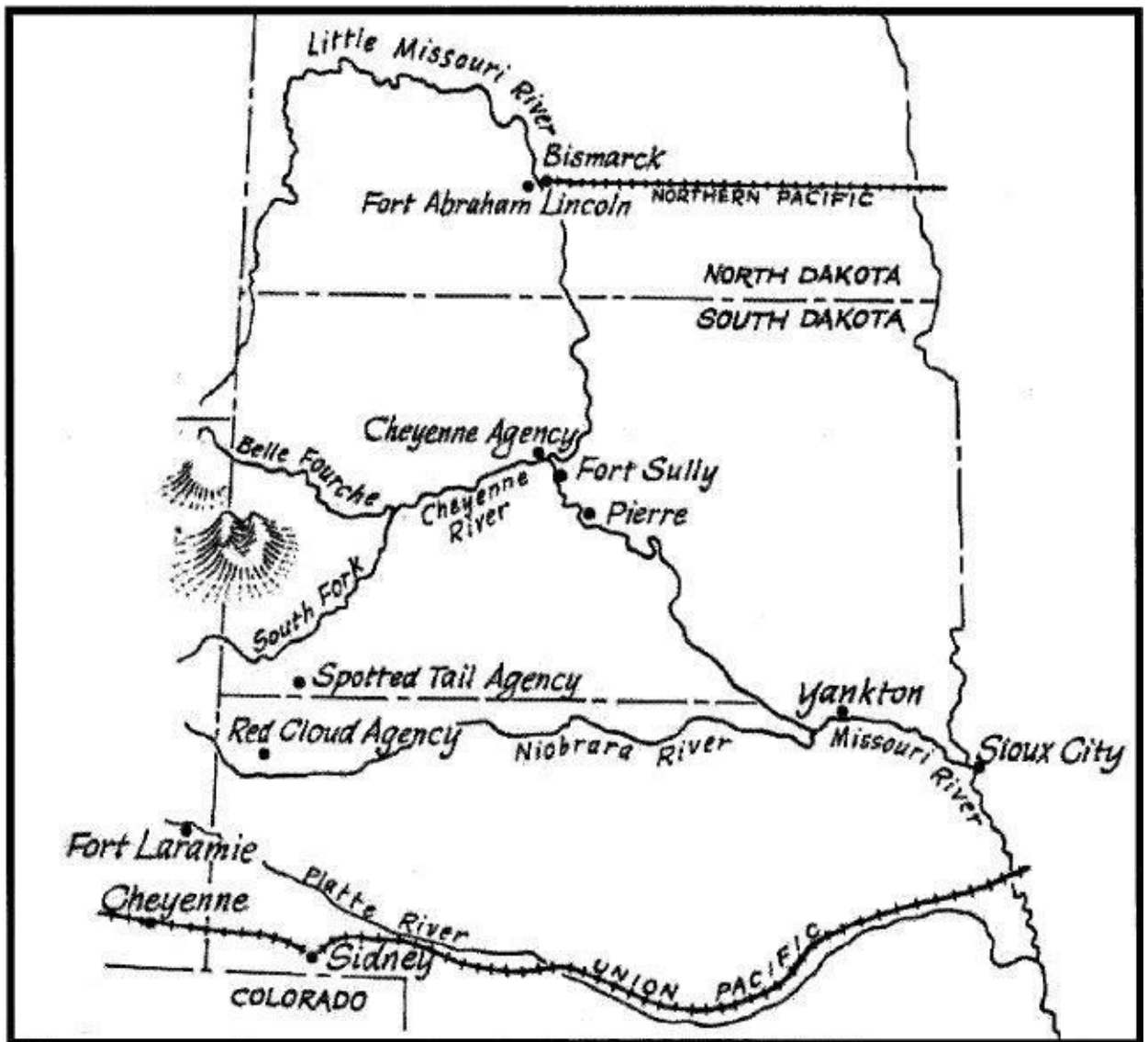


Figure 2.3 Map of major jumping off points for Black Hills Gold Rush (Spence 2010:122)

After the miners invaded the Hills and the eventual surrender of Crazy Horse at Fort Robinson, the story of Wind Cave becomes one of white settlers and tourism. Following the miners were ranchers who controlled the Plains and quickly moved into the Southern Hills around Wind Cave in search of water and whose herds of cattle quickly overgrazed the land (Spence 2010:140-141). This cattle boom actually

contributed largely to Wind Cave's first documented discovery by American colonists. This discovery was made in 1881 purely by chance when two ranch hands, Tom and Jesse Bingham were out on a hunting trip in the Black Hills (Sanders 2003:10). According to park historian John Bohi, Jesse is widely known as the first non-Native person to see the cave opening. He discovered it while tracking a wounded deer on an otherwise windy day. Jesse heard a whistling noise and followed it to the opening. As the brothers were investigating the hole, another gust came out and Jesse's hat was blown from his head (Spence 2010:139).

This was only the first step for Wind Cave in the historic era. By the time the cattle bust happened, once the land was over grazed and would no longer support herds, homesteaders began to move in. Their smaller farms were more easily supported. Because Wind Cave became a National Park in 1903 many of these homesteads were not even patented yet, and provisions had to be made in the Wind Cave National Park Act to move the families who lived on them outside of the original park boundaries (Spence 2010:145).

According to a historic resource study of the park, "In 1903, with passage of the Wind Cave National Park Act, a 10,522-acre national park was established... A 1920 Executive Order from President Woodrow Wilson added 480 acres to protect a water supply, and in 1931 another addition of 1,200 acres was made to the northern boundary of the park...The most significant acquisition of new park lands came in 1946 when more than 16,000 acres of the Custer Recreational Demonstration Area (RDA) was added to Wind Cave National Park" (Spence 2010:145). Currently the park sits at over 33,000

acres thanks to the Casey Addition added to the park in 2011 (National Park Service 2015:4) (Figure 2.4).



Figure 2.4 Historic and modern Wind Cave National Park boundaries

Today the vast prairies and pine forests that blanket the hills at Wind Cave protect not only the cave itself, but also various species of flora and fauna, including elk (*cervus Canadensis*), black tailed prairie dogs (*cynomys Ludovicianus*), pronghorn antelope (*anitlocapra Americana*), and bison (*bison Bison*) which were re-released into the park in 1913, 10 years after its establishment (Spence 2010:240-241). The cultural history of this park is one that is important not only to the history of the Sioux people, but also to the history of our nation.

CHAPTER 3 - METHODOLOGY

Fieldwork

The fieldwork for this project took place June 13-July 1, 2015, as a portion of an existing Midwest Archaeological Center field project. The work was conducted by four MWAC staff members, Anne Vawser (lead archeologist), Holly Staggs (archeologist), Michael Shumacher (archeological technician), and myself (archaeological technician). Because the sites had not been visited in at least a year, work plans were flexible and the crew was aware that they could be subject to change.

There have been a number of archaeological investigations related to historic Native American sites in both the United States and Canada, these were discussed in the introductory chapter. Though these projects often utilized excavation as the primary data collecting method, this project relied on pedestrian survey and metal detecting. These methods were chosen because of time constraints within the fieldwork schedule and because the sites investigated had unclear occupations related both to groups of people and the time frame of occupations, something that was not a concern for other researchers in other regions. Successfully utilizing these methods for historic Native American sites could also have positive implications for other heritage management and cultural resources management work where time and funds are limited but volunteer bases are often large and willing.

Fieldwork Goals

There were two primary goals related to the field work associated with this project. These goals were:

1. Pedestrian inventory of sensitive and/or exposed sites
2. Metal detection survey of the five sites indicated in the following section of this chapter

Artifact collection was nearly 100% with some exceptions that will be discussed further in this chapter. Lab work, conducted by the Midwest Archeological Center, included cleaning, analyzing, and repackaging of artifacts. The artifacts will be cataloged and permanently stored by the Midwest Archeological center upon completion of research.

Site Selection

The sites that were chosen for this investigation were all identified by crews from the Midwest Archeological Center in previous field seasons. A crew returned to the sites in June 2016. A combination of metal detector survey and pedestrian survey was conducted at each of these sites to determine what types, if any, of historic artifacts were present. Metal detector survey was chosen for this project for multiple reasons. 1) Many of the sites were in regions of the park that have not been burned for at least 2 years and have poor ground visibility and 2) trade goods utilized by both Euro and Native Americans included various metal objects and, because metal is able to survive, mostly intact, after being buried or exposed on the surface should still be lingering at sites.

For the purposes of eventual artifact comparison I chose one site with a known Euro American occupation (WICA 2015-5), one site with a known Native American occupation (WICA 2015-61), and three sites with an unknown occupation (39CU357, 39CU2566, WICA 2015-46) (Figure 3.1). The two sites with known occupations were chosen to produce the control sample against which artifacts from the unknown occupation sites could be compared.

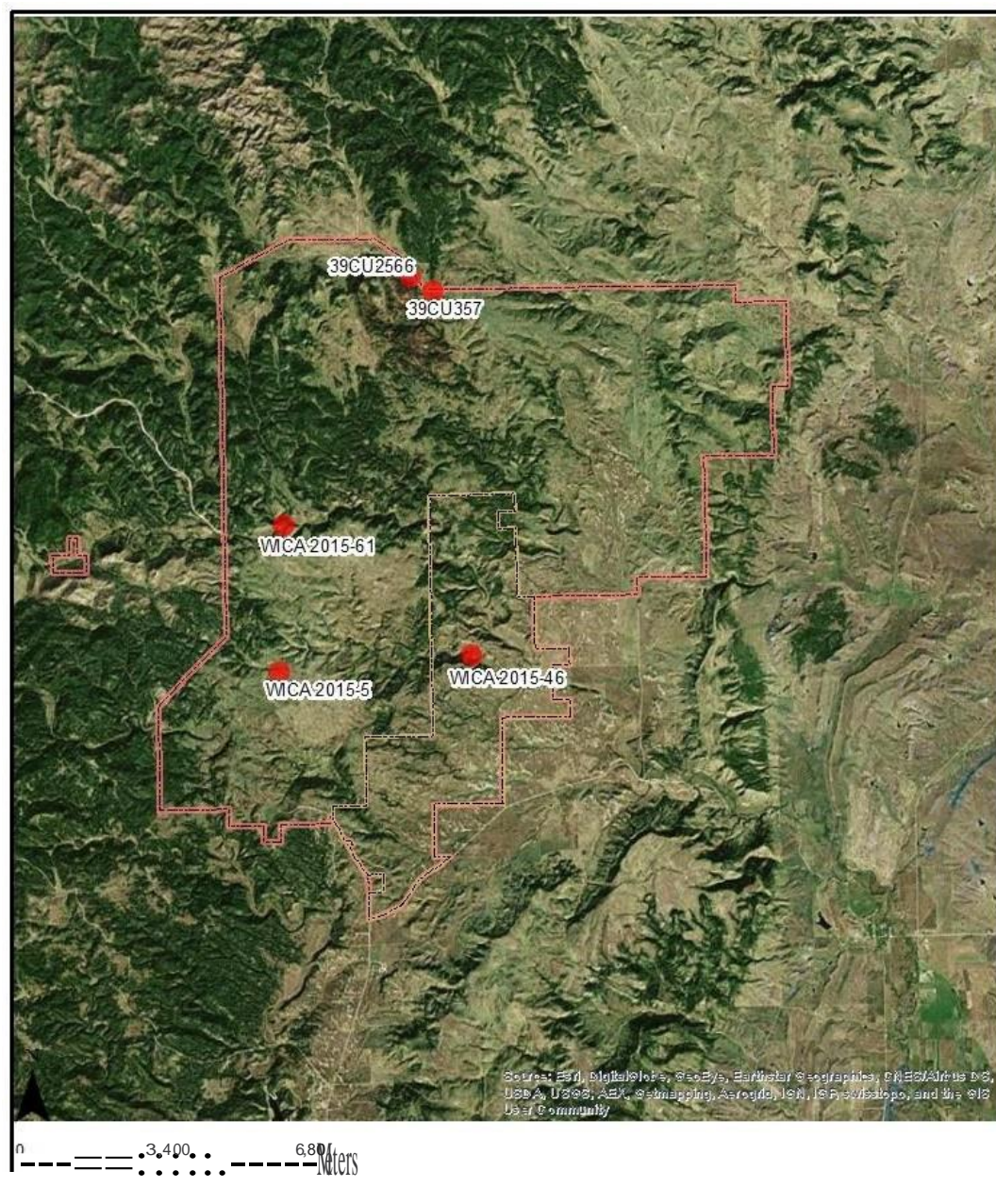


Figure 3.1 Map showing the location of all five sites inside the boundaries of WICA

Site WICA 2015-5 was identified during the 2015 field season. This site is clearly historical and contains the remnants of a structure, a possible yard wall, cistern, and possible well, all of which are visible on the surface (Figure 3.1). In addition, there is a large amount of historical trash spread across the site that includes glass, ceramic, and various types of metal. Artifacts and features collected or identified at this site are important to the comparative aspect of this research because the site was identified on an 1893 plat map (Figures 3.3 and 3.3) as being immediately adjacent to the Valentine ranch.

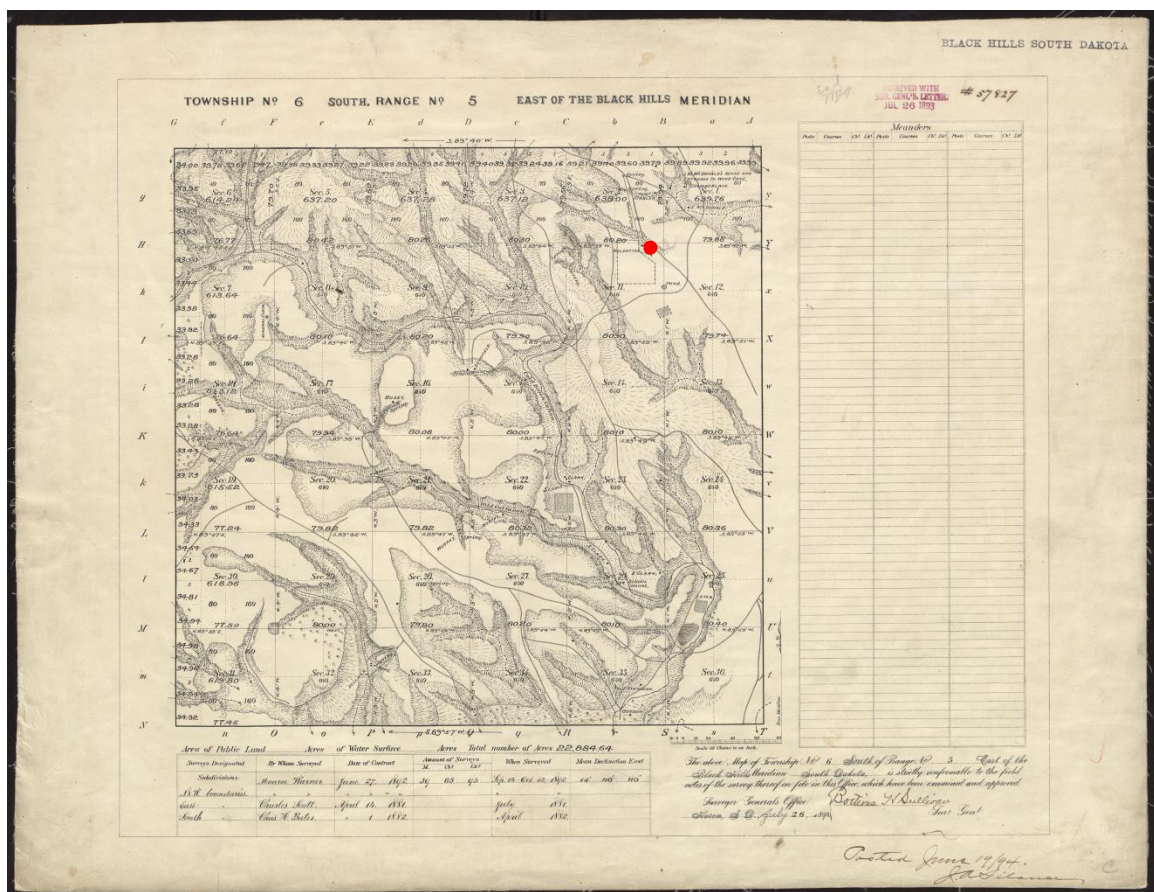


Figure 3.2 1893 Plat Map showing the location of the Valentine Ranch as well as the location of site WICA 2015-5.

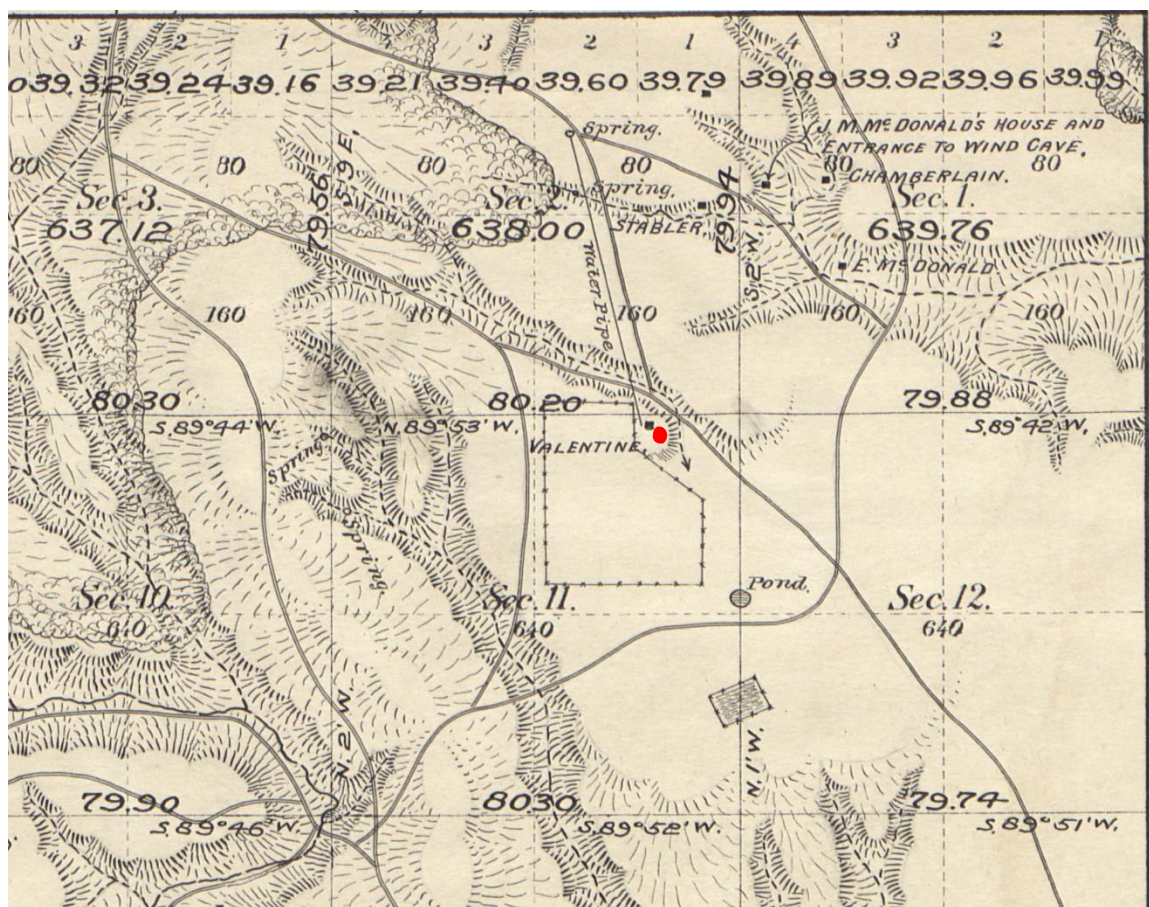


Figure 3.3 Close up view of Valentine Ranch and location of site 2015-5.

The second comparative site, WICA 2015-46, was also identified during the 2015 field season. Photos of a Lakota camp from 1937 were found by MWAC Archaeologist Anne Vawser in the book *Wind Cave National Park: The First 100 Years*. The book is part of the Images of America series and includes many photos of a camp set up by a group of Lakota people from the Pine Ridge Indian Reservation who set up a short term encampment in the National Park as they travelled through the Black Hills on the rodeo circuit. These photos are the only known images of historic Lakota encampments, though groups of tribal members did travel through the park during multiple rodeo seasons. A general location of the camp site was described in the book alongside the photos (Sanders 2003). Vawser used the photos from the book and assistance from crew members from the Midwest Archeological Center and the University of Nebraska –

Lincoln field school to relocate the site in June 2015. Large rocks and other stationary landforms were identified both in the photos and the current landscape, providing an accurate location for the short term occupation. One instance of this is shown in Figures 3.4 and 3.5.

Because this Lakota site was occupied in 1937 (Thomas Farrell, personal communication 2015), considerably later than the estimated dates for the other sites and at least three decades after the park was founded, it is possible that the assemblages found there will be too different to use as a control sample. However, they will still be an accurate reflection of historic Lakota life in the Black Hills.



Figure 3.4 Historic photo of chief Dan Blue Horse during a summer encampment in Wind Cave National Park.



Figure 3.5 2015 photo relocation of the summer encampment

Site 39CU357 is believed to be the location of a bison jump site based on stone alignments found above a bluff, though little archaeology has been done to confirm this fact at this time. However, during the 2012 field season a Midwest Archeological Center crew member

found a metal projectile point at the site, possibly confirming the existence of a bison jump and firmly linking it to the historic period.

Another possibly protohistoric site is WICA 2015-46. This site was found along Wind Cave Canyon in a new addition to the park and was identified during pedestrian survey in June 2015 by a crew from the Midwest Archeological Center with assistance from the University of Nebraska – Lincoln (UNL) field school. At this site crew members identified six stone circles and one rectangular stone alignment that appears to be from a wall tent. Assuming that the tent and the tipis were at the site concurrently, this was also identified as a possible protohistoric Native American site.

The final site, 39CU2566, is located within sight of 39CU357. This site consists of rock cairns and some historic artifacts. Because of the cultural significance and possible sensitivity of this site, only pedestrian survey, one of the most minimally invasive archaeological techniques that can be employed, and metal detecting without ground disturbance were conducted at this site. Other data for this location will come from reports on previous field research.

Methodology

For this investigation a combination of pedestrian survey, metal detector survey, and targeted excavation (Figure 3.5) was employed. These methods were employed because they were the most practical for the field conditions found at the National Park and because, if successful, these methods could be easily utilized by heritage management and cultural resources management archaeologists in various regions at similar sites. Though metal detection has been utilized effectively at many types of historic period sites such as battlefields (Scott and Bleed 1997, Bleed and Scott 2011), internment camps (Young 2013), historic hunting camps (Scott, Bleed, and Damm 2013), and sections of the Overland Trail (Vawser, DeVore, and Scott 2015) it

has not been utilized at historic Native American occupation sites. Historic Native Americans have been included in other metal detection surveys of battlefields, however, for the purposes of this project I define “occupation” as a zone of habitation where people went about their daily lives. It was my hope that the success of this methodology in other historic contexts meant that similar survey methodology could be employed to determine the occupants of these sites in Wind Cave National Park.

Prior to beginning fieldwork, the methodology for this project was prepared with the assistance of former MWAC archaeologist Allison M. Young whose 2013 master’s thesis employed the use of metal detection to investigate a Japanese internment camp in Western Nebraska. Metal detector strategies were adapted from her 2013 thesis and personal correspondence.



Figure 3.6 A “pinpoint” excavation of a metal artifact

For each of the sites where metal detector survey was conducted, 20x20 meter grids were set up in locations based on the features at each site. Crew members with metal detectors were spaced two meters apart and surveyed in parallel transects until the grid was complete. The same survey technique was then completed in transects perpendicular to the first. This was done to limit user error and also to ensure full ground coverage for each grid across all of the sites.

Most of the difficulties that occurred while conducting these pedestrian and metal detector surveys were unavoidable and related to the natural environment at WICA. Multiple sites were located in areas of the park that do not see visitor traffic, have not been burned in multiple years, and are not ideal locations for prairie dog towns. Because of these conditions there was often very heavy vegetation that limited ground visibility and often impeded metal detecting. In

order to get full ground coverage with the metal detectors, operators were forced to walk quite slowly while moving the detectors strategically through tall grasses in order to avoid tangling the heads and damaging the detectors.

The fauna of the park was also often an impediment to survey. Bison in particular have little regard for the presence of people and the crew was forced, more than once, to abandon a particular site for the day as herds progressed on their daily routes through the park. We were particularly aware of the presence of bison because the calves from the spring were still quite young and cows are known to be more aggressive during this time of the year. The weather is also unpredictable during the summer months in the Black Hills and thunderstorms did force a retreat from survey on multiple occasions.

Grid locations, as mentioned previously, were chosen based on surface features at each site. These included a cistern, trash dump, and foundation or wall at WICA 2015-5; a fire pit or hearth feature at WICA 2015-61; the road at 39CU2566; possible cairns at 39CU357; and the location of a rectangular stone alignment at WICA 2015-46. Some of these features will be discussed later

At sites WICA 2015-5, 39CU357, and 39CU2566 pedestrian survey was conducted prior to metal detecting. This strategy was chosen at 2015-5 because the site was in the center of a prairie dog town and the ground visibility was very good, by far the best of all the sites visited for this research. By conducting pedestrian survey first, it was possible to collect glass, ceramic, and surface metal artifacts prior to metal detecting. This was partly done to speed up the metal detecting process and therefore the entire project. By collecting these artifacts first, the crew was able to reduce the number of artifacts that were picked up by the metal detectors, allowing excavation of fewer metal detector hits in a shorter amount of time. Site 39CU357 was surveyed for similar reasons. The ground visibility was high and lithic tools had been found on the surface

before. These were collected as well because that strategy had been employed at the site in previous field seasons.

Site WICA 2015-5 was the first location investigated and as it is quite large, approximately 100x100 meters, the research and survey plan was changed as the project developed. The initial project plan was to do pedestrian survey and metal detection survey in twenty 20x20 meter grids. However, after further exploration of the site this number was limited to 16 grids that were set up consecutively in a large 4x4 block. However, this was changed again after fieldwork began.

On the first day of field work the crew of four MWAC staff members were able to conduct pedestrian survey in 6/16 grids and metal detection in 5/16. This was not including the time it would take to conduct pinpoint detections, collection, and GPS. This rate of completion forced me to rethink my initial planning and reassess what was possible to complete while also getting comprehensive results. Because this project was completed by Midwest Archeological Center staff along with other field work requested by the park, the completion of the metal detecting at these sites was done in the most time efficient way possible under the circumstances. The final work plan for site WICA 2015-5 included a 3x3 block of 20x20 meter grids of which six were surveyed (Figure 3.7). The grids surveyed were Grid 1, Grid 2, Grid 3, Grid 11, Grid 12, and Grid 13.

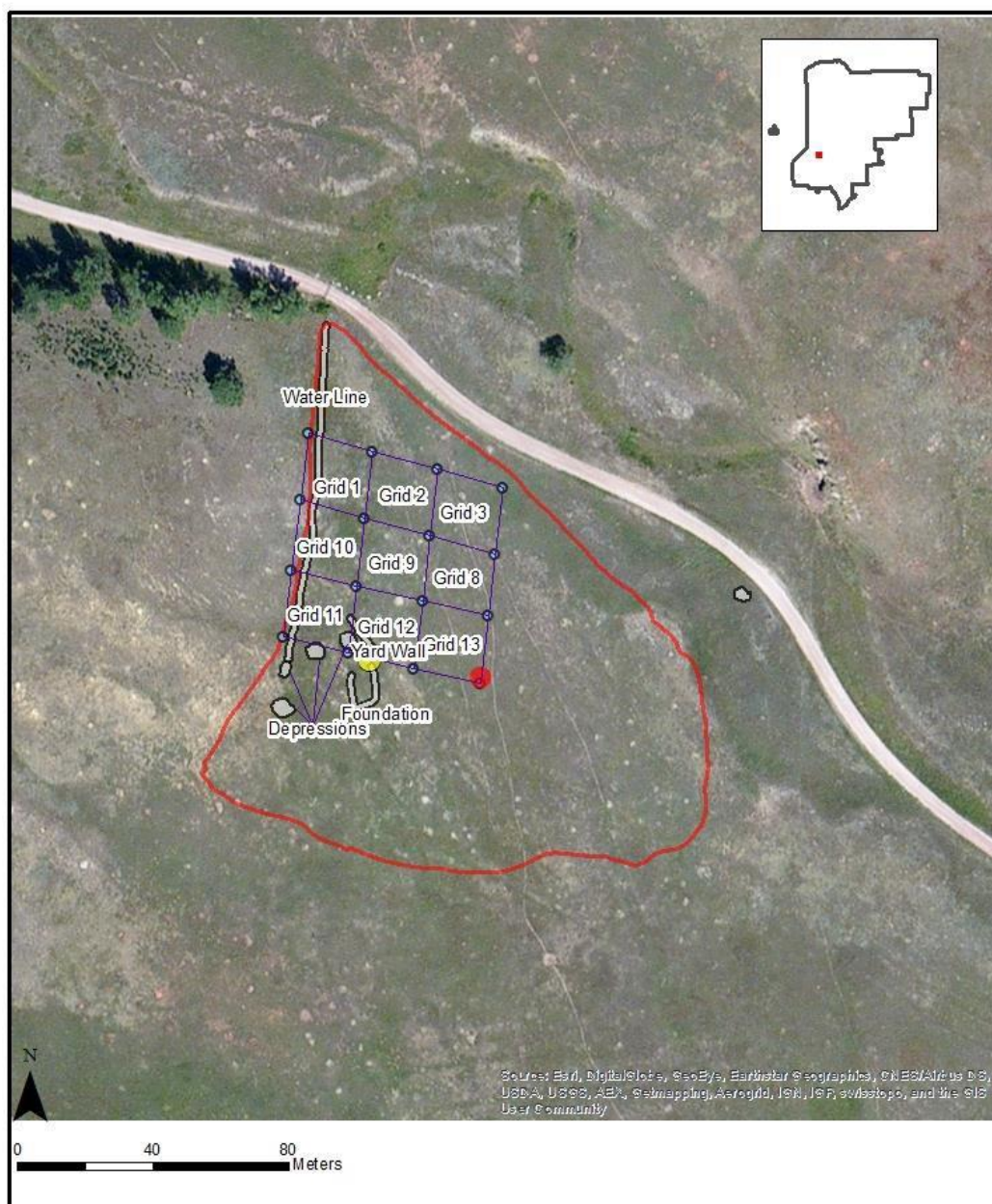


Figure 3.7 Map of site WICA 2015-5 including metal detector grids, site boundary, and associated features.

Adapting as the situation required it allowed coverage of surface features including a cistern, depressions, and a possible foundation or wall feature as well as open areas that would

have been associated with this ranch while also using time effectively in order to complete survey at the four other sites.

Pedestrian survey was also conducted at 39CU2566, known as the Three Large Cairns Site (Figure 3.8), because it had previously been identified as containing possible burial cairns. The identification as a burial site came from a field project led by park archeologist Jennifer Galindo. In 2002 a group of elders with the Gray Eagle Society of the Pine Ridge Reservation, were taken to the site for tribal consultation. This was only one of four sites that tribal elders visited, however it is the only one of those sites addressed in this investigation. At the Three Large Cairns Site one of the elders, Elaine Quiver, discovered “a red bead with a white center” near one of the cairns. Because of the possible association with burials, the elders gave prayers, sang a song, and the bead was reburied where it was found (Galindo 2004:108-110).

Galindo also notes in her report that “the largest cairn (Figure 3.9) resembles prehistoric cairns found across the Northern Plains in size and shape, however, prehistoric cairns occur most often, but not exclusively, on prominent hilltops (2004:108-109).” These cairns, however, are located on a sloping hillside (Figure 3.10) that rises quite dramatically to a tree covered ridge above the site. This site is also within walking distance, approximately 500 meters, from site 39CU357 where the possible bison jump is located.



Figure 3.8 Plan map of site 39CU2566 including cairns and grid corners.



Figure 3.9 Cairn 1 of 3 at site 39CU2566. Photo courtesy of Jennifer Galindo.



Figure 3.10 Overview of site with 2 of 3 cairns visible, rise is behind the photographer. Pin flags indicate metal detector hits.

Though pedestrian survey was conducted, ground visibility at this site was not ideal and metal detector survey was conducted as well in one 20x20 meter grid that incorporated two of the three cairns. Each metal detector hit was still flagged, though no excavation was conducted. If the artifact was not visible under the grass layer, no further investigation was conducted. No artifacts were collected at this site and the artifacts were only recorded through photos and GPS coordinates.

The artifacts that were collected at the other four sites, 39CU357, WICA 2015-5, WICA 2015-46, and WICA 2015-61 were varied but also somewhat limited by the fact that metal detection was the primary survey technique and therefore, at multiple sites, the potential for non-metal artifact collection was eliminated. These limitations will be further discussed in the

following chapter. Field photos from 39CU2566 will be included for comparison as no artifacts were collected.

CHAPTER 4 – RESULTS AND DISCUSSION

Overview

Compared to investigations at historic Native American sites in other regions, the investigations at these sites did not produce the types of artifacts that were anticipated, particularly at sites 39CU357, 39CU2566, WICA 2015-46, and WICA 2015-61. These sites were known or suspected historical Native American sites and as such I anticipated at least a small portion of the artifacts uncovered to show evidence of modification for secondary usage. However, during this field work only one site (WICA 2015-61) produced artifacts that may have been modified. The artifacts from the other sites were strictly historical and at WICA 2016-61, were found in very small numbers.

This was not the case at every location surveyed and some of the sites produced large and varied assemblages. Others produced less than 20 artifacts across 1200 square meters. In this chapter I will discuss these assemblages that resulted from my fieldwork and the answers that they provide to my initial research questions and the inferences that can be made in regards to those questions.

Metal Detector Survey

Though GPS documentation is undoubtedly important, the metal detector surveys conducted at all 5 sites were the most vital to the scope of this investigation. Because Native American sites from the protohistoric and historic periods often do not leave behind the remains of permanent structures, mapping is less important for these types of sites. The particular questions addressed by this investigation were: Are historic Native American sites visible on the landscape? Do the assemblages they contain appear different from those at historic Euro American sites? Thus, it is the recorded artifacts that will provide the key to answering these questions and lead to further research. The tables in this chapter include the artifacts collected from sites 39CU357, WICA 2015-5, WICA 2015-46, WICA-61 and all artifacts identified at site 39CU2566.

WICA 2015-5

The metal detector survey was tested and adjusted at this site because of its size and the density of artifacts. Pedestrian survey prior to metal detecting helped in the elimination of surface metal and resulted in the collection of some metal, curved and bottle glass, whiteware ceramic, and porcelain. Lithic tools were also collected from the surface. The subsequent metal detector survey resulted in the collection of a variety of metal artifacts including wire and cut nails, hole-in-top cans, fencing materials, and various types of domestic debris (Table 4.1). Some of these artifacts are described and shown below.

The porcelain, whiteware, and ceramic fragments, as well as some of the bottle glass and the food cans indicate the presence of a domestic dwelling in relatively close

proximity to this site. These artifacts are likely the trash related to broken dinnerware and drinking or medicine bottles and empty food containers (Figures 4.1 and 4.2). The fragments are all quite small and even the fruit jar bases are too fragmented to clearly read (Figure 4.1). Many of the metal artifacts indicate the presence of buildings (hardware such as hinge plates and nails), fences (Figure 4.3), livestock – particularly horses (Figure 4.2), and possibly a blacksmith shop (horseshoes, possible raw iron for smithing). Most of the artifacts indicated by the metal artifacts are ones that you would anticipate finding on a ranch around the turn of the 20th century.



Figure 4.1 Fruit Jar base fragments



Figure 4.2 Olive glass fragments, possibly a wine bottle. Edge wear is likely from trampling



Figure 4.3 Horseshoes from various stages of use



Figure 4.4 Cut nails, wire nails, and fence staples – both used and unused examples of each are shown

Artifacts which were identified within the metal detector survey and recorded with GPS coordinates but not collected include both wire and cut nails, small gauge wire fragments, small sheet metal or can fragments, and any other materials likely to be non-diagnostic. It was determined that these artifacts would not add anything valuable to the research and that collection and curation would be unnecessary.

Artifact	Grid 1	Grid 2	Grid 3	Grid 4	Grid 7	Grid 8	Grid 9	Grid 10
wire nail	6	1		2	1	1		
concrete anchor	2							
metal fragment	9	22	9		1		2	
hole in cap can	1							
cut nail	2	3		1			1	
fence staple	2				2			
fence wire	1							
wire fragment	1	1	1					
scraper	3				2	4		
biface	1					1	1	
forged nail	1							
hardware	1	1	1					
shaker cap		1						
metal strapping		10	7					
can fragment		1	47				7	
retouched flake		1					1	
horseshoe		2						1
fruit jar lid		1						
machine part?		1						

shotshell brass				1				
bottle glass					29	3	6	25
glass fragment					9	1	16	12
bullet casing					1			1
barbed wire						1		
retouched flake								
thimble							1	
hole in top can fragments							8	
can lid							1	
enamelwar e bowl							1	
tobacco tag								1
whiteware ceramic								3
buckle								1
small tin								1
melted glass								1
porcelain fragment								2
glass button								1

Table 4.1

The artifact assemblage collected from this site, which was known to have been occupied by Euro Americans, was intended to be used as a type of comparison collection to any artifacts found at the known and possible Native American sites also within the study area. This site produced the largest assemblage of any site in this investigation and was one of two sites within the investigation to produce non-metal historic artifacts.

This assemblage was also the most diverse of all the sites within the investigation. This occurred for multiple reasons that were beyond the control of the research crew. First, the site was in the center of a large prairie dog town. Prairie dogs not only bring artifacts to the ground surface as they dig their burrows, but also eat and trim surrounding vegetation so that they are able to easily observe approaching predators. This is convenient for archaeologists because the ground visibility is very good. Bison also frequent this area of the park and create wallows for dusting themselves, often on the mounds that are formed at the entrances to the prairie dog tunnels (National Park Service 1979:11). These large patches of ground are bare of most vegetation because of the bison, and in them artifacts that would otherwise be buried are exposed. Because of these factors the ground visibility at site 2015-5 was approximately 100% and even non-metal historic artifacts and lithic tools were easily observed and collected.

Artifacts were collected at this site in the hopes that they would provide type and usage comparisons to historic artifacts found at sites with Native American occupations. Though dating sites was not within the goals of this investigation, some of the artifacts collected (ex. Fruit jar lid, jar base fragments, tobacco tag, hole-in-top cans, enamelware bowl) could be useful for dating the occupancy of the site with some time and effort dedicated to that task. Some of these artifacts could also be used in further investigations

into the socio-economic status of the family who homesteaded this land. Similar investigations have been carried out by Rotman and Nassaney (1997) at a farmstead in Southwest Michigan while Leedecker (1994) referenced more broad patterns of domestic behavior based on discard patterns at historic sites.

Based on conversations with retired MWAC archaeologist Jeffrey J. Richner, who worked extensively at historic Native American sites in the Great Lakes region over his 38 years with the National Park Service, I expected discard at Euro American sites to be centered around larger dump sites dedicated to that purpose while Native American sites would have a more sporadic discard pattern because of the reuse of materials and shorter term occupations at sites. The initial site assessment indicates the presence of two or more concentrated areas of surface artifacts that points toward the presence of trash dump at this site. One of these localities was a depression that was included as a part of a survey grid. Though there were multiple metal detector hits within the depression, one in particular was excavated with a trowel to approximately 20cm below the ground surface. While artifacts were still being unearthed, the pinpoint metal detectors, which detect metal within approximately 15-20cm, were indicating the presence of more artifacts. It was at this depth that a sample of the artifacts from the dump was collected (Figure 4.5) and the hole was backfilled. One other possible dump location was not within the grid boundaries, but a large concentration of artifacts was visible on the ground surface.



Figure 4.5 A sample of artifacts collected from a dump location on the site

Some of the glass artifacts collected from this site could have been mistaken for Native American artifacts, particularly scrapers, though it is unlikely that they are. Research has been done by historical archaeologists on both historic utilized glass artifacts as well as trampling patterns (Clark 1981, Niemoller and Guse 1999, Harrison 2000, Conte Romero 2008, Porter 2015) but it would be difficult to definitively know which processes contributed to these artifacts without further investigation by an archaeologist with more lithic experience. Though many of the glass fragments collected were chipped in a way that mimicked intentional flaking scars, based on the location of the site this “flaking” can be tentatively identified as the result of trampling by bison and

other large mammals rather than intentional human reworking (Figure 4.3). This site is located in an area of the park known as “Bison Flats,” a name that references the consistency with which bison frequent the area. In Figure 4. you can see the bison trails that crisscross the site, hence my belief that this flaking is the result of trampling.

Some can fragments from this site also appear, at first, to be Native American in origin. Small triangular pieces of a can lid were discovered at metal detector hits. These pieces are incredibly close in size and shape to tinkling cone blanks discovered at historic Native American sites in the Great Lakes regions. However, multiple hole-in-top cans were later discovered with lids that had been cut in a “pie slice” pattern with each individual “slice” folded back in order to remove the contents of the can. The individual triangle pieces found appear to be broken from other similar cans (Figure 4.6).



Figure 4.6 Can and fragments cut into “pie slices”

WICA 2015-46

Metal detector survey was conducted in four 20x 20 meter grids at this site, however only three metal artifacts were produced in total (Table 4.2), though they were found in two grids. The three artifacts identified by metal detecting conducted in 2016 were two brass shot shells and one hairpin (Figure 4.8). Fieldwork in 2015 was responsible for identifying a lithic scatter at the site, the initial tipi rings and rectangular alignment, and a mano and matate adjacent to the alignments.

Grid	Artifact	Count
1		
	shotshell	2
	hairpin	1

Table 4.2

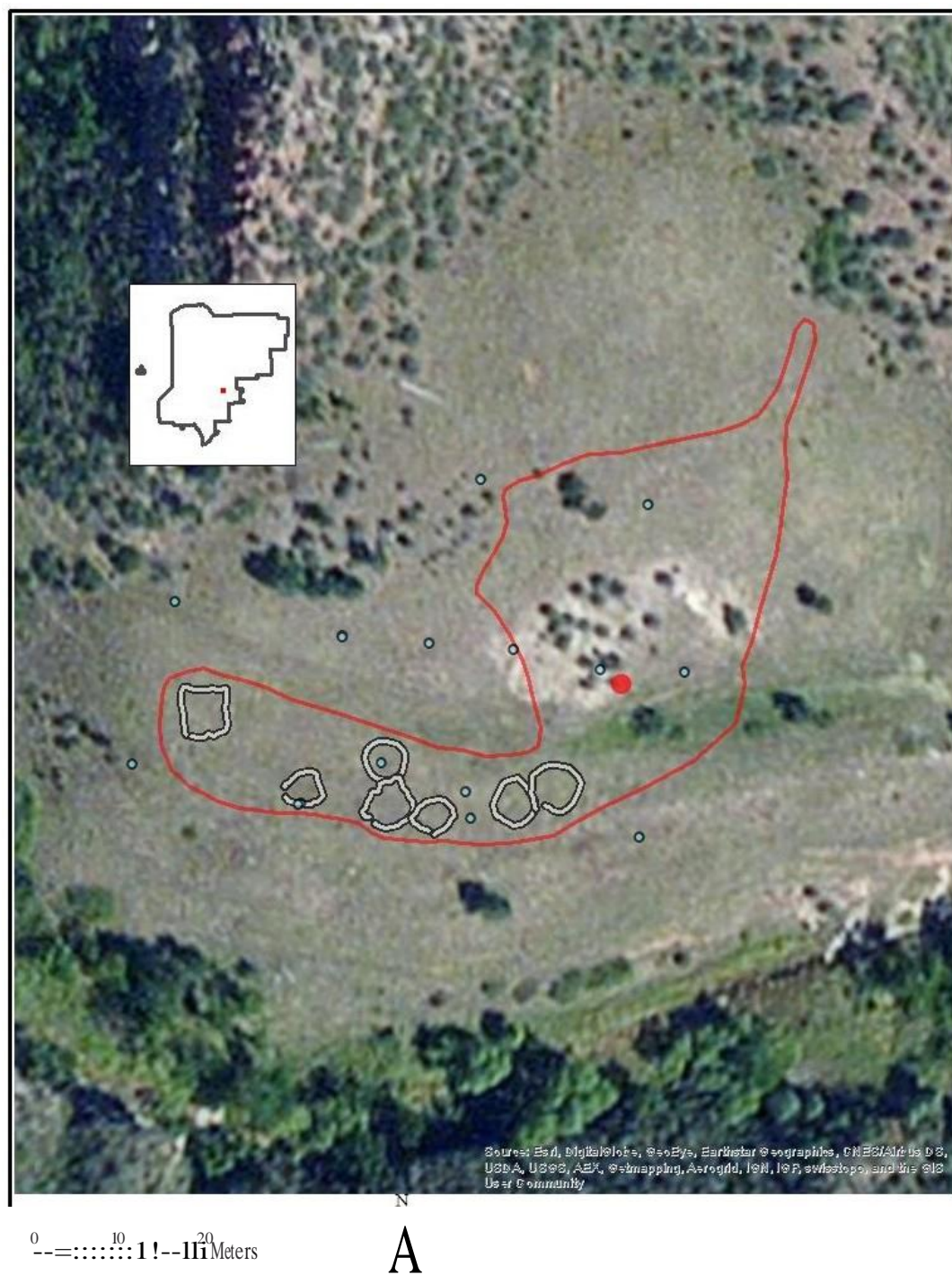


Figure 4.7 Map overview of site WICA 2015-46 including grid corners and stone alignment features



Figure 4.8 Two brass shot-shells and one hairpin

The small number of artifacts found at this site make any discussion or conclusions difficult. Though the site did appear to be protohistoric upon first discovery, the lack of success identifying metal artifacts makes it difficult to say definitively that this is a protohistoric or historic period Native American site. This site is located within the boundaries of the recently acquired Casey Addition, a section of ranchland that has been in continuous use since the late 1800s. Though the site is not near the ranch house and outbuildings, other sites related to the Sanson family have been identified along a majority of the length of Wind Cave Canyon. These sites are mostly related to the ranching operation at this location and include multiple abandoned livestock watering tanks and windmills. A section of the canyon wall marked with historic inscriptions attributed to the Sanson family was also identified.

Small .5x.5 meter excavations were done in two of the tipi rings at the site. These excavations were placed within what appeared to be an interior hearth feature in each of the rings. These excavations, unfortunately, uncovered a minimal number of artifacts. These consisted largely of shatter and small debitage pieces. No historic artifacts were uncovered from these excavations and only one possible charcoal sample was taken. Because the focus of the research questions for this project was on artefactual evidence of Native American occupation, I chose not to have the sample dated. However, this may be used in future research to attempt to date the tipi rings.

It is possible that the three historic artifacts located at this site (two brass shot shells and one hairpin) are from the long-term ranching occupation rather than a more short-term historic Native American occupation because of the number of historic ranch-related sites throughout the canyon. Though it would benefit the results of this investigation to assume that the lithic scatter, stone alignments, and metal artifacts were proof that this was a Native American site, I feel that the data available is too limited to conclusively make that distinction. Tipi rings, circular arrangements of stone that had been used to hold down the skins on conical tipis (Frisson 1967: 26-27, 59), are common at prehistoric and historic Plains Indian sites while rectangular stone alignments, such as this one assumed to have held down the three sides of a wall tent, are not. This rectangular alignment is almost definitely from a historic occupation. However, without a larger artifact sample for analysis there is no way to determine whether the tent was used by Native or Euro Americans. At this time, I would suggest re-visiting this site after a burn when the ground surface is visible and other artifacts present could be more easily identified.

WICA 2015-61

This site yielded little in the way of diagnostic artifacts (Table 4.3) and the majority of metal detector hits were not collected once they were excavated. The artifacts collected were 5 pieces of barbed wire, four smaller gauge wire fragments, a screw top bottle cap, a hexagonal nut, and a possible wall hook. The artifacts that were metal detected and recorded with GPS coordinates but not collected for curation were large, modern wire nails, possibly from a vegetation survey, and one fence staple.

Grid	Artifact	Count
1		
	barbed wire	5
	hardware	1
	bottle screw top	1
	hexagonal nut	1
	wire fragment	4

Table 4.3

This is undoubtedly the location of a short-term historic Native American encampment based on the identification of historic photo locations. However, few artifacts were found that would add any information to what is already known about this site or its occupancy. The most informative artifacts were barbed wire fragments approximately two feet long (Figure 4.9). These fragments were single strand wire with

four pronged barbs; however, each of the barbs had been snipped off near the wire. This could mean that the wire was repurposed and the barbs were cut to ensure the safety of the person using it.



Figure 4.9 Barbed wire fragment with trimmed barbs

Two of these wire fragments were found inside the boundaries of what is assumed to be a hearth or fire ring feature. Because of the length of the wire, the snipped barbs, and the location it is possible that these two fragments were used as handles for some type of kettle or other cooking vessel. This sight is within view of a hiking trail (Figure 4.10), so the idea that this hearth was from a modern occupation did occur to me. However, the hearth appears to be visible in the background of one of the historic photos (Figure 4.11) that shows bison meat drying on a stick, and because the site is also within sight of Highway 87, a main fairway through the park, it is unlikely that the fire ring is

from modern camping. This fire ring was relocated in 2015 (Figure 4.12) and was used as a guide for setting up the grids for the metal detection in 2016.

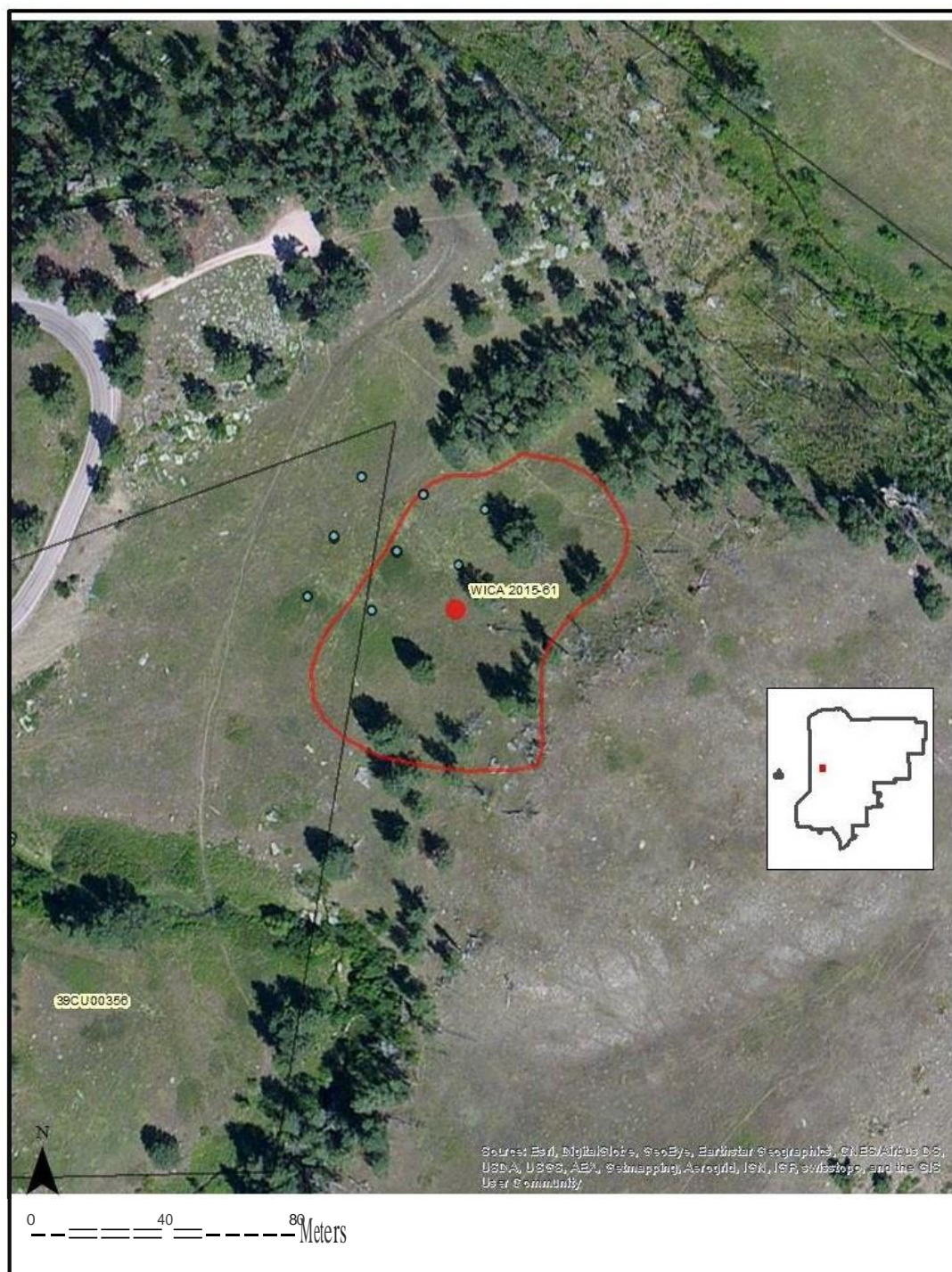


Figure 4.10 Overview map showing the proximity of the site to the highway and hiking trail



Figure 4.11 The feature in the circle appears to be a stack of logs inside or adjacent to a fire ring, a fire ring feature was identified in 2015 and is shown in Figure 5.6



Figure 4.12 Fire ring is indicated by pin flags, crew members (L to R) Anne Vawser, Amanda Renner, Emilie Turek, Jennifer Hammond

A similar barbed wire to the one identified in the fire ring and elsewhere on the site is called “Merrill’s Brads.” This wire is described as being a “single strand wire with four-point wire barb. (The) Body of (the) barb is tightly coiled to hold (the) barb in position” (Clifton 1970:53). The wire was patented by brothers Luther and John C. Merrill on September 29, 1874 (US Patent No. 155538 A). Similar single-strand, four prong styles are still available for purchase today so no firm date could be specified from these artifacts.

The other common artifacts found at this site were large, modern wire nails. After finding 13 of these large nails in two 20x20 meter grids it was suggested that these may

have been used as markers for a vegetation survey that was recently conducted in the park. None of these nails were collected and they were all reburied where they had been originally located.

39CU357

Three 20x20 meter grids and one 10x20 meter grid were surveyed at this site and a variety of historic artifacts were recorded (Figure 4.13). Because the surface visibility was good at this site, it was possible to do some surface collection, though the majority of surface finds were metal. Only a small number of whiteware fragments were identified and collected.

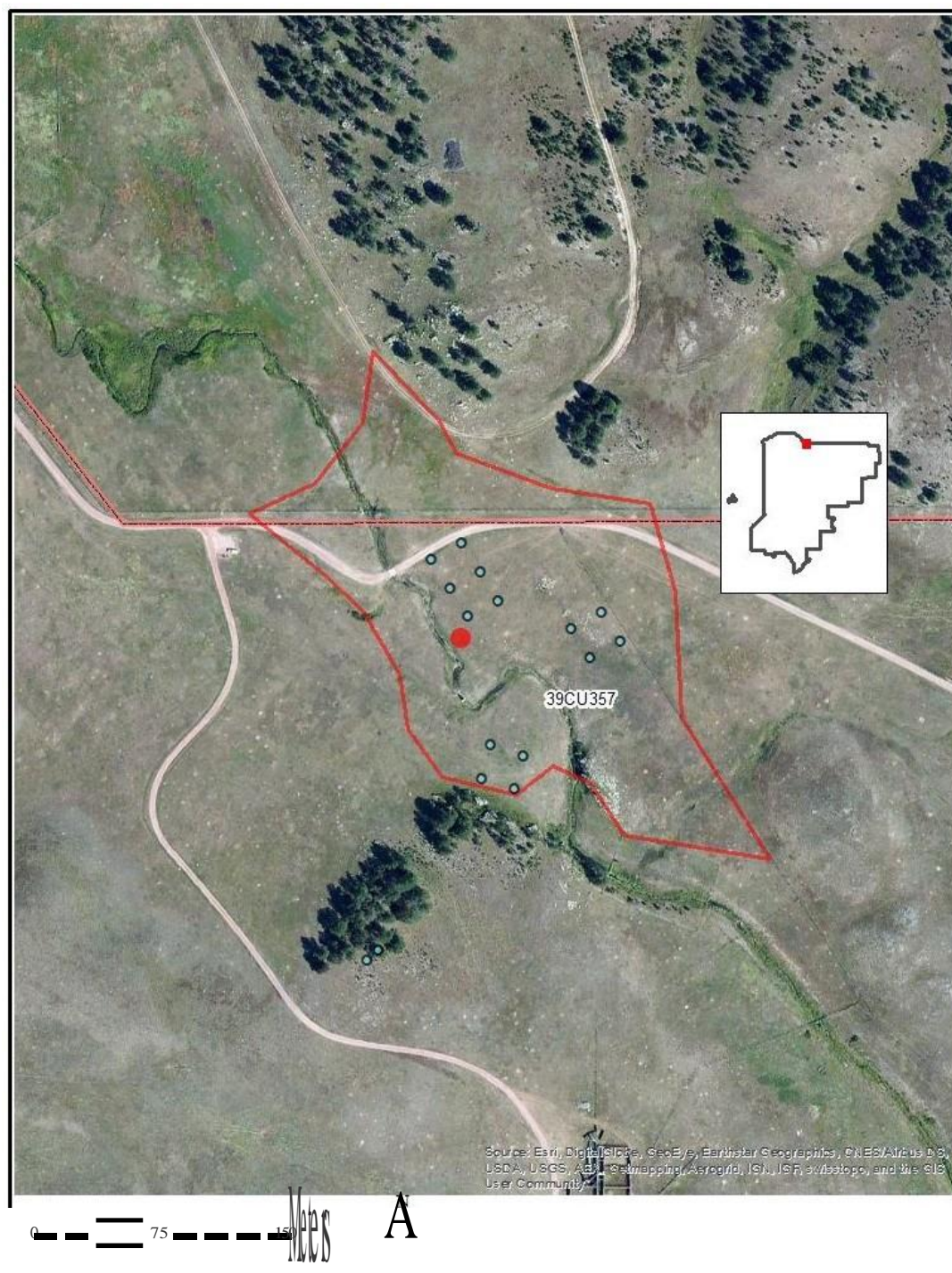


Figure 4.13 Overview of site 39CU357 showing grid locations and site boundary

Artifacts collected include general historical debris such as wire nails, metal fragments, cut nails (Table 4.4). Artifacts with more diagnostic potential included one key wind strip and vent hole cans and fragments (Figure 4.14). These could be scattered remains of the possible can dump located at this site, which will be discussed in depth later, or an indicator of early park presence at this location. A boundary fence, for use during yearly bison roundups, is immediately adjacent to this site, as is the fence that marks the border with Custer State park. It is possible that some of these artifacts were left by crews performing maintenance on the original fences. The lithic artifacts are likely from activities associated with the bison jump since they are largely tools rather than debitage or cores.

Grid	Artifact	Count
1		
	bottle cap	1
	biface fragment	1
	wire nail	1
	metal fragment	1
2		
	wire fragment	2
	metal fragment	1
3		
	whiteware sherds	2
	cut nail	5
	metal fragments	9

	can fragments	28
	round stock	1
	wire nail	4
	horseshoe nail	1
	impacted bullet	1
	utilized flake	1
	key wind strip	1
	vent hole can lid	1
	vent hole can	1
	wire handle	1
4		
	cut nail	3
	wire nail	1
	bullet casing	1
	scraper	1
	can or bucket fragments	18
	biface	1

Table 4.4



Figure 4.14 A sample of the types of artifacts collected during metal detection

This site had the most potential of essentially any site in this investigation. Because a metal projectile point had been found during the 2012 field season (Figure 4.15), this site was very firmly tied to both the historic period and to Native American occupation. This point does not appear to be uniform enough to have been made specifically for trade purposes, and more likely was made from a repurposed trade good by a Native craftsman. It was my hope that by conducting metal detector survey at this site more potentially diagnostic artifacts could be discovered. This was not the case, unfortunately. The grass was relatively short in this area, likely because it was near a creek where animals, including herds of bison, came often to drink. Due to the high ground visibility, this was the only site besides WICA 2015-5 where non-metal historic artifacts were collected.



Figure 4.15 Metal projectile point from site 39CCU357

This site is very large including the areas above and below what is believed to be a bison jump and extends across a nearby boundary fence into Custer State Park. The jump site has only had limited investigations conducted on it, however, rock alignments about the sheep bluff face do seem to indicate drive lines that would be used to push the bison over the drop (Gallindo 2004) The nearby creek is currently used as a water source by the park's bison herds, so it would make sense that this was the case prehistorically as well, giving Native Americans a chance to round up the bison and drive them from the jump.

Because the site is large the metal detector grids focused on a flat area adjacent to the base of the bison jump near where the metal projectile point had been found. Three

grids were laid out in this area, but unfortunately there were few diagnostic artifacts discovered in these grids. At the suggestion of MWAC archaeologists and project leader Anne Vawser, a fourth grid was set up at the foot of the jump. Because of a large portion of metal debris on the surface (Figure 4.16) it was suspected that we had inadvertently stumbled upon a trash dump so the grid was limited from 20x20 meters to 10x20 meters. Within this 10x20 meter grid there were over 100 metal detector hits (Figure 4.17) and approximately 10% of these hits were dug. The artifacts pulled from these small excavations included more of the same historic trash that was evident on the surface, further indicating that this was a trash dump. Because of this very few of the artifacts from the excavations were collected. One can from the surface was collected as an example of what was found at the site.



Figure 4.16 Grid 4 ground surface, metal can debris is circled



Figure 4.17 10x20 meter grid at the base of the bison jump. Pin flags represent metal detector hits.

Based on the evidence, it is likely that homesteaders in the region, and perhaps both the state and national parks in their first days, used the bison jump as a convenient place to rid themselves of refuse. It would have been all too simple for a wagon or truck to back up to the edge of the jump for trash to be thrown over the side. Because this investigation was conducted as a part of a larger Midwest Archeological Center project, the time required to fully detect and/or excavate this grid locality was not available. This

grid location was deemed to be outside the scope of this investigation and no further analysis will be conducted on the artifacts found there at this time.

39CU2566

No artifacts were collected at this site. However, a small gauge wire fragment, galvanized bucket (Figure 4.18), misfired bullet casing (Figure 4.19), and a can were identified through metal detector survey (Table 4.5). Only surface finds were recorded using GPS coordinates and photos.

Grid	Artifact	Count
1		
	wire fragment	1
	galvanized bucket	1
	misfired bullet casing (.22cal)	1
	can	1

Table 4.5



Figure 4.18 Galvanized bucket found on the surface at site 39CU2566



Figure 4.19 Bullet casing found at site 39CU2566, appears to have misfired

Because of the possibility of burials at this site only non-invasive survey techniques were used. A few artifacts were identified but only GPS coordinates and photos were taken. Two of the cairns fell within the boundaries of the one 20x20 meter survey grid and special care was taken to leave them undisturbed as survey was conducted.

It has been noted by former MWAC archaeologist Jennifer Galindo that “the largest cairn resembles prehistoric cairns found across the Northern Plains in size and shape, however, prehistoric cairns occur most often, but not exclusively, on prominent hilltops. Test excavations would be the only way to determine the age and cultural

affiliation of these features, however, it is possible that these are burial cairns and therefore excavation is not recommended” (Galindo 2004:108-109).

However, a metal detector hit that was recorded immediately adjacent to one of the two cairns challenges the idea that only excavation could be used to date the site. Surrounding vegetation, mostly dried grasses from previous years, was removed to make the ground surface visible and the hit was determined to be a metal can, likely some type of food can, which was partially buried (Figure 4.20). This can was particularly interesting because it was not buried in the ground, but instead was compacted in one of the lowest levels of the cairn itself. Because the other cairns do not appear to be damaged in any major way, meaning that the can was integrated into the construction rather than inserted at a later date, this is a positive indicator that the site is from the historic period rather than being a multi component site (e. g., a prehistoric cairn site where historic debris was later dumped). As you can see in the photo below, there is little difference in appearance between the can (circled) and the stone in the background. Without metal detectors it is unlikely that this can would have been noticed even with less vegetation.



Figure 4.20 Photo of can in situ

Though there are multiple historic artifacts scattered on the ground surface, the inclusion of this can in the construction of the cairn, whether by accident or design, seems to definitively date this site to the historic period. The overarching conclusions in relation to all five sites surveyed for this project will be discussed in the following chapter.

CHAPTER 5 – CONCLUSIONS

Final Conclusions

Though the results of this project did not confirm my expectations, it is still possible to draw inferences and evaluate the results in relation to the initial research questions posed. The goals of this project were: 1) to identify markers that could be utilized by archaeologists to differentiate Native American sites and Euro American sites from the same historic time period in the Black Hills Region, 2) positively identify the occupation of certain sites within the boundaries of Wind Cave National Park, and 3) determine if metal detection and pedestrian survey could be used effectively in the field to achieve these two goals.

Based on this field research, site 39CU357 could not be more firmly tied to a historic Native American occupation. Though the artifacts at the site are definitely historical in nature, there are no defining characteristics that would identify them as Native American. Site 39CU2566 is undoubtedly a historic Native American site, though the only way to learn more about the site would be through excavation, something that is impossible due to the sensitivity of the site. Site WICA 2015-5 would be a prime location to look further into the homesteading past of the Black Hills. Because the research goals of this project involved the suitability of metal detecting for identifying the occupation of historic sites rather than in depth analysis of specific sites, these artifacts were ultimately not utilized, though they are curated at the Midwest Archeological Center and could be used for research at a later date. The artifacts found at WICA 2015-46 are difficult to tie to a particular occupation, though the rock alignments on the site do speak to a historic Native American occupation. And finally, site WICA 2015-61, can be identified as a

historic Native American site based on evidence from tribal visits in 2002 compared to evidence presented by Dunham, Brashler, and Cleland (1998) who indicated that historic Native American remains have been discovered in association with similar stone piles and cairns in the Upper Great Lakes region (2-3).

Determining the occupation of these historic sites in Wind Cave National Park was not as effective as I had hoped, and it seems apparent that survey methods alone are not entirely suitable for this type of investigation. However, we do know more now about each of these sites than previous to this project. Historic Native American sites do have potential for future research; however it is recommended that steps be taken to slightly alter the methodology that was used for this project.

Future Research

In order for future research to be more successful the scope of the investigation must be broadened. To put it simply, we should look in different places. Though Wind Cave National Park is located in an area that was one of the final holdouts for the Lakota people, with only 14% of the park's 30,000 acres surveyed, it is possible that sites with higher potential for positive identification with Lakota occupation have yet to be discovered. Because of the nature of Park Service archaeology, this goal may not be reached for many years unless outside researchers take a particular interest in this type of work.

It is also recommended that a different methodology be used for investigating these types of sites. Though the metal detector survey was useful in some ways, I believe

that it would be more effective when used in conjunction with targeted excavations based on features at the site (i.e., the hearth or fire ring feature found at WICA 2015-61 and the square alignment at WICA 2015-46). This type of targeted excavation is what has been used at other historic Native American sites and has provided better results than the survey methods used for this project. This project chose not to use excavation in order to test the effectiveness of metal detecting as it could be applied to future NPS or heritage management projects.

Though it is not a Native American site, I believe that excavation at site WICA 2015-5, the site associated with the Valentine Ranch, would give interesting insights into early ranch life in the Black Hills. Though an exact date of settlement is not currently known, historical documentation does show a structure, fenced land, and water line from a spring in place by 1893 which is quite early for homesteading in this region. Further exploring this site could produce research that would be quite useful not only to MWAC archeologists, but also to archaeologists interested in homesteading, ranching, and the Black Hills.

The objectives for this investigation were different than those at other historical Native American sites as well. Often, in other similar research, the sites had been previously excavated and identified as the locations of historic period Native American occupations. In these circumstances researchers were able to perform excavations rather than survey in order to fully analyze specific aspects of the sites or to conduct analysis on artifacts that had been previously excavated.

However, because the sites in this study had no positive identification, I was interested to know if these types of determinations could be made strictly using survey

methodology. This type of investigation is generally more time effective allowing researchers to cover larger areas in shorter periods of time, is less invasive, and can be conducted accurately by workforces with little to no archeological experience. If successful in this instance, it was my hope that this methodology could then be utilized in other regions of the country to assist in the identification of other historic Native American sites.

Visiting sites of this nature after a burn or during winter months when ground cover is less of an impediment could also be to the benefit of the researcher. It is possible that important non-metal artifacts were overlooked at these sites because ground visibility was low. Based on personal correspondence with staff from the Midwest Archeological Center, it seems that in order to survey more of WICA, MWAC staff would like to work with ark staff to conduct controlled burns in area with high potential for sites. This would benefit both the park's interpretation potential and the archaeological information available to researchers so it is my hope that an agreement could be made.

Overall, the potential for research at these types of sites is high, though the methodology used in this project was not the most effective and should be rethought by future researchers. There is potential to combine a spatial approach with survey for better results. Because many sites around the Southern Hills were reused over many years by Native American tribes, using this type of combined spatial approach may be able to increase the information available on the prehistoric and historic timelines of this area. By attempting to expand the knowledge of the lives of historic Native Americans we are attempting to expand the knowledge of the larger history of our country. This knowledge is contributing to a more accurate picture of a challenging period in our Nation's past.

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