



2004 Archaeological Investigations
on the
University of Wisconsin-Madison Campus
City of Madison,
Dane County, Wisconsin
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Management Summary

The archaeological investigations conducted in 2004 were the result of the award of a Getty Grant Program Campus Heritage Initiative grant to the University of Wisconsin – Madison (UW-Madison) to create a Cultural Landscape Report. Great Lakes Archaeological Research Center was charged with the task of investigating approximately 100 acres of the main campus of the University of Wisconsin – Madison located along the south shore of Lake Mendota in the City of Madison, Dane County, Wisconsin.

The archaeological field reconnaissance was preceded by an in-depth literature and archives review which revealed the presence of 20 previously identified archaeological sites located within the University of Wisconsin – Madison campus. Nine of those sites were Native American mound groups/cemeteries. Ten sites were attributed to Native American habitation/campsites. One site was a known Euro-American cemetery located on Bascom Hill. Thorough review of the documentation for the campus revealed six additional habitation/campsites that had been identified in the early part of the twentieth century, but had not been recorded prior to 2004 (Figure 4.1). These sites included 47DA1236, 47DA1237, 47DA1238, 47DA1239, 47DA1244, and 47DA1245. As a group, the status of these sites is relatively unknown. The documentation was adequate to suggest a location on the landscape and in some cases a cultural or temporal affiliation, but not sufficient to provide exact locations. These sites will require additional fieldwork to verify their exact locations and conditions.

The archaeological fieldwork conducted in 2004 revealed the presence of 13 previously unknown Native American habitation/campsites located throughout the Lakeshore Nature Preserve and other portions of the main campus.

Newly identified sites include: 47DA1232, 47DA1233, 47DA1225, 47DA1226, 47DA1227, 47DA1228, 47DA1230, 47DA1231, 47DA1229, 47DA1240, 47DA1242, 47DA1243, and 47DA1234. In addition, three previously identified archaeological sites were revisited including 47DA413 – Eagle Heights Field, 47DA571 – Observatory Hill Mound Group and 47DA1207 – Observatory Hill Village.

Of these sites, eight sites remain unevaluated, but may be eligible for inclusion on the NRHP (47DA1225, 47DA1226, 47DA1227, 47DA1228, 47DA1207, 47DA1229, 47DA1242, and 47DA1243), six sites are not eligible for the NRHP (47DA1232, 47DA1233, 47DA1230, 47DA1231, 47DA1240, and 47DA1241), two sites conditions could not be determined (47DA1239 and 47DA1234) and one site is already listed on the NRHP (47DA571 – Observatory Hill Mound Group).

In addition to the Phase I archaeological reconnaissance, two sites underwent archaeological testing to determine their eligibility for inclusion on the National Register of Historic Places (47DA413 – Eagle Heights Field and 47DA124). Both sites are eligible for inclusion on the NRHP.

Table of Contents

2004 Archaeological Investigations on the University of Wisconsin – Madison Campus

Part I:	Project Background.....	7
Part II:	Research Methodology.....	33
Part III:	Results of the Investigation.....	41
Part IV:	Summary and Recommendations.....	147
	References Cited.....	153
	Tables	
	Appendices	

Part 1: Project Background

Introduction

In no region of a similar area in the state are there to be found so great a number of ancient Indian earthworks as in that about the three lakes surrounding the city of Madison. Every attractive point or sweep of shoreline about these beautiful bodies of water is or was once the site of a group of mounds. Although many of these remarkable earthen monuments have now been needlessly destroyed, a large number of them yet remain to interest all who may desire to become acquainted with the archaeological history of the site of Madison.

(Brown 1914:383)

Project History

The impetus for this project stemmed from the award of a Getty Campus Heritage Initiative grant to the University of Wisconsin – Madison (UW-Madison) to create a Cultural Landscape Report. This plan is to create a resource inventory and provide management recommendations for the spaces, vistas, research gardens and gathering places between buildings. As the UW-Madison campus is located at the geographic center of the Effigy Mound Culture (AD 700 – 1000) in North America, it is one of the few campuses in the world that is heavily endowed with Native American cemeteries (mound groups) and associated habitation areas. Previous archaeological research indicates that there are other significant archaeological resources on campus that are not associated with effigy mounds and that there has been almost continual habitation and use of the UW – Madison campus landscape for nearly 12,000 years. As such, the university facilities are situated in close proximity to many archaeological resources. Furthermore, there are many more resources (both discovered and yet to be discovered) that are on university grounds in areas that have the potential to be developed with severe impact to those resources. These archaeological sites manifest themselves in a variety of ways, but the most obvious are the earthen mounds situated throughout the campus. Any cultural landscape inventory or management plan for the development of UW facilities and for that matter, grounds maintenance, on campus must consider these resources in light of state (Wisconsin Statutes § 157.70, 44.47) and federal law (The Native American Graves Protection and Repatriation Act – NAGPRA).

As a consequence, Great Lakes Archaeological Research Center was contacted in August of 2003 to provide an estimate for conducting Phase I archaeological reconnaissance survey of approximately 100 acres and the investigation of the significance of two previously identified archaeological sites. Throughout September and October, the scope of work and budget were refined and a final scope and budget were submitted to Quinn Evans Architects who were hired by the University of Wisconsin to manage and complete the cultural resource inventory (Appendix D). The archaeological scope and budget were rolled into a larger scope and budget proposal provided by Quinn Evans and in December of 2003, the State of Wisconsin and the University of Wisconsin accepted the Quinn Evans proposal.

Fieldwork began on the project in the last week of April 2004 with the onset of clement weather. Initial fieldwork focused on reconnaissance survey of Bill's Woods followed by the Phase II investigations at 47DA413-Eagle Heights Field. A public archaeology day was provided on May 2, 2004 with approximately 200 people attending. Reconnaissance survey resumed with work in the Picnic Point West parcel and the Pharmaceutical Gardens tract. Survey was then conducted on Observatory Hill and the area near Lakeshore Residence Halls. With the completion of the work on the main campus, the Caretaker's Woods was the final survey parcel for the spring. Excavations were then conducted at 47DA124 located to the north of the Natatorium. Due to the early warm and wet weather of the spring of 2004, the vegetation leafed out early making survey of Frautschi Point nearly impossible. It was decided to delay the survey until after the first frost so that the quality of the archaeological survey could be maintained for all of the parcels. In the last week of November and the first week of December, archaeological survey work was completed for the Frautschi Point parcel.

Project Location

The project area is located entirely within the University of Wisconsin – Madison campus, however, only approximately 100 acres of the campus area was surveyed for archaeological remains within the scope of this project (Figures 1.1 – 1.2). The University of Wisconsin-Madison main campus is located on 900 acres of property within the city of Madison, Dane County, Wisconsin much of which is adjacent to the south shore of Lake Mendota. For the sake of data management, the campus area was divided into parcels that were then subsequently surveyed. A legal description for the locations of the parcels is provided below.

<u>Parcel Name</u>	<u>Legal Description</u>
Bill's Woods	NW, SW, NE of Section 16, Township 7 North, Range 9 East NE, SW, NE of Section 16, Township 7 North, Range 9 East
Picnic Point West	NW, SE, NE of Section 16, Township 7 North, Range 9 East NW, NE, SE, NE of Section 16, Township 7 North, Range 9 East S, NE, NE of Section 16, Township 7 North, Range 9 East
Caretaker's Woods	NW, NE, NE of Section 16, Township 7 North, Range 9 East
Biocore Field	NE, NE, NW, NE of Section 16, Township 7 North, Range 9 East
Pharmaceutical Gardens Tract	N, SE, SE, NW of Section 16, Township 7 North, Range 9 East SE, SW, SE, NW of Section 16, Township 7 North, Range 9 East
Frautschi Point	S, SW, SE of Section 9, Township 7 North, Range 9 East SW, SW, SE, SE of Section 9, Township 7 North, Range 9 East N, SW, SE of Section 9, Township 7 North, Range 9 East E, SE, SE, SW of Section 9, Township 7 North, Range 9 East SE, NE, SE, SW of Section 9, Township 7 North, Range 9 East

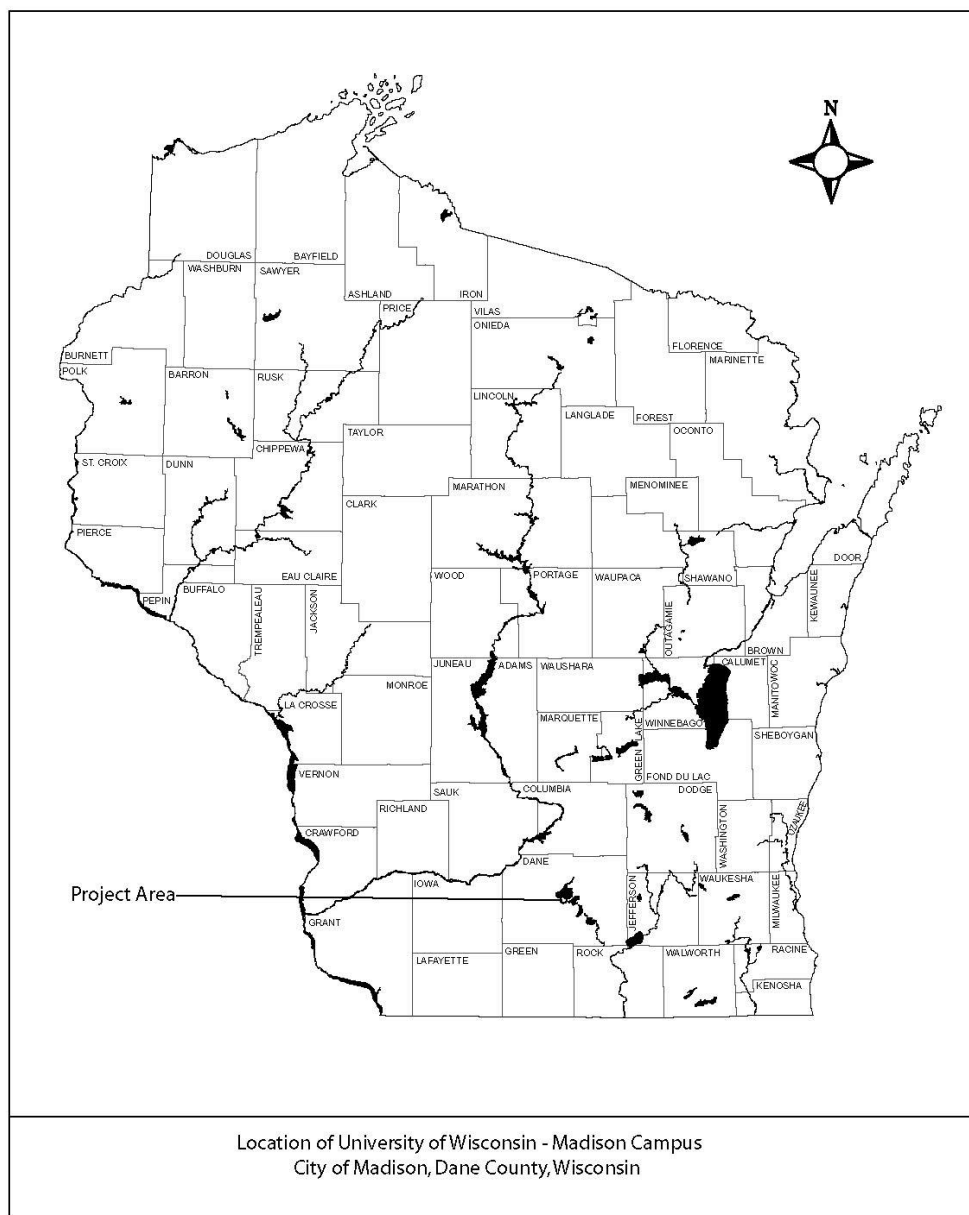


Figure 1.1: Project location in Wisconsin.

Observatory Hill	N, SW, SE, SE of Section 15, Township 7 North, Range 9 East NE, SE, SW, SE of Section 15, Township 7 North, Range 9 East
Lot 34	NE, NE, SW, SE of Section 15, Township 7 North, Range 9 East
Lakeshore Residence Halls	NW, NE, SW, SE of Section 15, Township 7 North, Range 9 East NE, NW, SW, SE of Section 15, Township 7 North, Range 9 East SW, SE, NW, SE of Section 15, Township 7 North, Range 9 East SE, SW, NW, SE of Section 15, Township 7 North, Range 9 East



Figure 1.2: UW – Madison Campus areas surveyed for archaeological sites in 2005

Project Description

This project was scoped with two distinct archaeological fieldwork components and several ancillary tasks. The archaeological study began with an archives and literature research that was followed by field investigations. The archives and literature search was conducted to identify all previously reported archaeological sites both within the confines of the campus and within a one mile radius. The archival research also documented locales within the project area that have already been subjected to archaeological survey.

Field investigations were conducted within the boundaries of the UW-Madison campus. Investigative techniques included, but were not limited to, shovel testing, hand excavations and pedestrian survey.

The archaeological tasks included:

- 1.) Phase I Archaeological Reconnaissance survey of approximately 100 acres. This involved the identification of Native American and Euro-American archaeological sites throughout the main campus area in areas that have not been built upon or undergone severe alteration through earth moving activities.

- 2.) Phase II Determinations of Eligibility for two archaeological sites (47DA124, 47DA413 – Eagle Heights Field) identified in previous archaeological surveys were conducted. The goal was to excavate 12 square meters at each site in an effort to determine whether the deposits at the site are: a) intact (i.e. minimally disturbed); and b) significant under any of the four criteria for eligibility on the National Register of Historic Places.
- 3.) Provide educational/training opportunities for up to 10 interns over a 5-week period.
- 4.) Provide two outreach opportunities – a lecture or formal presentation of the findings of the campus resources and an open house/tour of archaeological sites on campus.

Physical Setting

Physiography

It is not within the scope of these investigations to provide detailed or exhaustive reconstructions of the physiographic or topographic characteristics of the project locality. These topics as well as those relating to soils, geology, floral and faunal communities may be found in Chamberlin (1877), Martin (1965), Curtis (1959), Paull and Paull (1977) and in various Wisconsin Geological and Natural History Survey Bulletins. The following narrative is provided only to serve as a context within which the density and distribution of historic sites and pattern of historic settlement may be interpreted.

From a broad regional perspective, the project area is located within the Eastern Ridges and Lowlands physiographic province as defined by Martin (1965) (Figure 1.3). The topography of the province is influenced by *cuestas*, or ridges of resistant Paleozoic sedimentary rock flanked by lowlands developed on less resistant bedrock (Paull and Paull 1977). Specifically, the project can be placed within the Black River and Magnesian Cuesta, a subdivision of the Eastern Ridges and Lowlands. This westernmost *cuesta* is low, narrow, and formed by resistant Lower Magnesian limestone. This *cuesta* varies greatly in altitude and width. In discussing the area near Madison Martin notes:

In Dane county near Madison is a hilly region whose subsurface topography (is)...related to four rock formations, the Cambrian or Potsdam sandstone, Lower Magnesian limestone, St. Peter sandstone, and the Galena-Black River limestone, in addition to the unconsolidated, overlying glacial drift. The four rock formations all dip southward at angles of less than half a degree, so that for purposes of topographic description the structure may be spoken of as essentially horizontal. The texture of the rock formations is summarized by saying that two resistant formations, the Galena-Black River and Lower Magnesian, alternate with two weak formations, the St. Peters and Potsdam (1965:221).

The processes that have acted upon these formations are (a) normal erosion agencies—weathering, stream work, and, in very much smaller measure, the work of underground water and of the wind—and (b) glacial agencies—the rasping ice

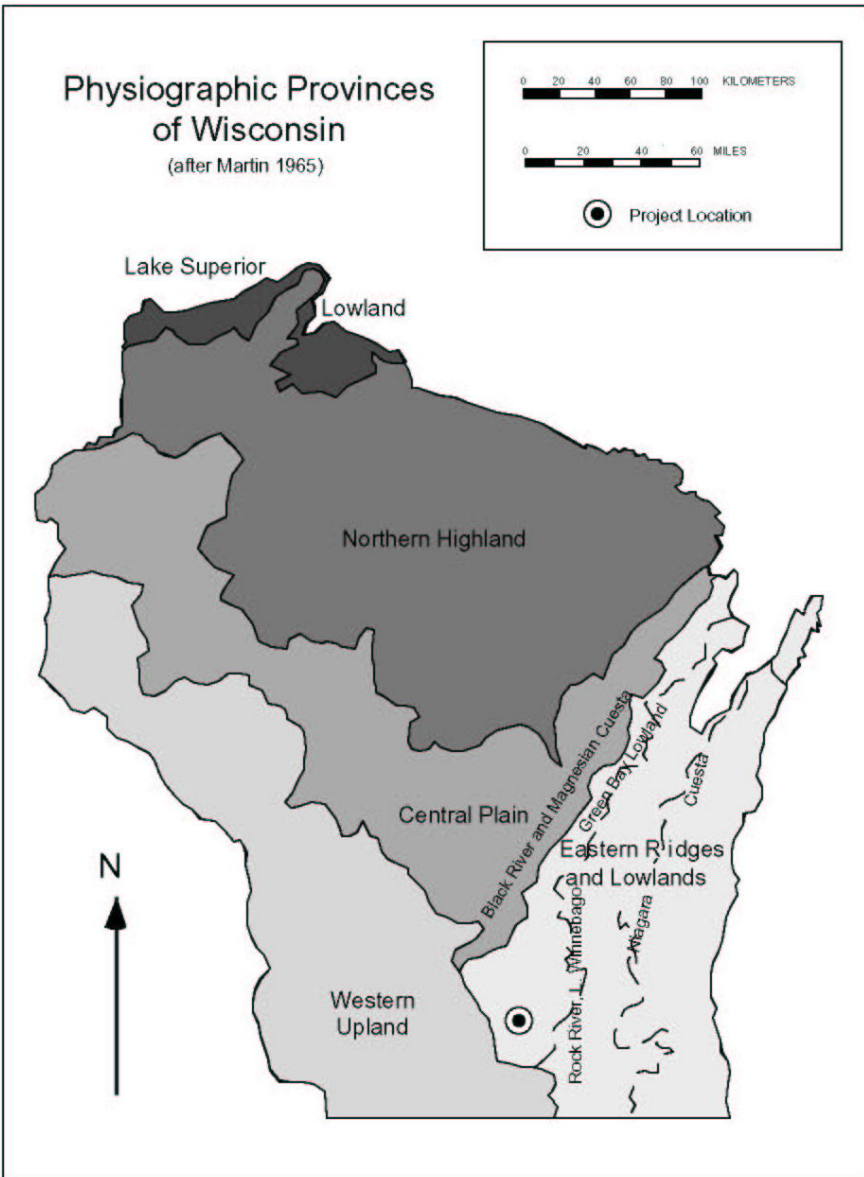


Figure 1.3: Location of project area relative to the physiographic provinces of Wisconsin.

itself, and the melting ice, which deposited its load on disappearing and also supplied the glacial-stream and lake deposits (1965:221).

It is this latter force, glaciation, which has had the most dramatic topographic effects on the project environs. Before the last glaciation created Lake Mendota, Picnic Point stood as a high Cambrian sandstone ridge between two stream valleys, Pre-Glacial Middleton River and its tributary University Bay Creek (Baum 2001:11). The lake formed following the last ice age, surrounding the peninsula with meltwater blocked by glacial drift (Baum 2001:11). Variations in Lake Mendota's water levels over the last several thousand years have been the result of various natural environmental phenomenon as well as the damming of Lake Mendota in 1847 which raised the lake levels approximately 1.5-meters (Baum 2001:13).

Vegetation

Historic Vegetation

The earliest references to the vegetation on the UW – Madison campus are the General Land Office field surveyor's notes for Township 7 North, Range 9 East of the Fourth Meridian of the Northwest Territory (Wisconsin Board of Commissioners of Public Lands 1834) and are dated to December of 1834. The surveyor (Orson Lyons) mentioned the hilly and rolling nature of the terrain in his transects and that for the most part the vegetation on campus in the early 19th century was one of second and third rate black, white and bur oak timber with an undergrowth of grass, smaller oaks, and in some cases hazel (essentially oak savannah) (Figure 1.4). Marsh and wet prairie vegetation were present in and along the margin of University Bay (Finley 1976).

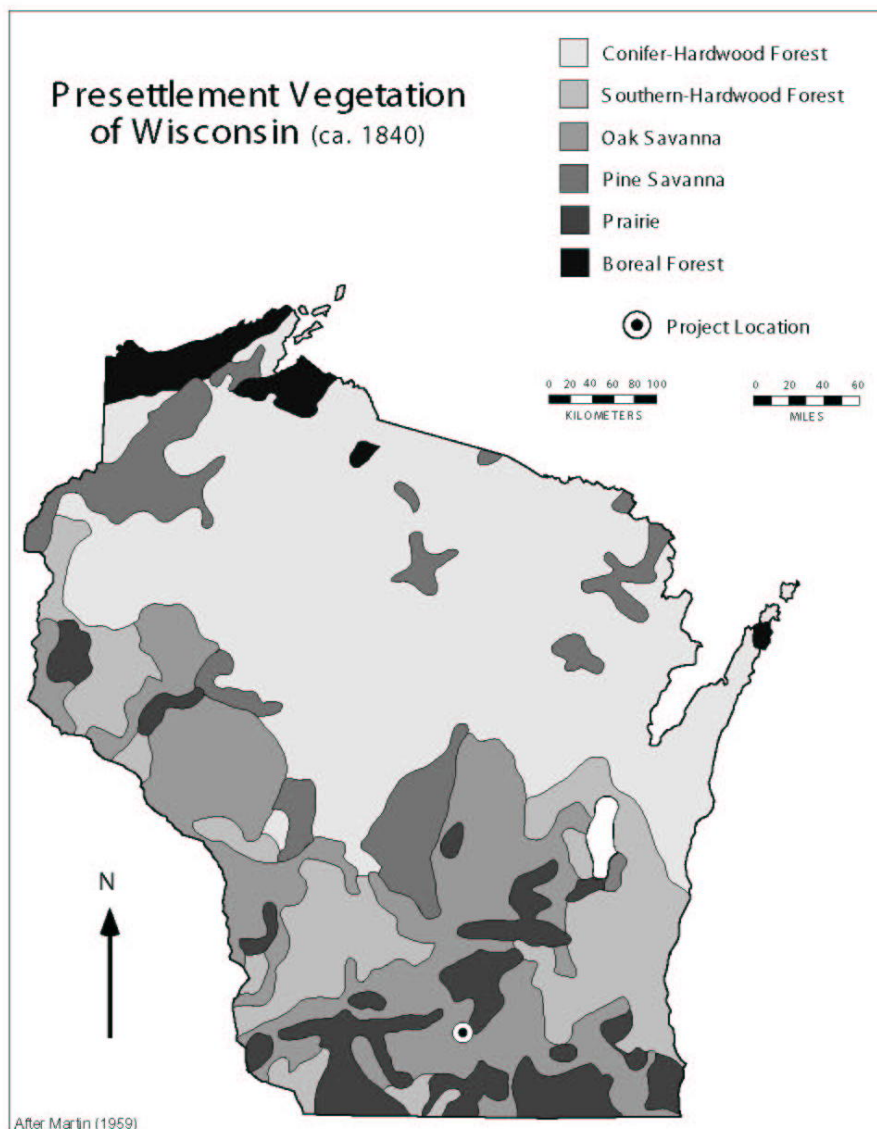


Figure 1.4: Location of the project area relative to the presettlement vegetation of Wisconsin.

As the land that eventually became university property was purchased from the government by various private landowners in the mid 1800s, it apparently was cleared and used for a variety of purposes including agriculture and pasture. Vegetation records from the period of 1834 to the early twentieth century are non-existent but it is clear from land plats that portions of Frautschi Point, Eagle Heights and Picnic Point were settled as early as 1861 with residences set up in each of the parcels that became part of the Lakeshore Nature Preserve.

By the turn of the century, the area around Picnic Point (as well as Picnic Point itself) was cultivated with some wooded corridors (Baum 2001:15). Picnic Point was used for grazing and logging. Photographs from this period depict Picnic Point as being virtually wide open with just a few trees and almost no understory (see Figures 1.5, 1.6). A map dated 1922 (campus Planning Department files) depicts several wooded corridors throughout Picnic Point. Aerial photographs from 1937 indicate that the majority of Frautschi Point was open with wooded areas along the Lake Mendota shoreline. A large cluster of woods (referred to as Second Point Woods) is present in the southeast portion of Frautschi Point in 1937.

The Wisconsin Land Economic Inventory of 1958 classified the cover density on most of Picnic Point as a "poor stand" of oak-hickory, 12 – 18 inches in diameter (Baum 2001:16). Baum makes the argument that in the last several hundred years, Picnic Point was a savanna that was perhaps originally maintained by fire and then kept open by grazing. When these two forces ceased to be a factor, the present day vegetation took hold of the area.



Figure 1.5: Picnic Point circa 1917



Figure 1.6: Picnic Point and Frautschi Point circa 1925

Modern Vegetation

Bill's Woods

The majority of Bill's Woods is recovering from decades of plowing and its use as agricultural fields. The oldest part of the woods is the southeast section, which appears in a 1937 aerial photograph. The western half of Bill's Woods was used as an agricultural field up until the 1970s. At the present time, the canopy is composed of white oak, bur oak, black oak, red oak, hackberry, black cherry and shagbark hickory. Along the southeastern edge of the woods, there are a few mature Norway maple trees. The shrub layer is dominated by buckthorn. Ground layer species include trout lily, wild geranium, Virginia creeper, white snakeroot, Solomon's seal, false Solomon's seal and enchanter's nightshade.

Picnic Point

In the Lakeshore Nature Preserve description of Picnic Point, the middle section of the point is described as having very large red oak, white oak, and shagbark hickory dominating the canopy along with some American elm. Hackberry, green ash, basswood and sugar maple are prominent in the subcanopy along with black cherry, silver maple, box elder, black locust, and black willow. The shrub layer is dominated by honeysuckle and buckthorn. The ground layer contains white avens, Virginia creeper, enchanter's nightshade, false Solomon's seal, violet and trout lily. The tip of Picnic Point is dominated by sugar maple, basswood, and hackberry. A few

hackberry and oak trees emerge above the other canopy trees. Sugar maple and basswood saplings and seedlings are also listed as being abundant.

Caretaker's Woods

At the present time, the Caretaker's Woods is dominated by red oak, white oak, shagbark hickory and hackberry. The subcanopy contains sugar maple, black cherry, hackberry and slippery elm while the shrub layer has buckthorn, honeysuckle and chokecherry. Common ground layer species include wild geranium, yellow violet, Virginia waterleaf, false Solomon's seal, Virginia creeper, enchanter's nightshade, jack-in-the-pulpit, and goldenrod.

Second Point Woods and Frautschi Point

These two Lakeshore Nature Preserve were combined into a single parcel for the convenience of the archaeological survey, however, from a vegetative and land-use history perspective, these two areas are different in that up until the 1960s/1970s Frautschi Point was largely open (with the exception of the areas immediately adjacent to Lake Mendota) and was apparently used for residences, for gardening. Along the driveway extending from Lake Mendota Drive to the former house sites, Norway spruce, red pine, red cedar, white birch and trembling aspen were planted sometime prior to the 1930s and these trees have since matured. The remainder of the Frautschi Point area has filled in with invasive species such as silver maple, big-tooth aspen, basswood, box elder and green ash. The understory is dense with honeysuckle, buckthorn, and chokecherry. Second Point Woods on the southeastern edge of Frautschi Point appears on aerial photographs from the 1930s as a mature stand of trees and hence the canopy is currently more oriented towards large red oaks, black cherry, white oak, bur oak, silver maple and slippery elm. The subcanopy consists of black cherry, box elder, hackberry, basswood, slippery elm and sugar maple.

Soils

A number of different soils are present within the approximately 100 acres of land that was surveyed in 2004 (Figure 1.7). Seven soil series were encountered all of which are briefly described below. All descriptions are taken from Glocker and Patzer 1978. For additional detailed descriptions of specific soil types, see the *Soil Survey of Dane County, Wisconsin*.

Colwood Series soils (Co) – The Colwood series consists of deep, poorly drained, nearly level soils on low benches in old lake basins. These soils formed under sedge grasses in deep, alternating layers of calcareous lake-laid silt and fine sand. The lower part of these soils is very stratified. In profile, Colwood series soils have a surface layer of black silt loam about 10 inches thick. The subsoil is about 25 inches thick with the upper six inches being a grayish-brown clay loam, the middle section being an olive-gray sandy clay loam approximately eight inches thick and the lower part is light brownish-gray loamy very fine sand approximately 11 inches thick. The underlying material is calcareous and consists of alternate layers of different thickness, of brownish-gray, light yellowish-brown, and gray coarse silt, very fine sand and fine sand.



+

Dodge Series soils (DnB, DnC2) – The Dodge series consists of deep, well-drained, gently sloping and sloping soils on glaciated uplands. These soils formed under mixed hardwoods in 26 to 36 inches of loess over sandy loam glacial till. The surface layer is dark grayish-brown silt loam about six inches thick. The subsurface layer is brown silt loam three inches thick. The subsoil is 31 inches thick with the upper 20 inches of the subsoil being brown silty clay loam and the lower 11 inches being a brown, firm clay loam and sandy clay loam. The underlying material is calcareous, yellowish-brown sandy loam till.

Kidder Series soils (KdD2, KrE2) – The Kidder series consists of deep, well drained, gently sloping to very steep soils on glaciated uplands. Soils of this series formed in glacial till under mixed hardwoods. Soil profiles for Kidder series typically have a surface layer that is very dark grayish-brown loam about three inches thick with a subsurface layer that is a brown loam approximately six inches thick. In areas where the soil has been tilled, all or most of the subsurface layer has been incorporated into the surface layer. The subsoil is 29 inches thick with the upper 21 inches being a brown sandy clay loam and the lower eight inches being a strong-brown sandy loam. The underlying material is a yellowish-brown, platy, calcareous sandy loam till.

McHenry Series (MdC2) – The McHenry series consists of deep, well drained, gently sloping to moderately steep soils on glacial uplands. These soils formed in thin loess and sandy loam glacial till under thin stands of mixed hardwoods. The loess is 10 to 15 inches thick over till that is five to 20 feet or more thick. The depth of calcareous glacial till is 24 to 40 inches. Representative profiles typically have surface layer that is very dark grayish-brown silt loam about seven inches thick. The subsoil is about 26 inches thick with an upper part of the subsoil being brown silty clay loam, the middle part being a dark yellowish-brown silty clay loam and the lower part being a dark-brown sandy clay loam. The underlying material is calcareous, light yellowish-brown sandy loam till.

Radford Series soils (RaA) – The Radford series soils consists of deep, somewhat poorly drained, nearly level and gently undulating alluvial soils in low drainageways and stream channels. These soils formed under prairie grasses in moderately deep, recent, silty alluvium overlying a buried, poorly drained, silty soil. The recent silty alluvium, which overlies the dark-colored soil, has come from nearby eroded uplands. The surface layer is very dark brown silt loam nine inches thick overlying a very dark gray silt loam approximately 14 inches thick. The buried surface layer and subsoil are mostly silty clay loam. The buried surface layer is black, and the subsoil is light brownish gray and olive gray. The underlying material is massive, olive-gray silt loam.

St. Charles Series soils (ScB, ScC2) – The St. Charles series consists of deep, nearly level to moderately steep, well drained and moderately well drained soils on glaciated uplands. These soils formed in deep loess and loamy glacial till under mixed hardwoods. The surface layer is typically dark grayish-brown silt loam approximately six inches thick. The subsurface layer is brown, friable silt loam about three inches thick. The subsoil is about 41 inches thick with the upper 32 inches being a firm, yellowish-brown silt loam and silty clay loam and the bottom nine inches being a friable brown loam. The underlying material is massive, calcareous, brown, sandy loam till.

Whalan Series (WxD2) – The Whalan series consists of moderately deep, gently sloping to steep, well-drained soils on dolomite-controlled upland s. These soils formed in moderately deep glacial till over dolomite bedrock under mixed hardwoods. A representative profile in a cultivated field consists of a surface layer that is about five inches thick and is a dark grayish-brown silt loam. The subsurface layer is brown, friable silt loam about five inches thick. The subsoil is firm, brown and about 17 inches thick of which the upper six inches is loam and the lower 11 inches are sandy clay loam. The underlying material is fractured dolomite at a depth of about 27 inches.

Cultural Setting

The archaeology of southern Wisconsin has been extensively reviewed elsewhere. Major syntheses include Mason (1981); Birmingham et al. (1997) and Fowler and Hall (Fowler and Hall 1978). Therefore, a detailed account will not be provided here. A brief summary is provided below.

Paleo-Indian Tradition

Early Paleo-Indian Stage (13,000 - 10,000 BC)

The earliest inhabitants of the Four Lakes area are believed to be the descendents of the first humans to inhabit the New World. Archaeological research over the last forty years has raised a variety of issues regarding who these early immigrants were, how they traveled to the New World, and the timing of their migration (Anderson and Gillam 2000; Fladmark 1979; Greenberg, et al. 1986; Haynes 1964, 1969; Hoffecker, et al. 1993; Martin 1973; Meltzer 1995, 1997). In brief, there are currently two generalized proposed points of origin for the earliest immigrants, Asia and Europe. There are two proposed methods of travel, one involving the use of boats skirting either the Pacific or Atlantic coastlines from either Asia or Europe, or overland travel using the Bearing Land Bridge (with subsequent use of an ice-free corridor through central Canada) from Asia. Finally, there is a debate on whether the previously acknowledged Clovis peoples were the first immigrants or whether there was an earlier group of immigrants. While these debates cannot possibly be addressed in detail in this summary, it is clear that information pertaining to the earliest peoples of the New World is highly sought after and is of the utmost importance to resolving these research issues.

Controversial research conducted in Kenosha and Racine Counties has led Overstreet (1991; 1994) to suggest that the earliest occupation of southern Wisconsin may date as early as 13,000 years ago, and as such, pre-dates Clovis. The Chesrow Complex was originally defined as falling late within the Early Paleo-Indian stage on the basis of excavations at the Chesrow site and surface collections at nearby sites in Kenosha County in southeastern Wisconsin. Though the complex has not been securely dated, Overstreet has argued for an early date based on the recovery of mammoth and mastodon remains bearing butchery marks, dated to 12,100-12,600 years ago, on the same landforms and within the same geographic constraints as Chesrow complex material (R. J. Mason 1986; Overstreet 1991; 1993).

The early Paleo-Indian Fluted Point complexes (Clovis, Gainey and Folsom) have been securely dated to the period between 11,500 and 10,000 years ago. The fluted point complexes

are distinguished by the presence of lanceolate projectile points, commonly manufactured of fine and exotic materials, which have been carefully thinned at the base by the removal of long, deep flakes, which extend for varying lengths along the point and produce a distinctive, fluted appearance. Points belonging to the Clovis complex, dating 11,500-11,000 years ago, have flute scars that extend less than one-third of their length. Folsom points (produced ca. 10,000 years ago) have broad flute scars that extend nearly the entire length of the point. Gainey points fall between the two both morphologically and temporally (Stoltman 1991).

Evidence for early Paleo-Indian occupation of Dane County is abundant, though confined for the most part to surface finds of projectile points. Fluted points in the county have been recovered from the Horseshoe Ridge Site-47DA325 (Sanborn and Eaton 1980), the Havey Site-47DA13 (Nero 1955), the Skare Site-47DA10 (Ritzenthaler 1967a, b, 1970), the Johnson Site-47DA15 (Wendt 1985), Eagle Heights Field-47DA413 (Wendt 1985), the Boltz Site-47DA419 (Wendt 1985), the Marquis Site-47DA7 (Maher 1959), and the Bollig Site-47DA429 (Wendt 1985). Early Paleo-Indian peoples have been stereotyped as big-game hunters specializing in mammoth and mastodon. While there is some evidence that these animals were hunted by humans in Wisconsin, the repeated association of Paleo-Indian sites with the junctions of streams or rivers with a marsh or lake suggests either an effort to gain strategic advantage for big game ambush and drive-type hunting strategies or concern for the availability of small game and aquatic resources (Wendt 1985).

Late Paleo-Indian Stage (10,000 – 7000 BC)

The late Paleo-Indian stage is characterized by the use of long, slender, lanceolate blades without fluted bases and stemmed projectile points. The quality of flaking on some late Paleo-Indian points has been described by some researchers as high art. Most examples in east central Wisconsin were manufactured of orthoquartzite and fall within the Agate Basin, Alberta, Eden and Scottsbluff types. Basal grinding on those points is frequent and usually heavy (Mason 1997).

In Dane County, Late Paleo-Indian sites tend to be located in the same locations as Early Paleoindian sites. Late Paleo-Indian projectile points have been recovered from Horseshoe Ridge Site-47DA325 (Sanborn and Eaton 1980), the Havey Site-47DA13 (Nero 1955), the Skare Site-47DA10 (Ritzenthaler 1967a, b, 1970), the Johnson Site-47DA15 (Wendt 1985), Airport Village-47DA2 (Baerreis 1953a), Eagle Heights Field-47DA413 (Wendt 1985), Observatory Hill Mounds-47DA571 (MacKinnon 1985), the Boltz Site-47DA419 (Wendt 1985), the Marquis Site-47DA7 (Maher 1959), the Hurskamp Site-47DA379 (Wendt 1985), the Acker Site-47DA414 (Wendt 1985), the Bollig Site-47DA429 (Wendt 1985), and the Bollweg Site-47DA430 (Wendt 1985).

While late Paleo-Indian life ways have consistently been described as focused on a continuance of earlier big-game hunting strategies, evidence from other parts of Wisconsin suggest that late Paleo-Indian peoples practiced a broad range of subsistence activities (Kuehn 1998). Unfortunately, there have not been any published excavations at Late Paleo-Indian sites in the Four Lakes area and as a consequence, very little can be said of Late Paleo-Indian subsistence or settlement strategies. It is presumed that in the Late Paleo-Indian stage, social structure was probably based on small groups of related individuals, who moved frequently on the landscape and preferentially occupied lakeshores and stream banks near the outlets of lakes (Mason 1997).

Archaic Tradition

Early Archaic Stages (8000/5500 BC – 4000 BC)

The Early Archaic is characterized by the presence of formally diverse diagnostic projectile types such as Hardin Barbed, St. Charles, a variety of Bifurcated Base points and Thebes. Subsistence practices remained focused on hunting and gathering, although what was being hunted changed with the disappearance of the large Pleistocene fauna and what was being gathered certainly reflected a post-glacial biotic regime brought about by climatic change. Social organization is hypothesized as being similar to the Paleo-Indian period, and Stoltman has argued that technologically, there is no clear line between the Early Archaic stage and the late Paleo-Indian stage other than that based on lithic typologies (Stoltman 1986, 1997).

Wendt (1985) has reported that a number of sites in the Four Lakes area have produced Early Archaic projectile points including Hardin Barbed points from 47DA10 – Skare site and 47DA429-Bollig site. Bifurcated Base points are known from 47DA325-Horseshoe Ridge, 47DA13-Havey, 47DA419-Boltz, 47DA429-Bollig and 47DA430-Bollweg. The pattern of site reuse continued through the Early Archaic, probably because of their ideal settings for taking advantage of a wide variety of resources (Wendt 1985:259).

Middle Archaic Stage (6000/4000 BC – 1500/1200 BC)

The Middle Archaic stage in Wisconsin saw a number of technological innovations, including the first use of ground stone technology and copper metallurgy. The stage has primarily been identified with technological developments that culminated in the Old Copper industry (Martin 1999; Martin and Pleger 1999; Pleger 2000; Stoltman 1997). In the past, the Old Copper industry was treated as a separate manifestation of the Middle Archaic (the Old Copper Culture). However, recent research indicates that the use of copper technology is not limited to the Middle Archaic and as such, the term “Old Copper Culture” has ceased to be useful as a taxonomic designation. The Middle Archaic stage in the Four Lakes area is represented by the cluster of side-notched points diagnostic of the Middle Archaic stage in the Midwest (Raddatz, Godar, Madison, Matanzas, Reigh) (Stoltman 1997).

Raddatz points have been reported from 47DA736-Murphy (Hamilton, et al. 1995), 47DA325-Horseshoe Ridge, 47DA10-Skare site, 47DA419-Boltz, 47DA7-Marquis, 47DA379-Hurskamp, and 47DA414-Acker. Despite the long duration of the Middle Archaic stage, relatively little is known of the actual lifeways of Middle Archaic people in the Four Lakes area. Excavations at 47DA736-Murphy suggest that there were two Middle Archaic occupations at the site, one between 4045-3375 BC and a later one between 3675 and 3375 BC (Hamilton, et al. 1995). The full range of lithic tool manufacture was represented in the lithic assemblage from the Middle Archaic component of the site and Hamilton et al. suggest that activities at the site were extensive in duration and complexity (Hamilton, et al. 1995:88). Floral remains from the site indicate that hickory nuts and walnuts were being processed during the later Middle Archaic occupation at the site based on the ratio of nutshell to wood charcoal (Egan 1995).

It was with the emergence of the Old Copper industry that long-range trade networks between territorial groups were first established. The establishment of formal cemeteries hints that group mobility was at a fairly low level and cultural boundaries between groups were beginning to form. The eastern Old Copper burial assemblages contain goods that may have signaled individual status—copper headdresses and jewelry of exotic marine shell (Stoltman

1997). If so, Wisconsin was home to one of the earliest socially complex societies in the Upper Great Lakes.

Late Archaic Stage (1500/1200 BC – 500/100 BC)

The arrival of the Late Archaic stage in southwestern Wisconsin is signaled by the appearance of new projectile point types, a decline in the use of copper and a lack of identifiable cemeteries (Stoltman 1997). Late Archaic projectile points are generally small, stemmed, side or corner-notched dart points. Few other artifacts diagnostic of this phase have been identified. The beginning of the stage seems to coincide with changes in the climate and environment. Starting around 3500 years ago, oak savanna seems to have partially given way to closed oak forest, as weather grew cooler and wetter. The impact of this environmental shift on Late Archaic populations is not well understood, despite the excavation of several well-stratified rockshelter and cave sites. Based on regional studies of site distributions single component Late Archaic sites also appear to be quite rare in Wisconsin. Typically, Late Archaic Preston Notched or Durst Points are found at multi-component sites, often in disturbed contexts. The Late Archaic stage is the first to be well represented in south-central Wisconsin. Sites have been located over a broad range of environmental and topographical zones. Based on excavations to date, it would appear that the Late Archaic stage represents a transition between the extremely mobile, small band strategies of the Paleo-Indian, Early Archaic and Middle Archaic stages and the less-mobile, seasonally dispersed populations of the Woodland Tradition.

Based on stratigraphic excavations at the Preston and Durst Rockshelters in Grant and Sauk Counties and projectile point differences, Stoltman (1997) has defined the Preston and Durst Phases for southern Wisconsin.

Preston Phase (1500 – 1000 BC)

The earlier of the two phases has been designated the Preston Phase after deposits identified at the Preston Rockshelter in Grant County (Stoltman 1997). The diagnostic projectile point also takes its name from the rockshelter – Preston Notched. This is a small side or corner notched point type with analogs in the Riverton Culture of southern Illinois (Merom Expanding Stem and Trimble Side-notched types) (Winters 1969) and in the Burnt-Rollways phase of northern Wisconsin (Salzer 1974). These distinctive projectile points were identified in levels stratigraphically above Raddatz materials and below Durst levels at both the Preston (Stoltman 1997) and Durst Rockshelters (Wittry 1958). Since these points were formally defined, a number of surface collections and excavations have produced stylistically identical points. Unfortunately, the excavations have not been in stratified contexts and have therefore failed to produce any additional cultural information.

Two sites in the Four Lakes Area have produced Preston Notched projectile points, 47DA5-Blackhawk Village (Baerreis 1953b) and 47DA459-Beach Site (Salkin 1986). In both instances, the points were recovered from multi-component sites and were designated as Monona Stemmed Points as they were described prior to the formulation of the Preston Notched type. Due to the fact that the Preston Notched type has only recently been defined, there are few sites that include this type name in their artifact assemblage discussions. Future research on the frequency of Preston Notched points in the region will rest on re-visiting many of the old excavation reports and redefining previously misidentified points.

Durst Phase (1000 – 500 BC)

The Durst phase is the youngest of the Late Archaic phases and Durst phase sites are archaeologically identifiable largely by the presence of the diagnostic Durst Stemmed point. Durst Stemmed points are small expanding-stemmed points with weak shoulders and ovate blades. They take their name from the Durst Rockshelter, where they were found in levels above Raddatz and Preston points (Stoltman 1997; Wittry 1958). Although Durst Stemmed points are ubiquitous throughout the Driftless Area, almost no specifics are known of Durst phase lifeways.

Some of the better known sites with Durst Stemmed points in the Four Lakes area include Horseshoe Ridge Site-47DA325 (Sanborn and Eaton 1980), the Havey Site-47DA13 (Nero 1955), the Skare Site-47DA10 (Ritzenthaler 1967a, 1967b, 1970), the Johnson Site-47DA15 (Wendt 1985), Stevens-47DA123 (Christiansen III 2001a), the Boltz Site-47DA419 (Wendt 1985), the Marquis Site-47DA7 (Maher 1959), the Hurskamp Site-47DA379 (Wendt 1985), the Acker Site-47DA414, the Bollig Site-47DA429 (Wendt 1985), and the Bollweg Site-47DA430 (Wendt 1985).

Woodland Tradition

Early Woodland Stage (300 BC – AD 100)

The Early Woodland stage in south-central Wisconsin encompasses two distinct cultural phases.

Residents of the area during the Early Woodland stage appear to be a variant of the Marion culture, a widespread phenomenon with participants across the northern Eastern Woodlands (Esarey 1986; Green and Schermer 1988; Munson 1982). In many areas, the Marion culture is associated with Red Ochre ceremonialism. In some areas of Wisconsin Red Ochre mortuary sites may represent a leap in socio-political complexity. The quantity and quality of grave goods is far greater than that found in Old Copper cemeteries. Burials were typically in-the-flesh internments placed in a flexed posture with pits in natural ridges, knolls and occasionally within artificially constructed mounds. Some bundle burials, cremations and extended in-the-flesh inhumations are known. Red ochre (powdered hematite), sometimes mixed with red sand, was liberally sprinkled over corpses and their associated grave goods during the course of burial ceremonies. Large caches of exotic and finely fashioned burial goods were placed with the remains of both adults and children—a pattern usually associated with the emergence of hereditary status differences (Stevenson, et al. 1997).

The Marion culture is responsible for the introduction of ceramic technology into Wisconsin. Marion Thick pottery was grit-tempered, cord-paddled inside and out, and took a distinctive conical or “flowerpot” form. Kramer Stemmed projectile points are the only other artifact diagnostic of early Early Woodland habitation sites.

Lake Farms Phase (250 BC – AD 100)

The latter part of the Early Woodland saw an evolution in pottery technology and a minor switch from square stemmed projectile points to Waubesa Contracting Stem points, diagnostic of the Lake Farms phase in the Madison area. Lake Farms phase ceramics are sand or grit-tempered, cord-marked jars with relatively thin walls and slightly everted upper rim profiles.

Decoration is applied directly over cord-marking in the form of bosses, incising, fingernail impressions and cord-wrapped-stick impressions. This material is closely related to that produced by the Black Sand culture in Illinois.

Excavations of Lake Farms phase sites in the Four Lakes area, primarily the Canoe (47DA457) and Beach (47DA459) sites, on Lake Waubesa, indicate that late Early Woodland peoples may have lived in large warm-season camps surrounded by specialized resource processing and extraction sites (Salkin 1986). The large camps would have broken up in the winter, as individual families spread out across the landscape. Though many Lake Farms phase sites are located near shallow lakes and marshes, recovered faunal remains are curiously lacking in aquatic species.

Middle Woodland Stage (AD 100 – 500)

Waukesha Phase (AD 100 – 300)

The Middle Woodland Stage in the Four Lakes Area is poorly known although there is some evidence to suggest that should be considered part of the Waukesha phase (Salzer n.d; Stevenson, et al. 1997). Waukesha phase pottery is characterized by grit tempering and smooth exterior surfaces decorated using a wide variety of techniques. Ceramic types include several indigenous variants of more classic Illinois Havana types. Types such as Kegonsa Stamped and Shorewood Cord Roughened appear to be regional variants of Naples Stamped. Havana types typically associated with the Waukesha Phase include Havana Zoned, Neteler Crescent Stamped and classic Hopewell ware (Goldstein 1992). Projectile point types dating to the Waukesha phase are commonly either corner notched or stemmed and include the Snyders, Steuben, Monona Stemmed and Norton types.

What is known of the Waukesha phase people in the Four Lakes area comes from excavations at the Outlet Site (47DA3) located where the Yahara River exits Lake Monona. Excavations conducted by Whiteford (1949), and Bakken (1950) indicate that Waukesha phase peoples, like their contemporaries in southwestern Wisconsin and Illinois interred their dead in rectangular pits covered by large conical mounds. The interments at the Outlet site exhibited a wide variety of treatments including extended, flexed, bundled, and/or cremated. Two skulls from the 1948 excavations had white clay masks that had been applied to the faces of the dead shortly before interment. The primary burial in Mound 5 excavated in 1949 contained a single expanding stemmed Hixton silicified sandstone biface 231 mm long. This artifact is similar in morphology to objects recovered from Trempealeau Phase burials in southwestern Wisconsin (Baerreis and Bender 1984; McKern 1931). This is, however, a rare occurrence as typically mortuary goods have not been found associated with Waukesha phase burials.

Waukesha phase habitation sites indicate a continued emphasis on hunting and gathering, with increased use of aquatic resources. Lippold (1973) has suggested that Waukesha phase peoples had begun to live in semi-sedentary communities supported in part by shellfish harvesting.

Late Woodland Stage (AD 500 – 1050)

The Late Woodland stage in the eastern United States has often been viewed in the past as a transitional phenomenon by a number of researchers (Griffin 1964; 1967; Phillips 1970; Phillips, et al. 1951; Prufer 1964; Williams 1963). This, however, is not the case for Wisconsin

where even the earliest archaeological researchers were aware of, and intrigued by, monumental earthworks that dotted the landscape (Lapham 1855; McKern 1928, 1929, 1930; Peet 1890). As research on the Late Woodland has progressed, it has become clear that while the Late Woodland stage is transitional in some aspects, others indicate a unique and well-developed stage with a complexity that is expressed not in material goods, but in ceremonialism and ritual. In other words, it does not represent a decline between two climaxes, but rather reorganization and consolidation of regional and macroregional networks that laid the groundwork for larger sociopolitical units. The early portion of the Late Woodland was, in essence, a continuation of the lifeways that had been gradually developing over the last thousand years. People continued to hunt, gather and fish, live in small groups and practice a seasonal round (Arzigian 1987; Storck 1974; Theler 1987).

Some transitional aspects of the Late Woodland stage relate to changes in subsistence strategies, settlement patterns and technology. It has become increasingly clear in the last 20 years that sometime around AD 850 maize began to play a more significant role in the diet of some Late Woodland groups (Arzigian 1987). Certainly by 1000 years ago, maize had become a mainstay for a number of contemporaneous peoples who occupied the Wisconsin landscape. The adoption of more intensive horticultural economies apparently had profound affects on settlement patterns as sedentism become more prevalent among Native American peoples (Dirst 1988, 1995; Richards 1992; Salkin 1987, 1993). The establishment of permanent villages at a number of locations in the eastern portion of Wisconsin confirms the impact that the rigors of maintaining a maize-based diet had. Population appears to have increased during the Late Woodland, presumably as a result of changes in diet and settlement patterns.

Prior to 1987, the Late Woodland stage in Wisconsin was synonymous with the Effigy Mound Culture. As it is recognized today, the Effigy Mound culture is used as an umbrella term that incorporates at least two phases, the Horicon phase in south-central Wisconsin (Salkin 1987, 1993), the Eastman phase in southwestern Wisconsin (Stoltman 1990), and several phases not yet completely defined in northwestern and north-central Wisconsin.

The distribution of Effigy Mound culture sites is predominantly in the southern three-quarters of Wisconsin with additional sites in northern Illinois, northeastern Iowa and southeastern Minnesota. Site types include rock shelters, caves, multi-seasonal open-air villages, short-term encampments, seasonal resource exploitation camps and the highly visible effigy mound mortuary complexes typically located on elevated terraces near waterways, marshes and lakes. Very little is known of Effigy Mound domestic architecture, although three shallow oval basins excavated at the Sanders site (47Wp26) (Hurley 1975) suggest that small oval wigwam type houses were utilized. In addition, several "keyhole" shaped structures with associated Madison ware ceramics were recently excavated at the Statz site in Dane County (Meinholz 1997).

The primary technological innovation of the stage was the widespread adoption of the bow and arrow. The bow and arrow were introduced into Wisconsin circa AD 700, and small arrow points are the most abundant projectile points found in archaeological sites occupied after that date. Lithics from Late Woodland stage sites in the Four Lakes area are often made from local Prairie du Chien and Galena cherts and on occasion, from one of the silicified sandstones found in northwestern Wisconsin. The lithic tool kit appears to be generalized with a high proportion of utilized and retouched flakes relative to more formal patterned tools. Drills, endscrapers and spokeshaves are known from rockshelter and open-air sites. Projectile points seem to be present in three forms: triangular, small corner-notched and small, stemmed points. It seems likely that the triangular points (Madison Triangular points) and small corner-notched

points (Klunk points) are part of a bow and arrow delivery system, while the small stemmed points may represent spear or atlatl points.

Analysis of faunal and floral remains from rock shelters, caves and open-air sites indicate that a variety of local resources were consumed by Effigy Mound builders, including deer, small mammals, fish, fowl, mollusks, nuts, as well as starchy and oily seed bearing plants (Arzigian 1987; Benn 1980; Berwick 1975; Emerson 1979; Lippold 1973; Parmalee 1959; Storck 1974; Theler 1987). Though there is evidence that maize was utilized in the Driftless Area to some extent (Arzigian 1987; Stoltman 1990), no maize has yet been reported from Horicon phase sites (Salkin 1987, 1993).

By definition, Effigy Mound culture mortuary sites contain one or more earthen, animal-shaped effigy mounds. Mound shapes include “panthers,” birds, waterfowl, bears, canines, deer, buffalo, “turtles” and humans (Birmingham and Eisenberg 2000; McKern and Ritzenthaler 1949; Rowe 1956). Effigy Mound peoples also constructed long “linear” mounds and small conical mounds. Unlike earlier Red Ochre and Hopewellian mounds, these mounds were generally low, contained few, if any, grave goods and contained the remains of only a single individual, though some mounds with multiple interments, (and some with none at all), are known. Articulated and bundle burials, cremations, pit burials, primary mound floor and primary mound fill burials were all common. The only consistency in burial regime was the placement of the corpse near the “heart” of the effigy (Stevenson et. al. 1997). Though many excavated Late Woodland mounds contain burial features, not all do. This has led several researchers to suggest that the importance of the mounds lay in the process and ceremonies accompanying their construction and not only in their use as burial markers (Mallam 1976).

Recent research suggests that there are patterns to the distributions of certain types of mounds that indicate an east to west geographical division (Birmingham and Eisenberg 2000). This division seems to reflect differing terrain, resource bases, and perhaps social affiliations and cosmologies. As an example, bear-shaped mounds are more frequently found in the western portion of the state, while the east is dominated by “panther” and “turtle”-shaped mounds (forms similar to historic iconography depicting water spirits). Bird mounds, while found throughout the area occupied by Effigy Mound builders, are most abundant in the higher elevations of the Driftless Area. The association of specific animals with high and low elevations fits within a pan-eastern Native American tradition concerning a tripartite division of the world into the “Upper World” (order, fire, lightning/thunder, warfare, birds), “Middle World” (this world, balance) and “Lower World” (chaos, water, springs and caves, healing and fertility, bears and water spirits) (Birmingham and Eisenberg 2000; Hall 1997; Hudson 1976). Local landscape features also appear to have played a role in the structure of individual mound groups. “Panther” or Water Spirit mounds are often found near springs and deep lakes, features identified as portals to the underworld in the cosmology of eastern Native Americans. It appears that the Native Americans who built the effigy mounds were creating a symbolic landscape through the construction of various types of mounds.

Horicon Phase (AD 700 – 1200)

Several major changes in material culture and ceremonial practices differentiate the Middle Woodland Waukesha Phase from the Late Woodland Horicon phase. First, the people of the Horicon phase are considered to be part of the Effigy Mound Culture because they buried their dead in animal shaped effigy mounds. Second, cord and fabric-impressed ceramics (Madison Cord-Imprinted, Madison-Fabric-Imprinted) dominate Horicon phase ceramic

assemblages. These two types taken together are the principal components of Madison Ware ceramics, which are generally globular in form, grit-tempered, and almost always in the form of large jars, although several smaller bowl-like vessels are known from a number of sites. Exteriors are cordmarked with decoration being confined to the inner lip, outer lip, lip surface, and the exterior rim to the neck of the vessel. Rims may be incurving, flared or straight. When decoration is present, it is usually in the form of single or multiple cord impressions in linear bands or geometric patterns.

Salkin has argued that Horicon phase peoples utilized large habitation sites for socializing and ceremonial purposes and then occupied small sites at other times of the year (Salkin 1993). The size and distribution of sites has been used as support for a band-level hunting and gathering lifestyle for the Effigy Mound peoples (Mallam 1976; Salkin 1987).

Effigy mound groups and habitation sites are ubiquitous around the Four Lakes area of Dane County. It is difficult to find a location adjacent to either of the four lakes, the Yahara River or any of the tributaries of the drainage that do not contain effigy or other types of mounds as well as habitation sites. The Four Lakes area is considered to be one of several “super clusters” of mounds and earthworks in Wisconsin (Birmingham and Eisenberg 2000).

Kekoskee Phase (AD 800 – 1200)

Sometime around 1,100 years ago, significant changes took place on the landscape of southern Wisconsin. A few ceramic vessels in east central Wisconsin were produced with a distinctive folded rim, which produced the appearance of a “collar” around the pot. Though used in small amounts at first, collared pottery became more popular and replaced the earlier Madison ware entirely by 950 B.P. The resulting Point Sauble and Aztalan Collared types are the diagnostic hallmarks of the terminal Late Woodland stage. At the same time that this ceramic transition was taking place, maize was introduced into the Late Woodland diet in increasing amounts. By 1,000 years ago, fully horticultural societies had arisen and the first sedentary villages in Wisconsin were occupied (Stevenson et al 1997). Some of these early villages were fortified with post palisades (Salkin 1993). This set of changes signaled the onset of the Terminal Late Woodland in southern Wisconsin. In the eastern part of the state (east of the Driftless Area), the terminal Woodland has been called the Kekoskee Phase (Salkin 1987, 1993).

There are strong indications that the socio-political dynamics of southern Wisconsin became more complicated as sedentism took hold and diverse cultural groups either developed within, or moved into, southern Wisconsin. By AD 1050, the terminal Late Woodland town of Aztalan was occupied by a group of Cahokian Middle Mississippians and Oneota settlements were springing up in northwestern, northeastern and southeastern Wisconsin.

In the Four Lakes area, collared ceramics have been recovered from excavations at 47DA12-Dietz Site, 47DA424-Stricker Pond, 47DA642-Statz and 47DA36-Murphy. The Dietz site provided evidence of maize consumption in the form of charred cobs while the Statz site appears to have served as a relatively long-term habitation site. At least two pairs of structures are associated with the ceramics. All four structures are keyhole in shape and at the time of occupation were overlooking a marsh. Stricker Pond and Dietz are also located immediately adjacent to marshy areas. Based on the limited sample of Kekoskee phase sites, it appears that site location preference was oriented towards environments where a variety of aquatic resources could be procured and were off major waterways. This may be due in part to increased hostilities in the region as demonstrated by evidence for violent conflict at a number of sites

throughout the region (examples include Aztalan, the Highsmith site, Weisner III, IV, Camp Indianola, etc.).

Mississippian Tradition

Middle Mississippian (AD 1000 – 1250)

Evidence of a Middle Mississippian presence in southern Wisconsin is confined to only a handful of sites, which has led researchers to the conclusion that it is largely an intrusive presence. Middle Mississippian peoples were different from surrounding Late Woodland groups in a number of ways. First, they were a fully sedentary agricultural people depending on maize, beans and squash. Second, they appear to have had a ranked society that was organized around chiefly authority. Third, they constructed monumental architecture that included platform temple mounds, large bastioned palisades and specialized public buildings. Fourth, they utilized a very specialized ceramic technology that included the use of crushed freshwater clamshell as a tempering agent. In addition to this new temper, they also made a wider variety of vessel forms that included jars, water bottles, plates, and bowls that were occasionally slipped with red, black, white or brown pigments. The diagnostic Middle Mississippian ceramic types are Powell Plain and Ramey Incised. Lithic technology was based around a generalized core reduction strategy and the typical projectile point was a small, thin, notched or multi-notched triangular point.

Middle Mississippian peoples, or at the very least, ideas, were present in southern Wisconsin sometime between AD 1000 and AD 1050. It is thought that Middle Mississippian people took at least two routes north, one to the west along the Mississippi River trench and a second from Illinois via the Rock River. The eastern route brought Middle Mississippian peoples into contact with Late Woodland Kekoskee Phase people who had already settled at several locations. It appears that some type of relationship was established with these people and the small village of Aztalan metamorphosed into a 22-acre mixed Kekoskee/Middle Mississippian village with three platform mounds. Middle Mississippian presence is seen at several other sites in the form of trade goods and locally made imitations of Powell Plain and/or Ramey Incised. Evidence for a Middle Mississippian presence in Wisconsin ceases shortly after AD 1250 when portions of Aztalan were apparently burnt.

Oneota (AD 1000 to 1600)

Some Late Woodland communities appear to have adopted elements of Mississippian material culture and ideology, and evolved into a group of related cultures termed the Oneota. Oneota peoples adopted many elements of Mississippian material culture, including the manufacture of smooth surfaced, shell-tempered pottery decorated with trailed geometric and curvilinear motifs, and a heavy reliance on maize horticulture. Like the terminal Late Woodland peoples of eastern Wisconsin, they inhabited large, sometimes fortified, sedentary villages. Oneota material culture was variable, due in part to the differing responses of local groups to Mississippian ideology and technology. The geographic distribution of Oneota villages was discontinuous, as not every Late Woodland stage group accepted new ideas (Overstreet 2000).

The sudden pre-occupation with fortification systems that developed with the emergence of sedentary societies may be due in part to the close proximity that the culturally dissimilar terminal Late Woodland, emergent Oneota and Middle Mississippians found themselves in.

However, while terminal Late Woodland and Middle Mississippian sites in the area are frequently fortified, only a single fortified Emergent Oneota site has been noted to date.

Subsistence revolved around fishing, shellfish harvesting, hunting and trapping of aquatic mammals and a horticultural system involving corn, beans and squash. Shell middens, shellfish processing areas, garden beds and rock piles produced during field clearance are common both near and within habitation areas. Wild mast crops, such as hickory, walnut, butternut, acorn and hazelnut were collected, and there is evidence that deer and elk were hunted (Overstreet 1997).

Post European Contact Period

Native Americans (AD 1600 - present)

Oneota culture appears to have persisted into the Post European Contact period, based on excavations at the Astor site in modern Green Bay. Items of European manufacture were found there in association with Oneota shell-tempered ceramics. Fragments of brass kettles, a glass bead and a clasp knife were recovered from the site, along with a grit-tempered Bell Type I pot (C. I. Mason 1986; Wittry 1963). Bell Type I pottery has been associated with the Pottawatomie and Mesquakie. The ethnic affiliations of the Oneota communities have not yet been established, but their geographic location and material culture of the eastern Classic Oneota matches early European descriptions of the “Ouinipigou” (Winnebago/Ho-Chunk). It appears that Oneota populations had declined by Euro-American contact (presumably due to epidemic disease and an increase in regional conflict) and contact had been established with the Mesquakie, Pottawatomie and other groups being pushed westward by disturbances resulting from Euro-American colonization (Hall 1962; Overstreet 1997).

These disturbances, coupled with an increasing reliance on items of European manufacture, resulted in a cessation of pottery and stone tool manufacture. As a result, it is very difficult in most cases to link historically known Native American residents of Wisconsin to pre-Euro-American cultural complexes. The association of the Ho-Chunk with the eastern Oneota, though tentative, still remains the strongest to date.

The early Post European Contact period, in a formal sense, is traditionally said to begin in 1634, when Jean Nicolet is believed to have landed at Red Banks on the shore of Green Bay (though Hall and other researchers have questioned whether this location is correct (Hall 1993)). Nicolet had been sent as an envoy to the Ho-Chunk nation with the intent of establishing a peace treaty between their nation and the Ottawa, in order to facilitate the flow of furs into French territory. As competition for those furs between native tribes and European groups increased, warfare and population movement accelerated. War parties from eastern fur-trading tribes began to attack the Ho-Chunk, whom Nicolet had failed to convince of the benefits of trade with the French. These parties carried epidemic diseases with them, and the resulting outbreaks killed nearly two-thirds of the Ho-Chunk (Lurie 1978).

In 1649, the Huron abandoned their traditional lands, opening a passage along the northern shore of Lake Huron and along the islands spanning the straits between Lakes Superior and Michigan and into Green Bay. Pressure supplied by Iroquois raiders pushed refugees such as the Mesquakie, Sauk, Kickapoo, Mascouten, Illinois and Miami eastward into Wisconsin (Mason 1988). Other groups, including the Chippewa and the Huron themselves, moved along the southern shore of Lake Superior on their way eastward.

The Ho-Chunk began a push westward during this period, moving from Green Bay to the Lake Winnebago area. Though their major villages were located in eastern Wisconsin, the Ho-Chunk traveled regularly into the Driftless Area, and across the Mississippi for buffalo hunts. The following decades were witness to the partial recovery of the Ho-Chunk population. By the 1800s, villages and campsites were established across southern Wisconsin. During their period of expansion, the Ho-Chunk successfully adopted elements of the more mobile Algonquian life style and became prosperous participants in the fur trade (Lurie 1960, 1978). They also began to mine lead in the Driftless Area, putting themselves at the center of a developing regional trade network of raw lead and ammunition (Kay 1977; Spector 1977). This activity, though economically advantageous in the short-term, inevitably drew the attention of white settlers and led to conflict between the Ho-Chunk and Euro-Americans who wished to claim the lead district for themselves.

In 1829 and 1832, treaties were drawn up calling for the Ho-Chunk to abandon title to the lead district and relocate west of the Mississippi. A third treaty, drafted in 1837, stipulated the removal of the Ho-Chunk to Iowa from their remaining territory in Wisconsin. The Ho-Chunk, suffering through another round of catastrophic epidemic disease, largely ignored these treaties, and the U.S. government began a series of forced relocations in 1840s (Lurie 1978). Many of the deported Ho-Chunk returned to Wisconsin at the first opportunity (settling in the Wisconsin, Baraboo and Fox River valleys) (Lawson 1907). In 1875, the Indian Homestead Act was passed, allowing the Ho-Chunk to remain in Wisconsin by purchasing homesteads. These homesteads, located in the poorest areas of the state, served as “home bases” while the Ho-Chunk traveled to seasonal gatherings on the Mississippi River near La Crosse and served as itinerant workers in cranberry bogs, cherry groves and blueberry fields (Wyatt 1986).

By the late 1880s, Ho-Chunk settlement was concentrated around Black River Falls, Stevens Point, Tomah and Hatfield, and many homesteaders had lost their lands at the expiration of the 20-year tax-free period on their property. Despite these hardships and upheavals, many Ho-Chunk retained the practice of traveling on a seasonal round, periodically moving to favored winter fishing and hunting grounds. The following years saw a diminishment of this custom, as the Ho-Chunk began to participate in the tourism industry, seek factory jobs and practice commercial agriculture (Wyatt 1986).

Ho-Chunk villages in the Four Lakes region are not documented prior to the 1830s. Prior to that time, Ho-Chunk settlement was concentrated between Portage and Green Bay, and down the Rock River. By 1830, five villages had been established in the Four Lakes area: Old Turtle’s village on the north shore of Lake Mendota, the Four Lakes village in the area of modern Tenny Park on the isthmus, Broken Arm’s village on the south shore of Lake Monona, Spotted Arm’s village on the south shore of Lake Waubesa and Mammothe’s village on the south shore of Lake Kegonsa. By the time of Black Hawk’s retreat along the isthmus in 1832, only the two northernmost villages were still occupied, and a smallpox epidemic had spread through the Yahara and lower Rock River valleys (Tanner 1987).

Historical Background

For over two-hundred years, the fur trade was the focus of economic interest in Wisconsin. Incentives to its prosecution were intimately related to motives that inspired missionaries and secular explorers. Fur traders often initiated contacts with Indians, founded the first settlements, and expanded routes of travel in Wisconsin. Lacking the economic impetus of

the fur trade, there would have been considerably fewer Europeans in Wisconsin during the seventeenth, eighteenth, and early nineteenth centuries (Smith 1973).

Regional Development

The French (1730-1763)

During this time, the French opened posts throughout the interior of the Western Great Lakes country and adopted from the Indians the technology and patterns of operation which remained characteristic of the fur trade until its closing days. In Wisconsin, the period of French control saw the opening of direct trade with the Indians of the Western Great Lakes and with the Sioux, and the emergence of this tribe as one of the major fur suppliers in the area (Kellogg 1925). Documentation of the French presence in Wisconsin provides no evidence for French activity in the area of south central region of the state.

The British (1763-1816)

Subsequent to 1763, the Western Great Lakes was divided between British (after 1783, American) and Spanish sovereignty. The fur trade was shared among British and French traders. Some of the latter were based in Canada, others in Louisiana. After 1790 British traders penetrated the Great Plains and traded as far west as the upper Missouri and the Saskatchewan Plains (Kellogg 1935). While the British were actively involved in the fur trade in Wisconsin, their presence was confined primarily to the major waterways including Lakes Michigan and Superior, and the Fox-Wisconsin and Mississippi Rivers.

The Americans (1816-1850)

These years saw the emergence of St. Louis as a major trade and transportation center and its replacement of Mackinac as the main supply point for the Western Great Lakes fur trade. They also saw the creation of a near monopoly in the area by the American Fur Company, the decline of the fur trade before the advance of settlement, and the establishment of successful entrepreneurs who collected United States Indian Treaty money.

After the Black Hawk War of 1832, fur trade became less important and settlement of the area began in earnest. Soon traders began viewing the wilderness as developing frontier rather than a place solely for Indians and fur-bearing animals. Many traders became interested in lumbering, banking, general merchandising, road construction, steamboat lines, railroad development, and land speculation (Wyatt 1986). As early as the 1820s lead mining attracted settlers to southwestern Wisconsin. Despite the success enjoyed by many, others who could not support themselves as miners turned to farming. As locally available good farmland was acquired, individuals sought fertile land in the counties of south central Wisconsin, such as Dane County.

Dane County

Dane County was established in December of 1836, but the Euro-American presence in the area has been suggested to be as early as 1793 when a guide for Major Long claimed to have visited the area (Butterfield 1880). In 1836, Dane County was formed from the western part of

Milwaukee County and the eastern part of Iowa County but not organized as a separate county until three years later. The county was named by Governor Doty in honor of Nathaniel Dane who, in 1787, introduced the ordinance creating the Northwest Territory. The land comprising the county was ceded by the Winnebago in two treaties, one in 1829 and the other in 1832. Ebenezer Brigham, credited with being the first settler in Dane County, had passed through the area in 1829 and was interested in it for its potential mineral resources rather than its agricultural possibilities. Dane County encompasses 1,235 square miles and incorporates 35 townships within its political boundaries.

When Madison was selected to be the site of the capital in November of 1836, only thirty people were residing in what is now Dane County (Butterfield 1880). The government surveying of the county was executed between 1830 and 1839 (Keyes 1906). Following the inception of Madison as the state capital, settlement began to increase dramatically. In 1840 the population of Dane County was 314 but by the end of the Civil War the population grew to 43,992 (Park 1877). Pioneer settlement was facilitated by an early road system. In 1838, Congress appropriated funds for construction of three federal roads in Wisconsin Territory. One of these, the Milwaukee-Mississippi road was constructed between Milwaukee and a point opposite Dubuque by way of Madison. Governor Henry Dodge emphasized the importance of this road to the Territory:

Its completion would facilitate settlement, and aid in development of its agricultural, mineral and commercial resources and make transportation of the mails safe and facilitate the march or movement of troops and the transportation of necessary munitions of war from our Lake border to our most exposed frontier on the Mississippi, should it become necessary to meet a savage enemy (Karn 1959:40).

Other secondary roads directed north and south were rapidly constructed during the 1840s and 1850s. The territorial roads served as economic links between the rich agricultural lands and the shipping centers. These roads were traveled by pioneer settlers, many of whom settled farmsteads along the routes.

Population growth in Dane County was due, in large part, to the influx of immigrants, primarily Norwegians and Germans, during the 1840s and 1850s. These immigrant pioneers were predominantly farmers seeking economic opportunity in the fertile land of south central Wisconsin. In Dane County, as throughout Wisconsin, both Norwegians and Germans clustered in settlements according to their religious and provincial origins.

Like other Dane County pioneer farmers, the Germans grew wheat as the primary crop. However, even during the period of 1840-1890 when wheat reigned as Wisconsin's primary cash crop, German farmers grew other crops. When the wheat market collapsed they turned to dairy farming. German farmers, particularly in eastern and southern Wisconsin, assumed an integral role in the transition from a grain based economy to dairy-based agriculture (Wyatt 1986). In the wake of wheat's decline, Dane County farmers turned to other cash crops, the most lucrative of which was tobacco. This area of the state was the first to realize economic success from the cultivation of tobacco, which was introduced as early as the mid-1840s. However, it was not until the 1850s that tobacco was cultivated on a commercial scale. By the 1880s, it was commonly grown throughout southern Dane, Rock, and Jefferson counties. Despite a fluctuating market over the past century, tobacco cultivation continues to play a major role in agricultural production in Dane County.

Part II: Research Methodology

Introduction

The research methodologies are presented as two general exercises: (1) archives and literature research; and (2) field reconnaissance.

Archival and Literature Research

Prior to initiating field studies, GLARC staff performed a literature and archival search of materials related to the study area and its environs. The archival and literature search was undertaken to identify known archaeological sites and burial sites within or immediately adjacent to the project area as well as to compile relevant background information. The task consisted of reviewing published and unpublished materials archived at repositories in Milwaukee and Madison. Reviewed documentary sources and their locations are as follows:

- (1) The Wisconsin Archaeologist, issues available at GLARC, Milwaukee, Wisconsin;
- (2) State and county histories, available at the Milwaukee Public Library, University of Wisconsin-Milwaukee library, and Richland County Historical Society;
- (3) The Archaeological Site Inventory Codification Field, Office of the State Archaeologist, Wisconsin Historical Society;
- (4) General Land Office (GLO) survey plats, filed at the Archives Division, Wisconsin Historical Society;
- (5) Burial Sites Inventory, located at the Burial Sites Offices, Wisconsin Historical Society;
- (6) The Trygg map files, complete set housed at GLARC;
- (7) The Charles E. Brown manuscript files, at the Archives Division, Wisconsin Historical Society;
- (8) Miscellaneous archives/files/collections maintained at the Wisconsin Historical Society.

Two important map files that were reviewed were the Charles E. Brown Archaeological Atlas, and local plat/deed maps. The Brown Archaeological Atlas uses county plat maps to record the location of archaeological sites, features, and deposits reported to Brown during his long tenure as Secretary of the Wisconsin Archaeological Society and as an employee of the State Historical Society of Wisconsin. The Atlas identified camps, villages, mounds, springs, rock art, workshops, quarries, cemeteries, trails, and various type other types of archaeological properties.

The General Land Office (GLO) records consist of plats and survey notes that provide information regarding pre-settlement vegetation, topography, and aquatic features; all represent important variables when attempting to determine site locations. In addition, dependent on the interests of the individual land surveyors, cultural information such as the locations of Indian trails, camps, and villages, maple sugar processing stations (“sugar-bushes”), pioneer settlements, and early improvements such as mills, roads, homes, and farmsteads are frequently noted on the maps.

Manuscript files reviewed include the Charles E. Brown collection and the Museum Division, Wisconsin Historical Society’s county files. The Brown manuscripts consist of 50

years of notes, correspondence, sketches, maps and other data relating to archaeological sites. The county files include reports (unpublished), photographs, sketch maps, letters, and information derived from the Museum's highway archaeology program.

Field Reconnaissance Methodology

Phase I Archaeological Survey Methodology

Methods and techniques of Phase I archaeological inventory are determined primarily by ground cover conditions and surface geology of a particular project area. Three different pedestrian survey techniques were employed during the course of the project: (1) visual inspection (2) pedestrian survey and (3) systematic shovel probing. These techniques are briefly described below.

Visual Inspection

This technique is employed to provide an initial assessment of the project area. Attempts are made to identify those portions of the project that can not be surveyed by conventional means. Such areas include massively disturbed construction sites, heavily developed commercial or residential zones, paved or massively filled surfaces, inundated locales, and deeply ditched roadsides.

Shovel Testing

Shovel testing is a technique used to sample areas where the ground surface is masked by vegetation (less than 20% surface visibility), fill, natural sediments, or other materials. Shovel testing is a labor-intensive technique, which results in only a small fraction of the site area being sampled for cultural remains. This technique entails excavation in a series of small holes (35 to 45 cm in diameter), placed along predetermined transects or in grid form with specified intervals between the shovel tests. These intervals do not exceed 15 meters and, depending on the specific purposes or data needs, intervals may be reduced to 10 m, 5 m or even tighter intervals. Shovel tests are excavated to various depths, averaging 50 cm below surface. All matrixes from the shovel tests are screened through ¼-inch hardware cloth and cultural material is collected. After collection of the cultural material and examination of the stratigraphy, shovel tests are immediately backfilled.

Soil Coring

Soil coring involved the extraction of sediment cores using an Oakfield-type soil probe. This technique is employed to verify the presence/absence of buried soils as well as to document the extent of disturbance at any given locale. The hand extraction of sediment cores was used to assess the potential for buried deposits, and potential depth of recent construction over-burden.

Mapping

During the archaeological testing, detailed maps of the sites were created. As part of the mapping process, a site datum point was established and assigned arbitrary coordinates. All shovel tests, test excavation units, and surface finds, were documented on the site map in relation to this datum. In addition, the floors and profile walls of test units and trenches were mapped, providing documentation of features encountered over the course of the site evaluation.

Data Management

Field notes for the shovel-probe excavations and associated investigations were maintained throughout the project by the field director. All soils were recorded by color using the Munsell Soil Color Charts (1992) and by texture following the method outlined by Huddleston and Kling (1984:16-21). Other forms used included: the Shovel Test Form, Positive Shovel Test Form, Photo ID Form, Field Site Form, Photo Log, Lot Number Book, and Artifact Bag List.

Phase II Evaluation Methodology

Previous archaeological survey of Bill's Woods and a parcel to the east of Willow Creek on the UW – Madison campus have resulted in the identification of at least two archaeological sites that had the potential to be eligible for inclusion on the National Register of Historic Places. Using the information collected during those previous surveys to guide work efforts, additional subsurface testing of 47DA413 – Eagle Heights Field and 47DA124 was carried out to secure sufficient information to determine whether or not the sites met the criteria for inclusion on The National Register of Historic Places. In addition to those techniques utilized during the Phase I survey of the site, Phase II evaluation of the sites employed other methods of archaeological investigation, namely, controlled test unit excavations.

Controlled Test Unit Excavation

Excavation of test units provides both necessary stratigraphic detail to characterize on-site soil horizons and sufficient information to critically assess horizontal and vertical patterning and/or distribution of cultural materials. Based on the distribution of initial surface finds and the results of shovel probing, 1 x 2 and 1 x 1 meter test units were laid out and excavated at each of the sites. Using skimming shovels and trowels, the units were excavated in arbitrary 10-centimeter levels and the matrix dry screened through one-quarter inch hardware cloth. In the event that dark staining was observed in planview during excavation, excavations were halted in that unit, plan maps were drawn, and photographs were taken. The stain was pedestaled and adjacent areas were then excavated in 10-centimeter levels. The area of the stain was then bisected and half was removed in its entirety for a flotation sample. The remaining half was then excavated using natural levels when present or as a whole if no stratigraphy was observed. This material was then screened through one-quarter inch hardware cloth.

Mapping

During the Phase II evaluations, detailed maps of the sites were created. As part of the mapping process, a site datum point was established and assigned arbitrary coordinates. All shovel tests, test excavation units, and surface finds, were documented on the site map in relation to this datum. In addition, the floors and profile walls of test units and trenches were mapped, providing documentation of features encountered over the course of the site evaluation.

Data Management

Field notes for the shovel-probe excavations and associated investigations were maintained throughout the project by the field director. All soils were recorded by color using the Munsell Soil Color Charts (1992) and by texture following the method outlined by Huddleston and Kling (1984:16-21). Other forms used included: the Field Research Form, Parcel Survey Report, Shovel Test Form, Positive Shovel Test Form, Excavation Unit Form, Excavation Unit Level Form, Feature Form, Photo ID Form, Field Site Form, Photo Log, Phase II Lot Number Book, and Artifact Bag List.

Laboratory Methods

Laboratory activities involved the organization of collected field data, and the processing and analysis of artifacts and other samples. All artifacts are washed and subsequently labeled using waterproof indelible ink. Specialized analyses are conducted on the recovered artifact classes and assemblages. An artifact inventory is included with this document as Appendix A.

Lithic Analysis

Debitage Analysis

The methodology used for generaldebitage analysis in this report is that proposed by Sullivan and Rozen (1985). This particular methodology involves the sorting of lithic waste using a hierarchical key that has three dimensions of variability, each with two natural dichotomous attributes (Sullivan III and Rozen 1985:758). This allows for the categories employed in analysis to not be linked *a priori* to specific conclusions about lithic technology. In other words, it allows analysis to be conducted with interpretation-free categories which enhances objectivity and replicability in lithic analysis.

Sullivan and Rozen used four mutually exclusive flake categories. The first is complete flakes. Complete flakes are those flakes that have a discernible single interior surface (a single ventral surface with positive percussion features such as ripple marks, force lines, or bulb of percussion), an intact point of applied force (i.e. intact striking platform), and intact flake margins (distal end exhibits a hinge or feather termination and lateral breaks or snaps do not interfere with accurate width measurements). A broken flake has a discernible single interior surface, an intact point of applied force, but the flake margins are not intact. A flake fragment

has a discernible single interior surface, but the point of applied force is absent. Finally, a piece of lithic waste is considered debris if there is no discernible single interior surface.

When all flakes have been sorted into these four mutually exclusive categories, it is then possible to plot the distribution of flake categories and create profiles that can be informative as to what sorts of reduction strategies were employed with any given assemblage. The two examples that Sullivan and Rozen (Sullivan III and Rozen 1985) provide indicate that profiles that contain high percentages of complete flakes in relation to broken flakes and flake fragments indicate core reduction strategies while high percentages of broken flakes and flake fragments to complete flakes indicate tool (biface) manufacture.

Core Analysis

Two types of cores have been previously defined for lithic assemblages in the Richland County area (Christiansen III, et al. 1999:158-159), bifacial cores and multidirectional cores. In addition to definitions for these two types, a definition for bipolar cores is also included.

Bifacial cores exhibit flake scars primarily on opposing sides, with an artificially created edge between the two sides.

Multidirectional cores exhibit randomly oriented flake removals.

Bipolar cores are those cores that have been created through the “technique of resting a core or lithic implement on an anvil and striking the core with a precursor” (Crabtree 1972). Crabtree notes that contrary to popular belief, bulbs of force are not always present on both ends of bipolar flakes or blades as this technique typically causes the cone of force to be shattered or severed.

Biface Analysis

Bifaces have tended to be analytical dead ends in Wisconsin archaeology as they are frequently quantified in analysis and then serve no other purpose. However, not all bifaces are created equal when it is considered that bifaces recovered from archaeological sites usually demonstrate a variety of different levels of labor investment. For example, some bifaces exhibit random flaking patterns that yield only the most basic bifacial edge. Other bifaces exhibit fine retouch, thin cross sections and intentional symmetry. In an attempt to make better use of lithic data, it is proposed that by quantifying the labor invested in a biface, a better idea of lithic reduction strategies and implement use can be obtained. Initial attempts at defining bifaces can be found in Christiansen III et. al. (1999:164-168). For the purposes of this report, the following definitions have been adopted from Christiansen III et al. with some modification to the Type III biface definition.

Type I biface: a usable piece of lithic material that has been bifacially flaked such that a working edge may have been created, but that shows few or no pressure retouch scars. This is similar to Crabtree’s (1972) definition of a “blank,” however, it is not assumed that a Type 1 biface was ever intended to be anything other than it is. It may represent: 1.) an early stage, unfinished form of something else, that for whatever reason was never completed, 2.) a bifacial core, or 3.) it may represent a finished product in itself.

Type II biface: a bifacially worked piece that represents a more substantial investment of labor than a Type I biface. It will exhibit more thinning than a Type I biface, and moderate to extensive retouch along the edges. As with Type I bifaces, no inference is made here as to whether a Type II biface represents a finished product or a broken or rejected piece that was originally intended to be further modified.

Type III biface: these are highly finished bifacial pieces. The piece will be thinned, have well trimmed edges, and may well have been associated with a finished projectile point, knife, etc. These pieces may be broken, lacking a proximal end or they may be complete.

Projectile Point Analysis

Projectile points have a long history of being used as temporal and cultural markers. This has led to the designation of projectile point types that are used freely in most lithic analyses. For the purposes of this report, standard type names have been used throughout the text. In addition, however, a series of metric and formal descriptions have been provided in the hopes of generating a regional database that will serve as a framework within which to evaluate the current type designations. In terms of formal descriptions; blade shape, point condition, haft element, basal shape, presence or absence of grinding, presence or absence of beveling on the blade, raw material and presence or absence of heat treatment were recorded for each projectile point. Four metric observations were also made. These included maximum length, maximum width, maximum thickness and weight. These measurements were taken only when the dimension being measured was intact. A table of these data is provided in Appendix B.

Ceramic Analysis

Ceramic sherds recovered in both the Phase I and Phase II investigations were first sorted by location on the vessel (i.e. rim sherd, decorated body sherd, undecorated body sherd). Undecorated body sherds were then sorted by surface treatment and temper. Decorated body sherds were sorted by surface treatment, then temper and finally decorative technique. Rim sherds were sorted by rim form, temper, surface treatment and then decorative technique. Traditional type/variety designations were used in identifying vessel cultural and temporal affiliation.

Faunal Remains

Faunal were sorted by size and class. In the mammalian class, divisions were made between small, medium and large mammals. Examples of small mammals would include squirrels, rabbits, raccoons, skunks, etc. Examples of medium mammals include canines and deer. Large mammals might include bison, elk, bear, etc. No effort was made to make species or element identifications. Bone condition was not assessed (i.e. raw, burned, and calcined).

Floral Remains

Charred floral materials were divided into three general categories, nutshell, wood, and seeds. These fragments were then counted and totaled as part of the overall artifact assemblage.

Several samples underwent more intensive identification so that appropriate samples could be sent away for radiocarbon dating.

Euro-American Metal

Euro-American metal artifacts were divided into a number of categories that describe either form or function or both. Nails were divided into square cut and wire types as these two forms can be used as temporal markers. Other categories include wire, can fragments, bolts, pop tops, barbed wire, staples, oil filters, springs, buckles, washers, eyelets, screws, buttons, pins, razors, files, wrenches, spoons, keys, bottle caps, pulleys, cotter pins and unidentified fragments. All historic metal fragments were counted and tabulated as part of the overall artifact assemblage.

Glass

Glass fragments were divided into a number of descriptive categories that reflect function and form. Categories include: clear bottle glass, brown bottle glass, green bottle glass, amber bottle glass, amethyst bottle glass, decorative glass, window pane glass, safety window glass, insulator glass, glass buttons, milk glass and melted glass (i.e. glass that has been melted in such a way that original function cannot be ascertained.). All glass shards were counted and tabulated as part of the overall artifact assemblage.

Part III: Results of the Investigations

Results of the Archives and Literature Search

The archaeological investigations for the University of Wisconsin - Madison campus survey began with a thorough review of literature pertaining to the archaeological resources previously reported for the UW- Madison Campus grounds. The following discussion is divided into two chronological periods representing the difference between the application of modern archaeological methods and theory and the period preceding it in which modern archaeology was in its infancy.

Archaeological Investigations Prior to 1950

One of the earliest published references to campus archaeological resources comes from James D. Butler in an annual address to the State Historical Society of Wisconsin in the Assembly Chamber of the State Capitol on February 18, 1876. His address was to focus on pre-Euro-American Wisconsin; however, the bulk of the speech was really in reference to antiquities around the world and the general need for preservation of archaeological materials and sites lest they be lost as they had in many other countries. Towards the end of the address, Butler notes that efforts by private individuals had served to preserve mounds on the Beloit College campus but that “Had there been more of this spirit in our State University Regents, they would never have let the mammoth lizard perish which they found stretched out along the very sky-line of its ridge by the lake, the nearest mound to this capitol, and one of the noblest anywhere.”(Butler 1876:98). While it is clear that Butler’s statement about the condition of the twin-tailed lizard mound is an exaggeration, the sentiment was that the mounds in Wisconsin should be preserved even if it meant that the mounds be bought by the state.

The first known scientifically based archaeological fieldwork associated with cultural resources on the University of Wisconsin – Madison campus was conducted by Theodore Hayes Lewis of the Northwestern Archaeological Survey. On August 2, 1888, Lewis surveyed the Observatory Hill Mound Group (47DA571) and the Willow Drive Mounds (47DA119) (Figures 3.1, 3.2). Two weeks later, on August 16, 1888, Lewis surveyed a portion of the University Ridge Group (47DA126) (Figure 3.3). Lewis’ recorded his measurements and bearings as well as small un-scaled drawings in small, leather-bound handheld notebooks. Unfortunately, he did not make extensive notes about the mounds that he was surveying outside of the formal observations regarding the mounds themselves. His comments typically include the date of survey and notations on the geographic locations of the mounds that might include information such as the mounds proximity to bodies of water or whether there were additional mounds in the vicinity that he did not survey. Of the three mound groups, Lewis surveyed, only two are still extant.

Reuben G. Thwaites published a recommendation to the UW Board of Regents in 1904 reminding them of the presence of the Observatory Hill Mound Group (47DA571) and recommending to them that the mounds be preserved in light of a similar movement at the federal level to protect archaeological remains on federal lands. Thwaites felt that “An institution which stands for the advancement of knowledge among men, can ill afford to allow its

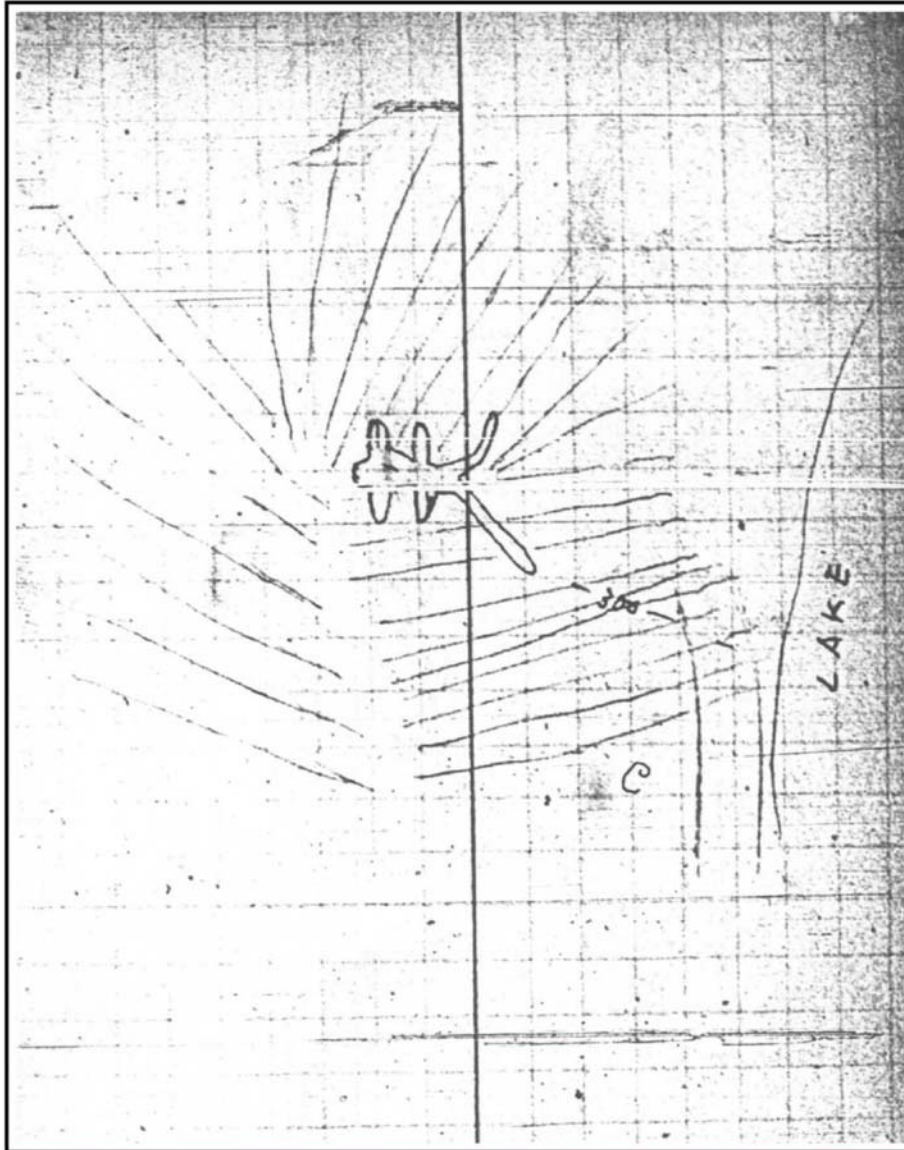


Figure 3.1: Observatory Hill Mound Group as recorded by T.H. Lewis - 1888.

own historical memorials to become the prey of an unappreciative spirit, which has already worked irremediable damage.”(Thwaites 1904:182). He goes further to make recommendations to restore the mutilated portions of the mounds and to re-seed the mounds to stabilize them. These comments appear to be the first preservation and maintenance suggestions made directly to the university.

A.B. Stout was the next individual to survey the mounds on the UW campus and on June 28, 1905, Stout recorded the dimensions and orientations of the Observatory Hill Mound Group

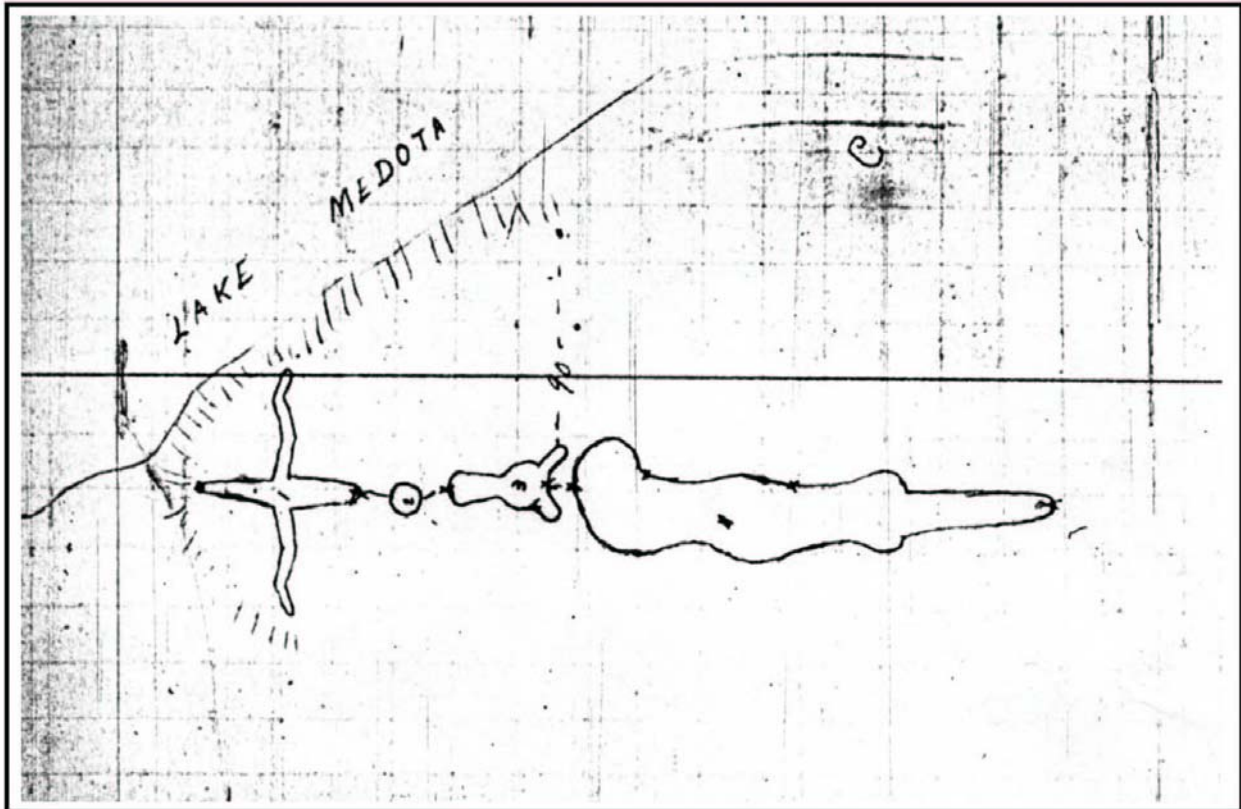


Figure 3.2: Willow Drive Mounds as recorded by T.H. Lewis - 1888.

(47DA571). His notes were later used by Charles E. Brown in a publication on mound groups of Lake Mendota (Brown 1912).

Brown was to become the most important researcher and advocate for the archaeological sites on the UW campus, particularly for the mounds. In May, June and August of 1909, Brown surveyed the University Ridge Mound Group (47DA126) (Figure 3.4), the Eagle Heights Group (47DA130) (Figure 3.5), the Picnic Grove Mounds (47DA120) (Figure 3.6), the Willow Drive Mounds (47DA119) (Figure 3.7) and the Picnic Point Mound Group (47DA121) (Figure 3.8). He produced plat maps for each of these groups and published information on them in 1912 (Brown 1912). Brown's enthusiasm and desire to protect the mounds of Wisconsin led to the mounds on campus being marked with wooden signs in the same year. Brown's contributions were not limited to mounds and mound preservation. Brown conducted fieldwork and reported other peoples fieldwork throughout his life. In 1911, Brown collected artifacts from a recently plowed University Farms field and identified a site that would later be designated 47DA124. In 1927 Brown reported described a small collection of artifacts recovered from the George Raymer farm which eventually became the better part of the Eagle Heights Apartments (these materials formed the basis for the site 47DA1237). Brown worked with his son and anyone else who was interested in learning about Madison's past. In 1928, he and his son collected and identified the Eagle Heights Field site (47DA413). Apparently, Brown regularly toured the campus as he seems to have been well aware of when new agricultural fields were being opened or when the university was going to expand their facilities. For example, in 1929 Brown collected a site located in an agricultural field just before the field was to be turned into an athletic field (47DA1238) and later that same year he took a group of approximately 18 anthropology students out to a recently tilled site (now the site of the McClimon Memorial Track) and recovered

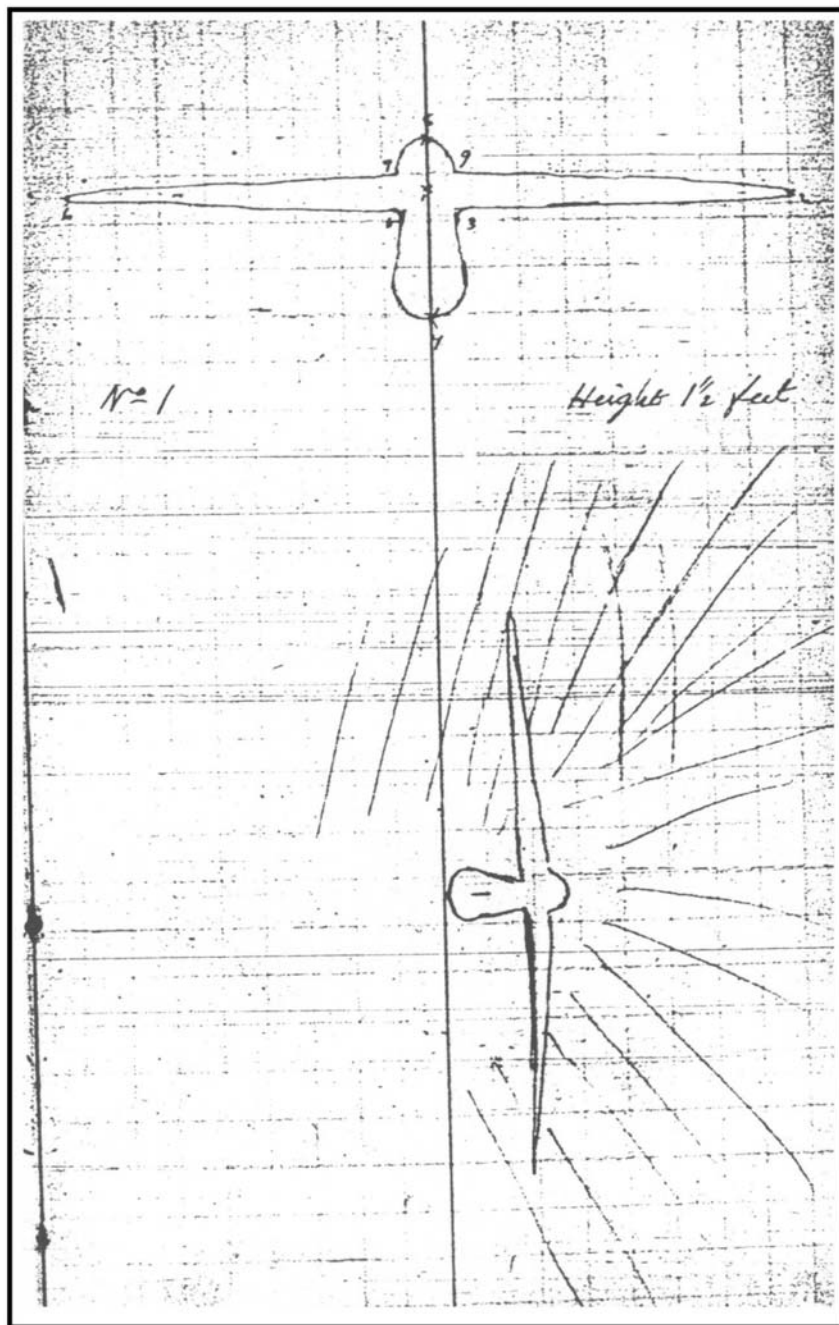


Figure 3.3: University Ridge Mound Group as recorded by T.H. Lewis - 1888.

an interesting assemblage of materials (site is now officially designated 47DA1236). Brown was clearly aware of the activities on campus and made every effort to engage interested parties into preserving and learning about the landscape of the past.

The 1930s must have been a difficult time for Brown, as many of the mounds that he had fought hard to preserve in the early 1900s became areas where development was deemed necessary by the university. In 1931 Brown lost the battle with Dean Russell at the College of Agriculture to preserve the remaining linear mound of the University Ridge Group (47DA126).



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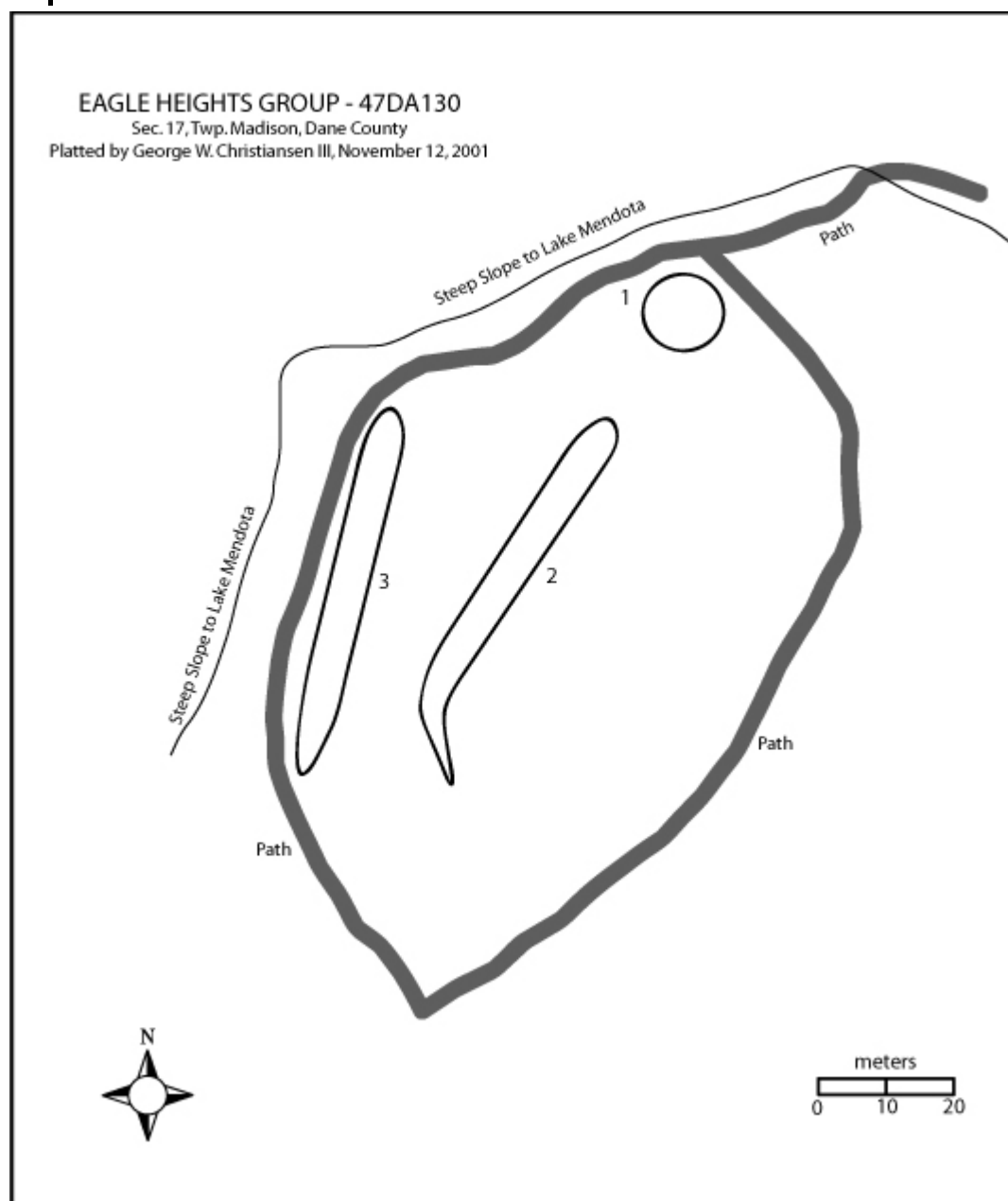


Figure 3.5: Eagle Heights Group as recorded by G.W. Christiansen III - 2001.

Brown continued his interest in the resources of the UW campus through the early 1940s. In 1943, he identified and sketched a set of terra cotta figurines recovered from the Pharmaceutical Gardens on the northwest side of the intersection of Lake Mendota Drive and University Bay Drive. These pieces had been collected from the surface prior to 1915 by a university professor and another individual whose status is unknown. While he thought that they were Mesoamerican in origin, they could fit within the Middle Mississippian Tradition of AD 1000 – 1250. This site was recently designated 47DA1239. In the same month (April), Brown toured Observatory Hill with Arthur Quan who had walked regularly over the west end of Observatory Hill to go fishing on the Lake Mendota shoreline between 1892 and 1896. Quan

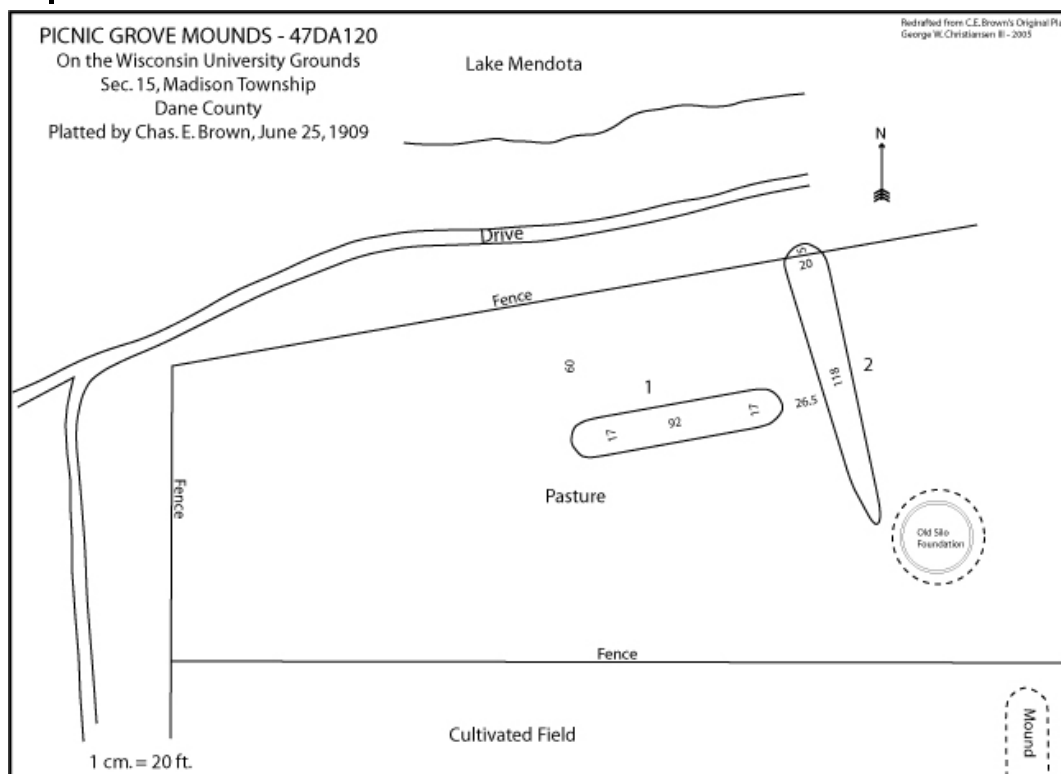


Figure 3.6: Picnic Grove Mounds as recorded by C.E. Brown - 1909.

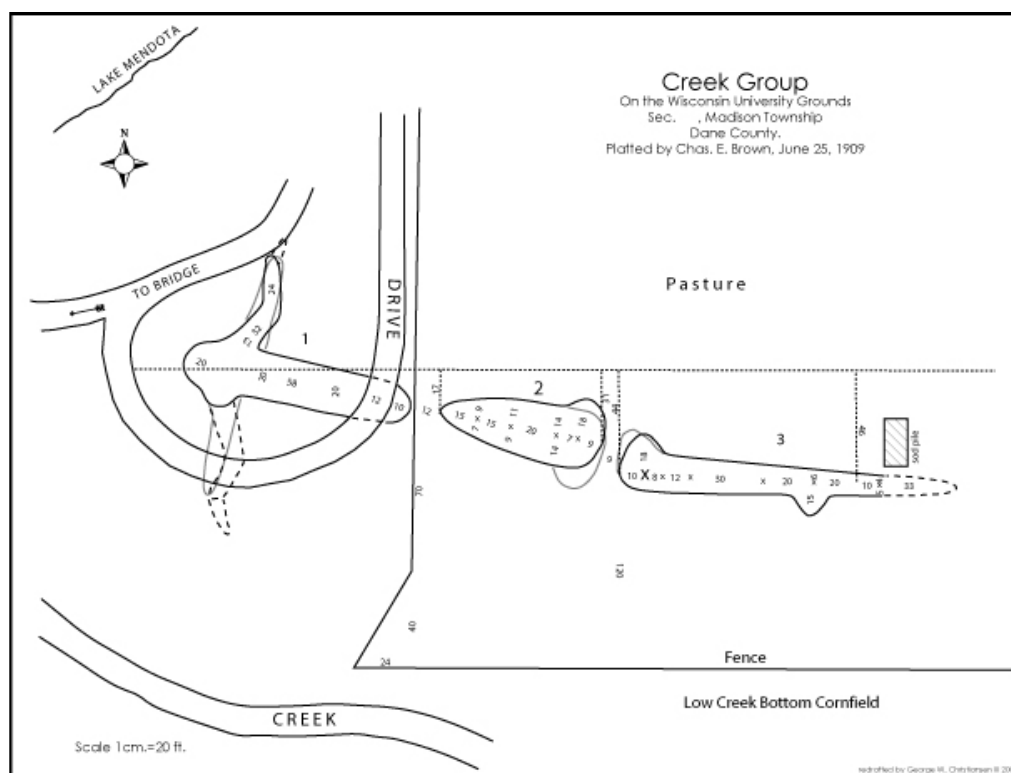


Figure 3.7: Willow Drive Mounds as recorded by C.E. Brown - 1909.

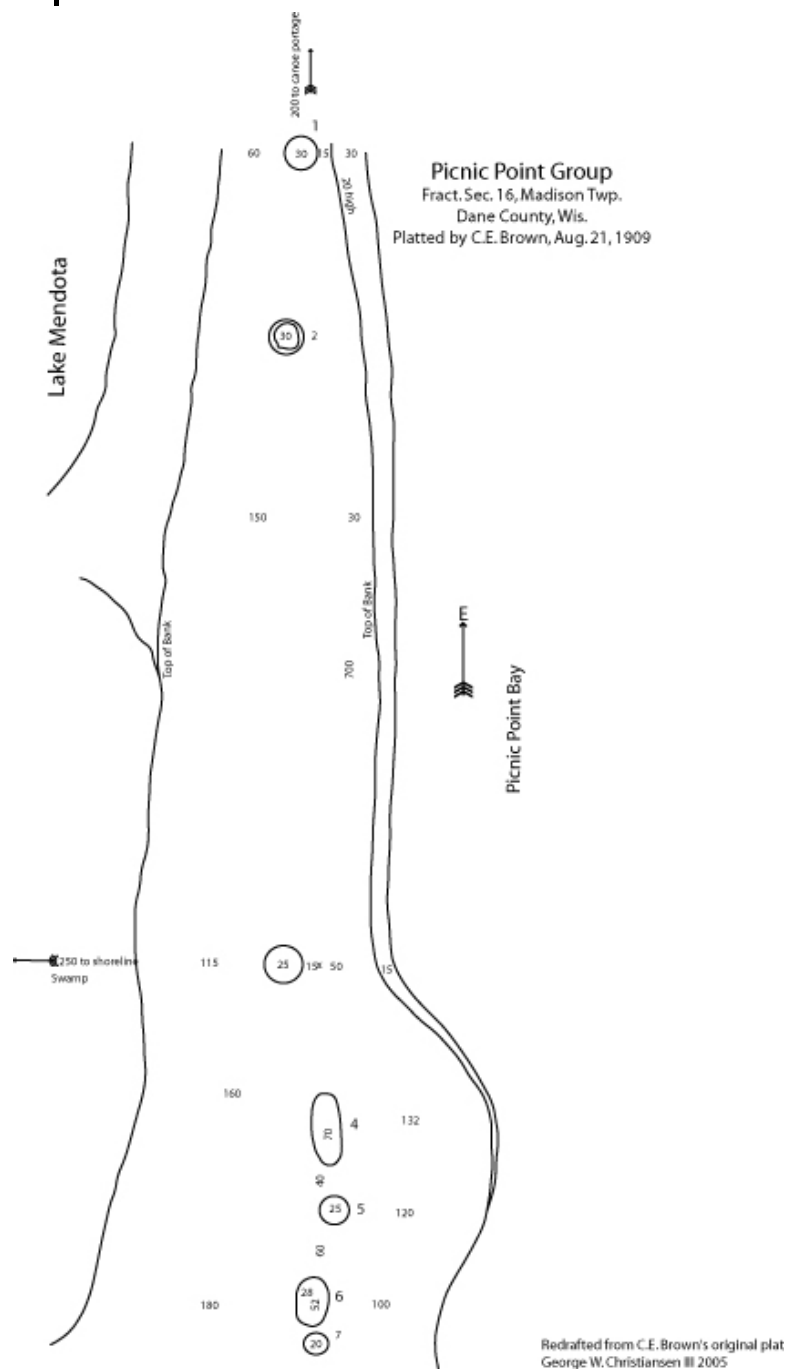


Figure 3.8: Picnic Point Mound Group as recorded by C.E. Brown - 1909.

was able to relate the location of a linear and panther mound that had previously been unknown as well as the location of a large village site that had also gone unrecorded in the past. Brown passed away in 1946 at the age of 74 and with him an era passed. Interest in the cultural resources of the UW campus slowly diminished eventually reaching an equilibrium whereby people were aware of the Native American mounds on campus, but not of the extensive number of living sites whose locations were all but forgotten.

Archaeological Research from 1950 to the Present

Archaeological research on campus through the 1950s and 1960s was limited in nature to primarily a publishing of Brown's work in the 1930s by David Baerreis (Baerreis 1966). In the mid-1970s some survey of the campus was undertaken by Dan Wendt who surface collected Eagle Heights Field (47DA413) and large portions of Picnic Point. Wendt identified three site areas on a sketch map of the peninsula but was limited in his investigations to areas that were actively eroding. With the advent of cultural resource management and laws passed at the federal level, local state laws seem to have received a boost of support and buildings that were in the planning stages in the mid-1970s were actively surveyed for cultural resources. In 1975 and 1976, David Baerreis (Department of Anthropology) surveyed the building site for an animal facility at the University of Wisconsin Medical School Complex on Marsh Lane. In 1987 and 1989, James R. Graves examined the areas where the McClain Athletic Facility at Camp Randall was to be built as well as the location for the Radio Hall electrical substation. When it became clear that the university rowing crew needed a new facility, Ken Karsten and Lynn Rusch surveyed a large parcel of land on the eastern side of Willow Creek between the Natatorium and Lake Mendota (Karsten and Rusch 1995). This survey aided in defining current site boundaries for 47DA124, a site that Brown had collected and reported in 1909 (Brown 1909:120).

With the turn of the century, renewed interest in the archaeology and cultural resources of the UW campus new comprehensive survey was initiated for Picnic Point, for a portion of Eagle Heights and for the Howard Temin Lakeshore Path (Cain 2001; Christiansen III 2001a, b). In 2003 at least three survey projects were conducted including the testing of Muir Knoll by the Wisconsin Historical Society (Rosebrough 2003), the testing of the route for a domestic water main through the campus area (Salkin 2003a) and the testing of another route for a lake water force main for the Madison Gas and Electric power plant (Salkin 2003b). Both the Picnic Point survey and the Muir Knoll projects produced new sites and several older sites were given better spatial definition. The Eagle Heights survey allowed for an update to Brown's plat maps for the Eagle Heights Group (47DA130) and the associated Howard Temin Lakeshore Path survey revived some interest in the Madison Park and Pleasure Drive of the 1890s. The water main and Madison Gas and Electric surveys did not produce additional information or sites. Although it is clear from the preceding discussion that there has been some archaeological survey conducted for specific portions of the University of Wisconsin campus, the areas surveyed are few and far between (Figure 3.9). Prior to this report, no synthesis of all of the known archaeological resources on campus was available and it is clear from the results of this survey that a comprehensive archaeological reconnaissance survey is needed to fully disclose the locations of all archaeological sites on campus.

Previously Reported Archaeological Sites

At the start of the fieldwork for the 2004 survey there were a total of 20 previously known archaeological sites on the main campus (Figure 3.10, Table 1). Nine of those sites were Native American mound groups/cemeteries, 10 were habitation sites and there was a single Euro-American cemetery. The mound groups/cemeteries contained a minimum of 31 mounds originally (2 bird mounds, 1 goose mound, 3 panther mounds, 2 problematical effigy mounds, 8 conical mounds, 14 linear mounds, 1 turtle mound). There may have been more, but some

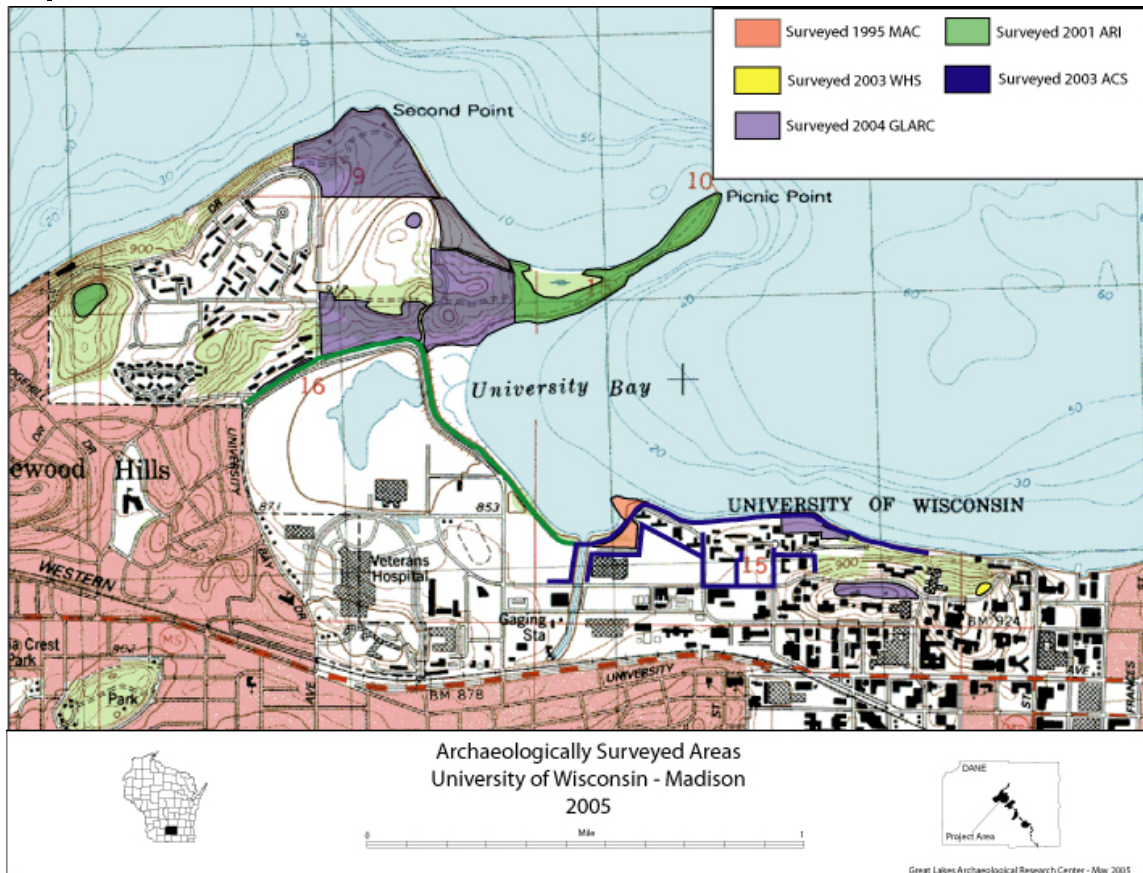


Figure 3.9: Areas on the UW – Madison campus that have been surveyed for archaeological sites.

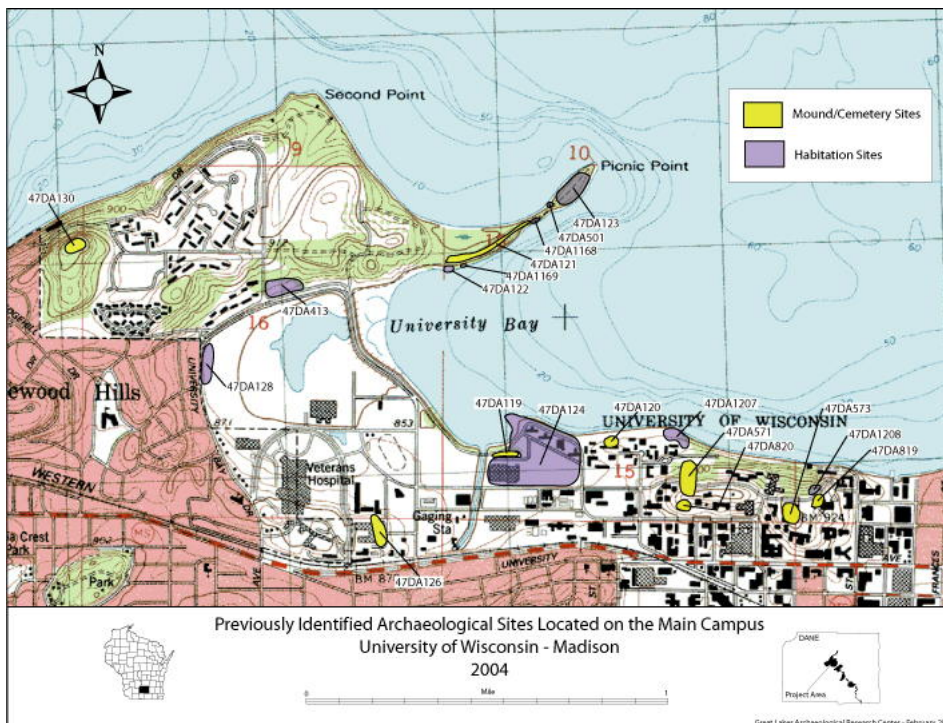


Figure 3.10: Previously identified archaeological sites located on the main campus.

mound groups were destroyed with the inception of the university and the records for these destroyed sites are poor. Since the beginning of construction of University of Wisconsin buildings and facilities the surface component of 16 of those mounds has been destroyed leaving numerous questions about their subsurface component (namely whether there were burials present or absent and what their nature was). Based on the nature of the construction that destroyed the surface it seems likely that in some places the burials have been destroyed, but in other locations the fate of the features is unknown. That represents 52% of the mounds on the main campus.

The previously identified habitation sites on the main campus have fared better although there is little knowledge to be had regarding several of these sites. At least three of the previously reported sites had been damaged by various buildings and facilities installation, burial for stabilization of playing fields and sometimes by agricultural activities such as plowing. The literature search and fieldwork conducted for the 2004 survey updated the currently available knowledge regarding mounds and habitations sites considerably. The results of that research are presented in detail and at length in the following sections.

New Sites Reported as a Result of the Archives and Literature Search

As a result of a thorough review of the unpublished Charles E. Brown manuscripts, the Charles E. Brown Atlas and the George R. Fox survey maps, a total of six archaeological sites that had been identified in the early part of the twentieth century (but had not been inventoried as part of Wisconsin's Archaeological Site Inventory [ASI]) were "re-discovered" and have now been reported to the Office of the State Archaeologist with their correct locations. These sites will be discussed individually below.

47DA1236

Location: E1/2 of NW1/4, SE1/4, SE1/4 and the SW1/4, NE1/4, SE1/4, SE1/4 of Section 16, Township 7 North, Range 9 East (Figure 3.11)

Geographic Location and Relationship to Landscape Features: This site was at one time an island surrounded by the low marshy land of Picnic Point Bay. The marsh was largely cut off from the rest of University Bay in the late 1800's and the majority has been filled in. Only a small portion of wetlands remain, that being the Class of 1918 Marsh. The filled in areas is being used for a variety of buildings and parking facilities. When the site was occupied by Native Americans, it overlooked the marsh to the north. At the present time the McClimon Memorial Track occupies the area where the site once was.

Site Description: Unfortunately, there are no precise descriptions of the size, shape or content of the site other than its geographic location on an island. Therefore, there is no adequate information regarding the size, shape, or intra-site artifact distribution. Furthermore, there is some evidence to suggest the presence of mounds or earthworks, but no known verbal description exists to verify the description.

Site History: The site first appears on George R. Fox's map of the Madison area as a series of three symbols, one that seems to represent a habitation site and two others that may be

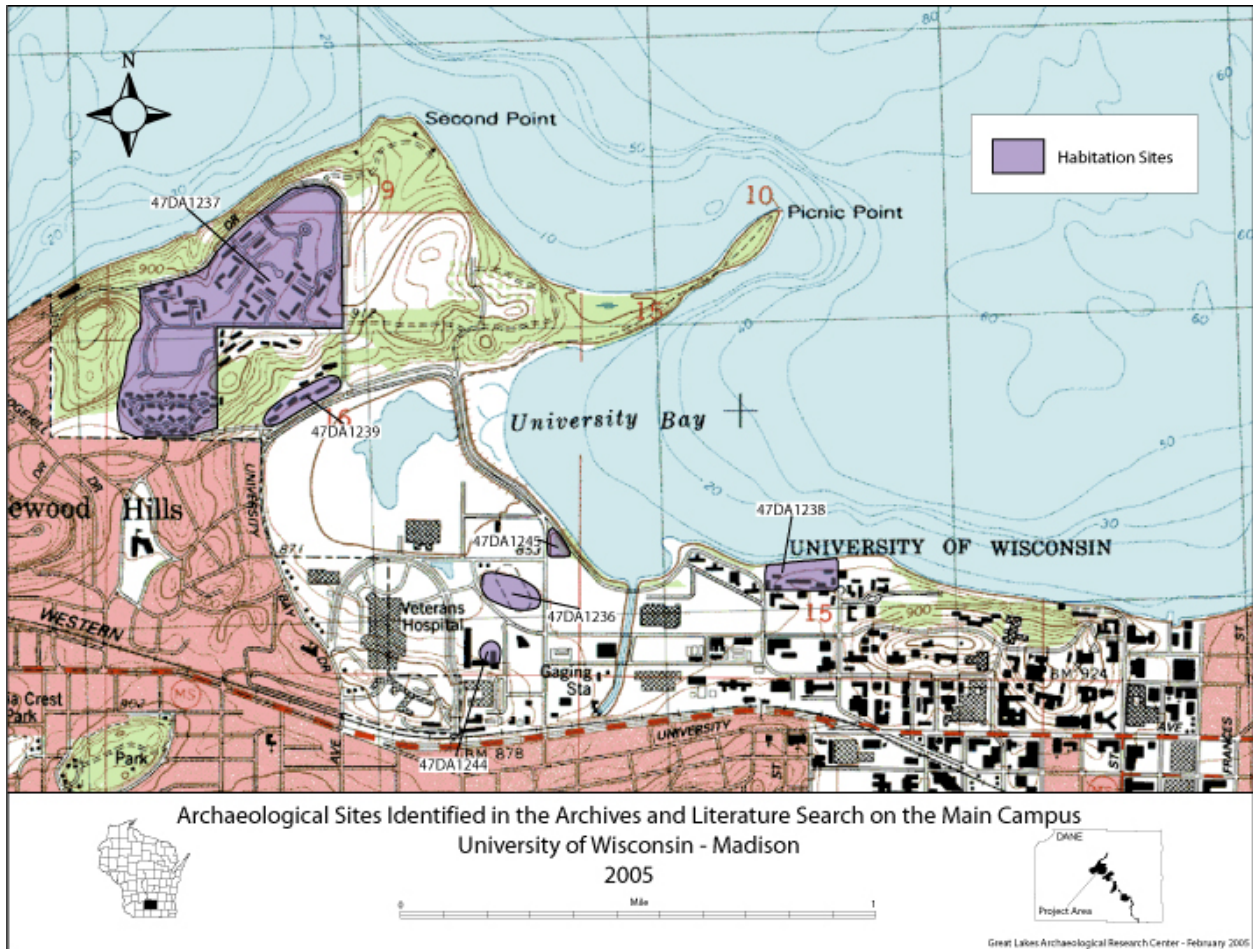


Figure 3.11: Archaeological sites identified in the archives and literature search on the main campus.

representations of linear mounds (Fox n.d) (Figure 3.12). The code for the symbols used by Fox has been lost and it is difficult to attach a confidence level to the interpretation of the symbols, but based on past experiences using Fox's maps, there is a relatively good chance that his symbols depict mounds at this location.

47DA1236 was described in print as early as 1914 in an article on mound groups on the University of Wisconsin campus (Brown 1914). As mounds were the primary focus of the article, it is not too surprising that reference to a habitation area might be overlooked, especially when the reference is not particularly descriptive when it comes to a specific location. The following is taken from the article:

On the west side of the creek on the higher land near the university sand pit are to be seen the usual surface indications of an Indian campsite. After the plowing of this field in 1911, the writer collected here a considerable number of flint arrowpoints and potsherds. A sandstone arrow shaft grinder was also obtained here. At this time flint chips and the burned and cracked stones from the wigwam fireplaces were quite numerous on the surface of the ground.

(Brown 1914:386-387)

The description of location is vague when one considers the extensive property that the university owns on the west side of Willow Creek. The first clue to the exact location is the use of “higher land near the university sand pit.” Fortunately, Brown re-visited the site at a later date and included more location information.

In the later reference, dated November 25, 1929, Brown refers to the site as the “Picnic Point Bay Site” and in a handwritten note, indicates that the site is “near Chemistry Dump.” This information was then supplemented by the body of the report, which is as follows:

On Saturday afternoon, November 23, 1929, visited this well-known site with a company of about eighteen students of the University anthropology course. Only a small part of the site was exposed, the eastern side of the knoll being covered with grass, and the western portion adjoining the refuse burning pit recently partly planted with a shrubbery nursery. In the course of about an hours search of the recently cultivated land on top of the knoll we found three pebble hammer stones, a small flint blank, a stemmed arrow point, bases and blades of three spearpoints, a rude stone celt, and a sherd of cord-marked, crushed stone tempered pottery. Visiting the same site several days later one of the boys found a bone implement made of a part of the shoulder blade bone of an animal. The point was rubbed flat and polished. Otherwise, it resembled an awl.

In the month of October and found here a piece of unornamented shell-tempered pottery, a broken quartzite knife, several pebble hammerstones and numerous hearthstones. Prof. Wayland Chase once found a fine flint perforator.

This site was at one time an island completely surrounded by low and marshy land. Marshy land separated it from Picnic Point Bay, there was a marshy tract between it and the University Creek on the east, low land in its rear to the south, and an extensive marsh, now a University field, north of it. This island was covered with oak trees.

(Brown 1929b)

It is clear that this site has been impacted by a variety of activities including initially agriculture and sand extraction. The *coup de grâce* appears to have been the construction of the McClimon Memorial Track or the Lot 60 parking facility. This is unfortunate as this site apparently produced shell-tempered ceramics, one of the hallmarks of the Mississippian Tradition. Frustratingly, Middle Mississippian and Oneota sites have been elusive in the Four Lakes Area and represent a high priority for reconstructing the pre-Euro-American history of the area.

47DA1236 Management Issues:

1. The condition of this site is unknown.
2. The location of the collections made by Brown is unknown.
3. The area where 47DA1236 may be further developed by the university.

47DA1236 Treatment Recommendations:

This site has clearly been severely impacted by development; however, the research value for intact materials (should they exist) is high. The following recommendations are made:

1. Geomorphological testing is recommended to identify any intact soils within the area.
2. Should there be intact soils, it is recommended that additional Phase I archaeological testing be conducted to identify any areas with intact archaeological materials.
3. Collections from this site should be found, researched and analyzed as they potentially represent all that will ever be known of this site.
4. Any additional development of the McClimon Memorial Track or the area of the “island” identified on topographic maps should be preceded by archaeological reconnaissance survey.

47DA1237

Location: NE ¼, NW¼ and the S ½, NW ¼, NW ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.11)

Geographic Location and Relationship to Landscape Features: This site is located on relatively flat upland area that slopes gently to the south and steeply to the north. It is the former location of the George Raymer and University Farms. It is now the site of Eagle Heights Apartments. It is bounded on the north and east by Lake Mendota Drive. The southern boundary is based on plat maps from the late 1800s indicating the southern limits of the Raymer farm.

Site Description: This site is one of many that were reported to Charles E. Brown by lay people of the late 19th and early 20th century and as such, there was typically very little exact provenience information provided. In this case, there is no description of the site other than that a series of artifacts were found on the George Raymer farm.

Site History: This site was reported to Charles E. Brown on November 10, 1927 by a Mrs. A. Halbersleben in the course of donating a collection of artifacts to the State Historical Society. Brown’s report is as follows:

Mrs. A. Halbersleben has presented to the State Historical Museum, November 10, 1927, a small collection of flint implements, the blade of a broken axe or celt and broken flint implements found in 1898 on the old Roemer, now University farm, at Eagle Heights, Lake Mendota. This collection includes—

- 4 flint blanks, white flint
- 1 flint knife, white flint
- 4 flint arrowpoints, triangular, white, flesh and black flint. One is made of white quartzite
- 6 flint spearpoints (1 triangular, 1 stemmed, 3 are notched and one barbed. (grey, buff and flesh colored)

- 9 flint arrowpoints (1 stemmed, 8 notched) grey, mottled grey and white (Bad Axe), buff, white, and salmon (Madison) flint
- 2 stone balls
- 16 Fragmentary flint arrow and spear points (white, buff, grey, brown, pink and salmon and light brown quartzite.)

(Brown 1927)

Although Brown states that this is a “small” collection, the inventory suggests a reasonable sized multi-component site or sites located somewhere in the Eagle Heights apartment area. Unfortunately, there is no additional detail available for this site. Brown did not depict a location for the site in his atlas nor was one present on the George R. Fox map. It is not clear if this was an oversight by Brown or if he was not confident of the provenience of the collection. This site has been reported to the Wisconsin Historical Society because of its historical value and because of the likelihood that an archaeological site once was present on the high ground overlooking Lake Mendota. Like so many sites reported to Brown, it is unfortunate that there is not more information regarding its location.

Management Issues:

1. The exact location of this site (or sites) within the Eagle Heights Apartments area is unknown.
2. The Eagle Heights Apartment area is under pressure for development of facilities including new housing accommodations.
3. The location of the collection donated by Halbersleben should be verified and the materials should be analyzed.
4. The Eagle Heights Apartment area is used as a housing area and as such, it seems likely that ground-disturbing activities related to maintenance and improvement would be occurring on a regular basis.

Treatment Recommendations:

The Eagle Heights apartment area is extensive in its area and it is clear that a great deal of earthmoving was conducted to create the various buildings, parking areas and roads. However, the Raymer/University farm was also large and it seems unlikely that every portion of the farm was impacted by construction. The following recommendations are submitted:

1. A Phase I archaeological reconnaissance should be conducted for the Eagle Heights apartment area.
2. A geomorphological study should be conducted in conjunction with the archaeological survey. This should serve to identify areas that are intact, areas that have been disturbed, and areas that have been completely graded away. It should also serve to help identify any archaeological deposits that are still present.
3. Any earthmoving activities in the Eagle Heights apartment area should be preceded by archaeological survey to identify any possible intact deposits. Earthmoving activities

include tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

4. The collection donated by Halbersleben should be located and the materials identified and analyzed as they represent all that is currently known of the site.

47DA1238

Location: N ½ , NE ¼, SE ¼, SW ¼, and the NW ¼, NW ¼, SW ¼, SE ¼ of Section 15, Township 7 North, Range 9 East (Figure 3.11)

Geographic Location and Relationship to Landscape Features: This site is located on a relatively flat, low-lying terrace overlooking Lake Mendota to the north. The site is bounded by Elm Drive to the west, Babcock Drive to the east, and Lake Mendota to the north. A number of buildings now occupy what was once known as Picnic Grove and these buildings include Gilman House, Mack House, Turner House, Conover House, Holt Commons, Kronshage House, Showerman House, Swenson House, Jones House, and Chamberlin House.

Site Description: 47DA1238 was a site identified by Charles E. Brown in 1929 when the Picnic Grove was still extant as were the agricultural fields to the south. Brown's description of the site come from his examination of materials along the northern agricultural field border and reports from people who had worked the fields. As a consequence, precise boundaries are not known.

Site History: 47DA1238 appears on Fox's map of the Madison area which probably dates from between 1905 and 1917 (Fox n.d) (Figure 3.12). The symbol used on the map is one that Fox seemed to use consistently for a habitation area. There is no verbal description of the site until Brown recorded the site on June 21, 1929 following his collection of artifacts along the northern edge of plowed fields immediately adjoining what was then known as the Picnic Grove (Figure 3.13). The following is from his report:

The University is preparing for use as an athletic field the former cultivated field located on the grounds of the College of Agriculture, adjoining on the south the Picnic Grove in which are located the two linear mounds preserved and marked by the University. In examining the cut earth bank along the grove edge of this field several typical hearthstones and a number of flint chips of pinkish white flint were found. Doubtless, more numerous evidences of this site exist beneath the sod-covered floor of the grove. Some flint arrowpoints have been picked up in recent years by workmen engaged in cultivating the field.

(Brown 1929a)

Brown's description of the site location is difficult to interpret at first glance, the only clues given are that the field is south of the Picnic Grove where the two linear mounds of the Picnic Grove Mounds (47DA120). It has been determined through examination of the original blueprints for Kronshage Hall that the linear mounds were located near the Lake Mendota side entrance to that complex. This puts the agricultural field to the south of the Kronshage Hall

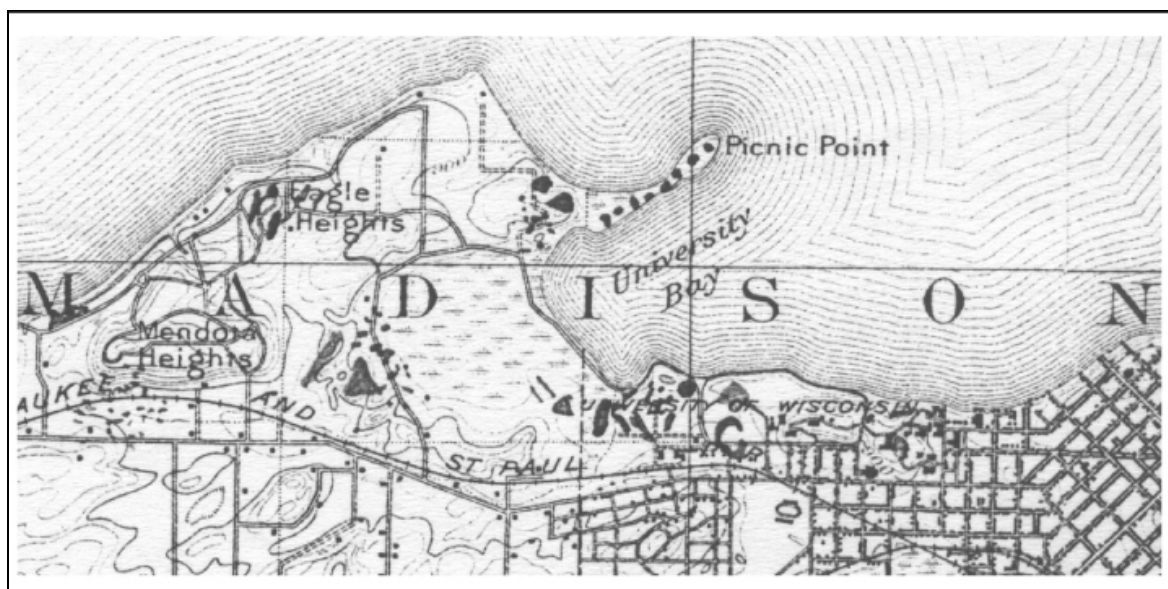


Figure 3.12: Fox's map of the Madison area.

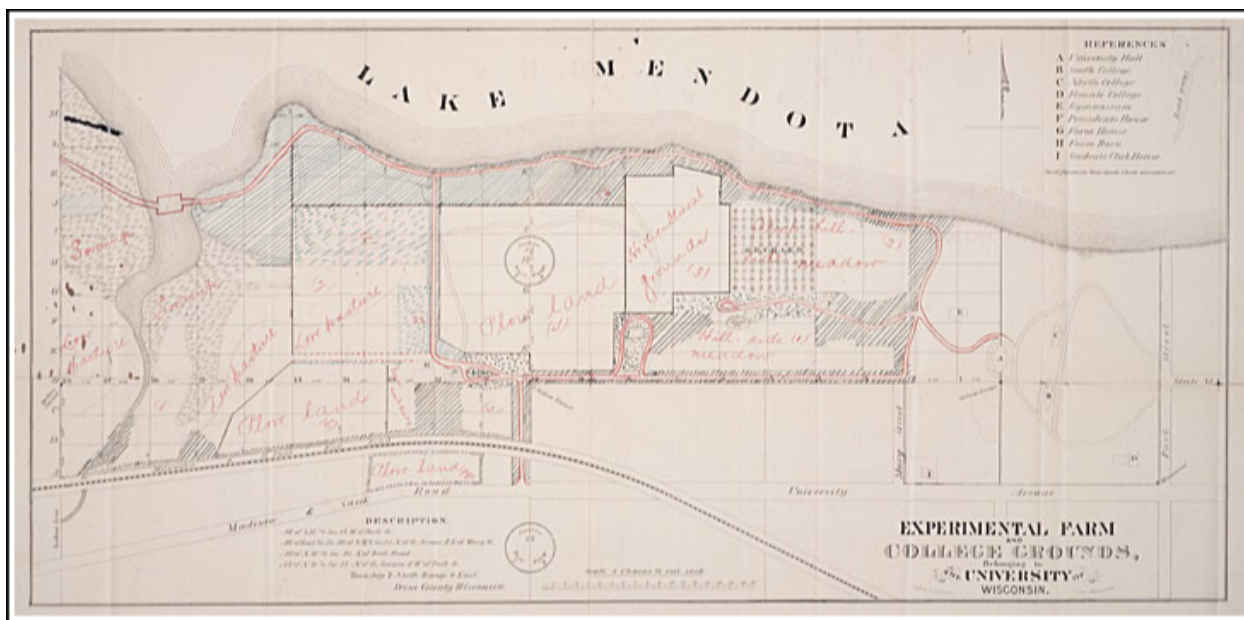


Figure 3.13: Map of the Experimental Farm on the UW – Madison Campus – circa 1870's

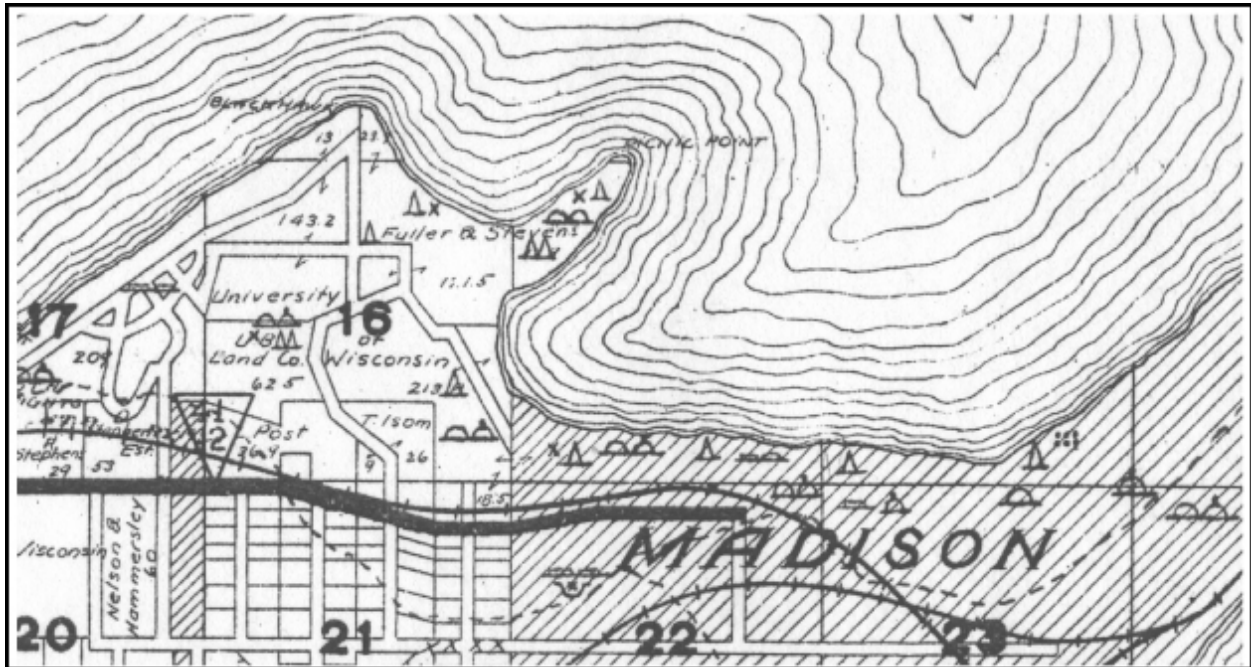


Figure 3.14: C.E. Brown Atlas depicting location of previously identified sites

complex. Although Brown's atlas is not precise enough to identify buildings, there is a symbol indicating a campsite in the immediate vicinity of the Picnic Grove Mounds (Figure 3.14). The examination of a map of the University Farm in 1934 further identifies a location where an athletic track was located to the north of Allen Centennial Gardens (Agricultural Dean's Residence) confirming Brown's observation that an athletic field was going to be placed in the former agricultural field (Figure 3.15).

47DA1238 Management Issues:

1. The precise boundaries of this site are not known and need to be refined.
2. It is likely that there is more than one site in this area whose boundaries are also undefined.
3. The location of the collections that were made by Brown is uncertain.

47DA1238 Treatment Recommendations

This area has been heavily developed since the days when it was used as part of the University Farm. Roads, parking facilities, residence halls and other UW facilities have been built since Brown was able to collect this field and these factors certainly suggest that portions of the site has either been heavily disturbed or destroyed. However, there are some large oak trees along the lakeshore and south of Kronshage hall, a minimum of disturbance and therefore the likelihood that some portions of the site may yet yield intact deposits. As a result, we make the following recommendations:

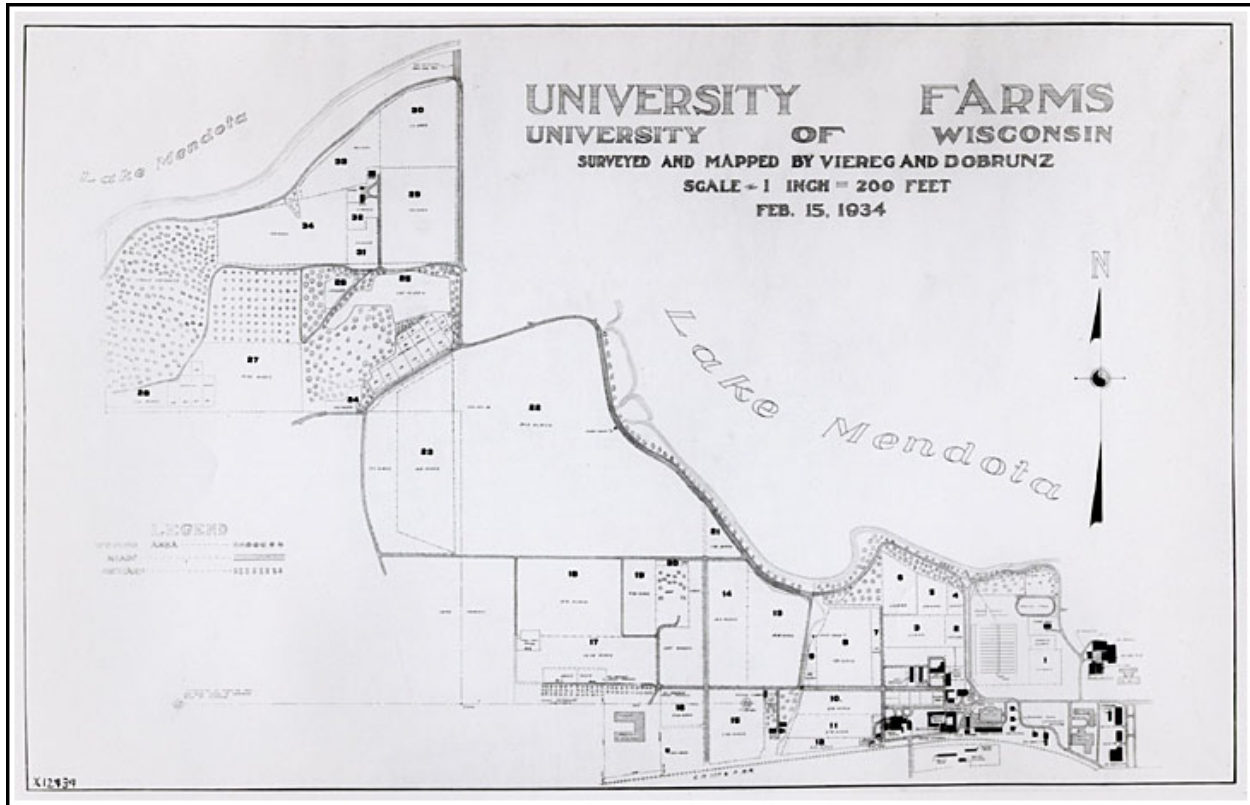


Figure 3.15. 1934 map of University Farms.

1. The area that encompasses Turner, Gilman, Humphrey, Mack, Jorns, Showerman, Kronshage, Conover, Holt Commons, Cole Hall, Sullivan Hall, Swensen, Jones and Chamberlin Houses should be subjected to Phase I archaeological reconnaissance so that any portions of this site that may still be extant be identified and located. Care will have to be taken in this survey as there are three former mound locations present within the area. These mound areas will have to be located and staked with the appropriate buffer zone during survey.
2. Any earthmoving activities for construction or maintenance should be preceded by archaeological survey.
3. Brown's collection of artifacts should be located and analyzed as it may represent the only information that will ever be known of this site.

47DA1239

(See page 69)

47DA1244 – University Ridge 1

Location: SE ¼, SW ¼, SE ¼, SE ¼, of Section 16, Township 7 North, Range 9 East (Figure 3.11)

Geographic Location and Relationship to Landscape: This site is located on the northern downslope of the feature known as University Ridge. This location is north of the Forest Products Laboratory and west of the WARF Office Building.

Elevation: 872 feet above sea level

Vegetation and Land use: This area is largely within a complex of buildings that are used by Forest Products Laboratory and the University of Wisconsin – Madison. The areas that are not covered with buildings have cement and asphalt parking lots and short manicured grass. This area is essentially an industrial park.

Soils: Kegonsa Silt Loam 2-6% slopes.

Site Description: There are no specific details regarding this site other than its location.

Site History: This site was initially reported by Charles E. Brown in 1912 in his article entitled the *Undescribed Groups of Lake Mendota Mounds* (Brown 1912). In that article he discussed the mounds associated with 47DA126 – University Ridge Mound Group and before proceeding to the next set of sites mentioned that “Sloping away to the north from the base of this ridge is a cultivated field in which area few scattered indications of an Indian camp site. Adjoining these fields on the north is the University sand pit described on the foregoing page “(Brown 1912:13). The sand pit site referred to in the quotation is 47DA1236 (described above). There is no other mention of this site in any of the published literature for the University of Wisconsin properties in this area.

Discussion: This site is located largely within an area that has been heavily disturbed first through agriculture, then by the construction of the Forest Products Laboratory facilities. The precise location of the site is unknown and the site location information must be regarded as a best estimation at this time. While it seems clear that at least some of the site is on Forest Products Laboratory property, it is also possible that portions extend onto University of Wisconsin property.

47DA1244 - University Ridge 1 Management Issues:

1. The exact boundaries of this site are unknown.
2. The boundaries of this site may cross over into Forest Products Laboratory property.
3. This area is under pressure for development.
4. It is unclear whether Brown made collections from this site and if he did what the disposition of those materials might be.

47DA1244 - University Ridge 1 Management Recommendations:

Brown's description of 47DA1244 – University Ridge 1 is vague at best and it is completely unknown what sorts of materials Brown observed and whether he made collections from this site or not. One thing that is certain is that the site was damaged first by agricultural activities and then further by the construction that has been conducted in the University Ridge area. At the present time it is impossible to determine the extent of the site and who may own the property where the site once was. Based on the current understanding the site, the following recommendations are made:

1. A Phase I archaeological reconnaissance should be conducted for the area west of the WARF Office Building. This should serve to identify areas that are intact, areas that have been disturbed, and areas that have been completely graded away. It should also serve to identify any archaeological deposits that are still present.
2. Any earthmoving activities in the area around and to the west of the WARF Office Building complex should be preceded by archaeological survey to identify any possible intact deposits.
3. The collection made by Brown should be found and the materials identified and analyzed as they represent all that is currently known of the site.

47DA1245 – University Bay South

Location: NW ¼, SW ¼, SW ¼, of Section 15, Township 7 North, Range 9 East (Figure 3.11).

Geographic Location and Relationship to Landscape: 47DA1245 is located on low-lying ground that is immediately south of University Bay. The Howard Temin Lakeshore path (formerly Madison Park and Pleasure Drive, Willow Drive and University Bay Drive) fronts the site on the north; Willow Creek is on the east.

Elevation: 849 feet above sea level

Vegetation and Land use: The area around 47DA1245 has been heavily developed with the installation of roads and recreation facilities. The area is currently being used as a recreation field that is covered with piles of fill from the construction of a nearby power plant

Soils: Colwood Silt Loam

Site Description: There is no indication in the historic sources regarding the size of the site or its precise location. It is described as being in a "...small grove below the sandpit and fronting on the willow drive of Picnic Point Bay"(Brown 1912:10).

Site History: 47DA1245 – University Bay South is depicted on Fox's map of the Madison area as an area of habitation marked with a "C" which may indicate a campsite (Figure 3.12). Charles E. Brown included a brief description of the site in 1912 in an article entitled *Undescribed Groups of Lake Mendota Mounds* (Brown 1912:10). After Brown discusses the site located around the university sand pit (47DA1236, see above), he states "Several early settlers have informed the writer that the small grove below the sandpit and fronting on the willow drive of

Picnic Point Bay was up to about the year 1885 a favorite camping ground of the Winnebago Indians who camped here, sometimes in considerable numbers. They came largely for the purpose of hunting the muskrats which were then numerous in the adjoining marshes” (Brown 1912:10). Brown does not indicate that he ever found anything at this location, but instead relied upon informant testimony. According to the Viereg and Dobrunz map, this parcel was numbered with the implication that it was used as an agricultural field by the University of Wisconsin (Viereg and Dobrunz 1934) (Figure 3.15).

Discussion: The disposition of 47DA1245 is unknown at this point in time. Brown’s report indicates that Ho-Chunk people used this small area of higher ground to camp while hunting muskrats. In a separate note, Brown relays information about hunting muskrats provided to him by another informant:

Mr. J.H. Paarman says that in 1889 some Winnebago Indians were camping somewhere on the shore of the then Picnic Point Bay (now University Bay) marsh. They were trapping and killing a few muskrats. One day when traveling down the road to the University barns, he noticed two of them at work. This was in the early winter – one had cut a hole through the ice while the other pounded on the nearby shore with a club. When he did so, a muskrat swam beneath the ice and came up at the hole. There he was promptly clubbed and thrown into the air by the other Indian. When the muskrat landed on the ice he was dead. No doubt this method of hunting muskrats was practiced at other places about the lake shore.

(Brown 1941)

Apparently, the informant did not know where the Ho-Chunk were staying on the shore, but it seems plausible that they may have stayed at the location mentioned by Brown. As has already been noted, Brown does not give any information on the size of the site or whether he collected any materials there. The history of the area is somewhat shrouded as well though it appears that it may have been used by the School of Agriculture sometime in the 1930s.

47DA1245 – University Bay South Management Issues:

1. The exact location and boundaries of this site are unknown.
2. The area has been used as a recreation field.
3. The open nature of this area and its proximity to the lake make it a candidate for future development.

47DA1245 – University Bay South Recommendations:

It is unclear at this time what the status of 47DA1245 – University Bay South is. The area is open at the present time (meaning there is no pavement or buildings present), but there are historic sources that indicate it was used as an agricultural field. Based on the current understanding of the site, the following recommendations are made:

1. A geomorphological study should be conducted to determine the presence of buried intact soils in the area. It is clear that the confluence of Willow Creek and Lake Mendota has been filled, but the extent of the fill is unknown and it is unclear what the relationship between marshy areas and dry habitable land might have been through the past.
2. A Phase I archaeological reconnaissance should be conducted within the area west of Willow Creek. This should serve to identify areas that are intact, areas that have been disturbed, and areas that have been completely graded away. It should also serve to identify any archaeological deposits that are still present.
3. Any future earthmoving activities in the area of 47DA1245 should be preceded by archaeological survey to identify any possible intact deposits.
4. Additional historic literature search may clarify location and range of activities conducted on the site.

Results of the Phase I Archaeological Fieldwork for the 2004 Archaeological Reconnaissance of the University of Wisconsin – Madison Campus

Introduction

The size of the project area and the scope of the archaeological investigations mandated the subdivision of the campus into several areas. A total of nine areas were defined based on landscape features and the presence of buildings and facilities. Each of these areas and the (archaeological resources encountered) will be discussed separately.

I. Bill's Woods Parcel

Area Boundaries: The Bill's Woods parcel is approximately 15 acres in area and is bounded on the south by the Howard Temin Lakeshore Path/University Bay Drive, on the west by Lake Mendota Drive, on the north by an east/west trending access road, and on the east by the main access road for Picnic Point. The boundaries are coterminous with the boundaries outlined for the Lakeshore Nature Preserve (Figure 3.16, 3.17).

Archaeological Testing Conducted:

1. Shovel testing at 10 meter intervals
2. Shovel testing at 15-meter intervals

Shovel Testing Results: A total of 432 shovel tests were excavated in 32 transects from either south to north or from north to south. Of those tests excavated, 32 were positive for Native American, Euro-American or a combination of Native American and Euro-American debris. A total of three archaeological sites were defined, two were previously unidentified while the third had been known of as early as 1928. The archaeological testing served to further refine the previously understood site boundaries.

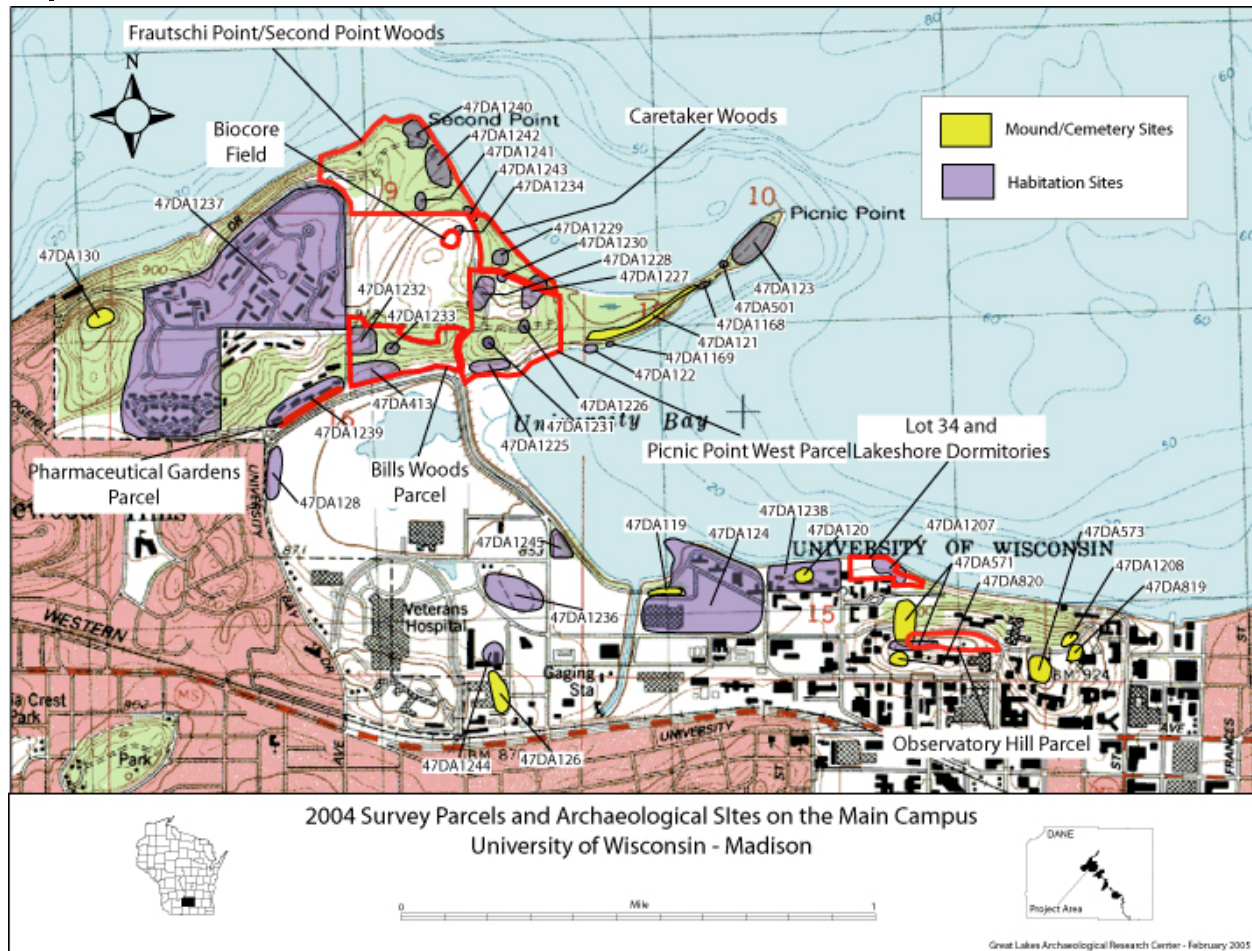


Figure 3.16: 2004 Survey Parcels and Archaeological Sites on the Main Campus.

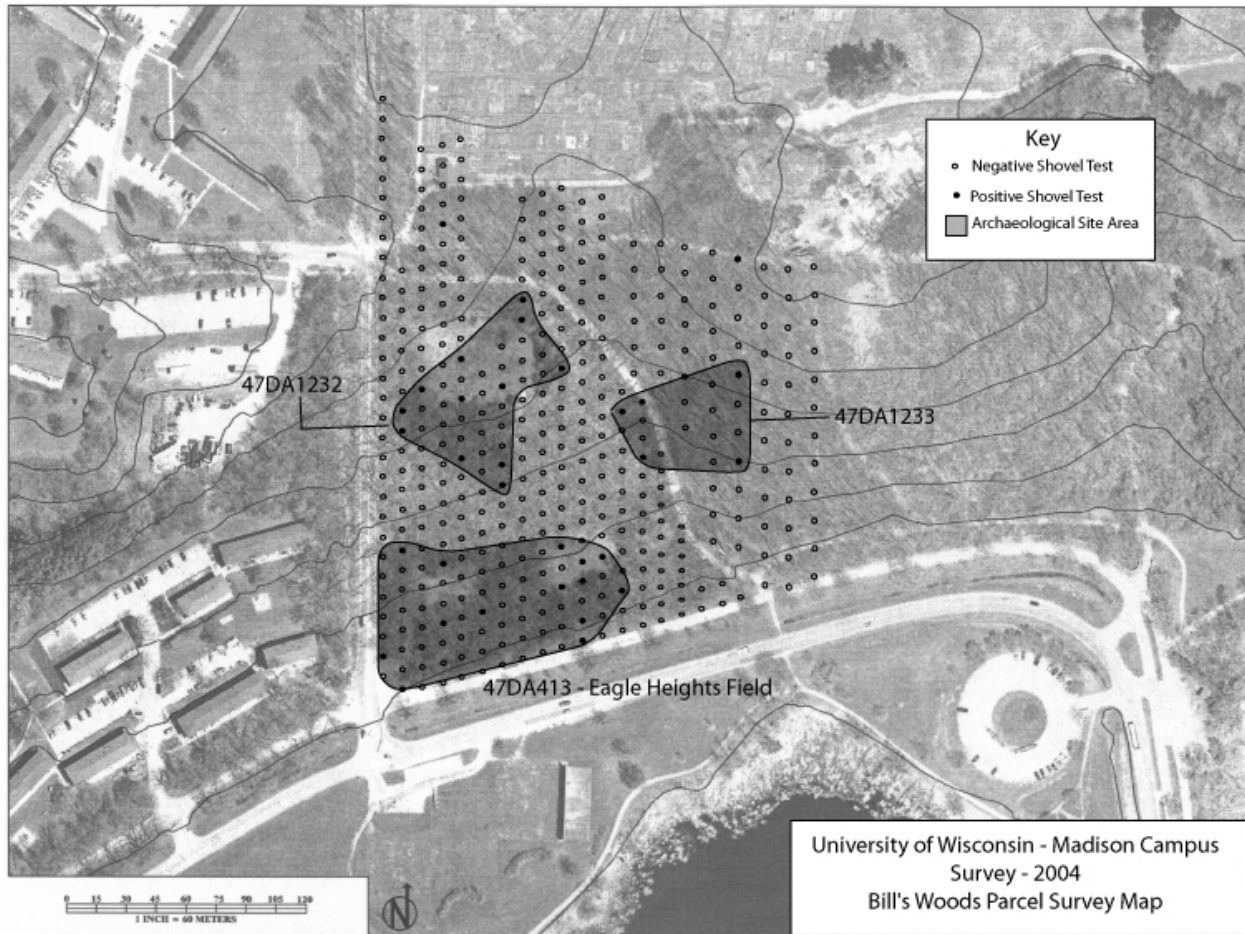


Figure 3.17: Bill's Woods Parcel survey map.

47DA413 – Eagle Heights Field

Location: S $\frac{1}{2}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 16, Township 7 North, Range 9 East (Figure 3.17).

Geographic Location and Relationship to Landscape: This site is located on a relatively flat to gently north sloping terrace overlooking University Bay marsh (Class of 1918 Marsh) to the south. The Howard Temin Lakeshore Path forms the southern boundary while Lake Mendota Drive forms the western boundary.

Elevation: Between 860 and 880 feet ASL

Vegetation and Land use: Bill's Woods are recovering former agricultural fields that have a variety of different deciduous trees of various ages although none appears to be more than approximately 80 years old. The underbrush in some areas is quite dense and consists predominantly of buckthorn and honeysuckle. At the present time, the land is being restored and used for recreational purposes. (See the Bill's Woods section in the Historic Vegetation in Part 1 for details, page 12).

Soils: KeB – Kegonsa silt loam 2-6% slopes
KdD2 - Kidder loam 12-20% slopes

Site Description: Eagle Heights Field site is roughly rectangular and has dimensions of approximately 130 meters east to west by approximately 60 meters north to south. This yields a site area of 0.78 hectares or 1.93 acres.

Site History: The Eagle Heights Field site was most likely identified for the first time on December 31, 1928 by Charles E. Brown and his son Theodore. Brown's report is as follows:

Traces of a former Indian campsite are found on the North side of the old Picnic Point Bay marsh in the cultivated fields of the University pharmaceutical garden. This land slopes gradually northward from the road and edge of this once extensive marsh, now under cultivation.

We were not able to examine this entire field a part of it being occupied by the over-wintering drug plants. We were able to find the clusters of not very much scattered hearth stones of at least two and probably three former wigwams. Near them were fragments and nodules of white, red and salmon colored flint, portions of three broken flint blanks of grey, buff and salmon colored flint, and chips and flakes of the same material. These wigwam sites were 100 to 150 feet up the slope from the former marsh edge. This site has not been uncovered until this year when the garden was extended eastward to this point.

(Brown and Brown 1928b)

Brown and Brown's description is relatively vague leaving the clue that the site is somewhere along the northern margin of the former University Bay marsh. Fortunately, Brown placed the site in his atlas relative to modern features on his plat map for Madison Township. Very clearly, the symbol for campsite is placed in the area to the east of Lake Mendota Drive and north of University Bay Drive (Figure 3.14). Brown's observation about the opening of the new agricultural fields in 1928 is significant in that from that time until relatively recently; Bill's Woods consisted of between one and three agricultural fields.

For some reason, this site was never transposed into the modern archaeological site files using the Brown manuscripts and the Brown atlas. As a consequence, the site was not formally reported to the Wisconsin Historical Society until 1975 after Dan Wendt had collected the lower open agricultural field in 1974 and recovered a small assemblage of archaeological materials (Figure 3.18). Among the objects recovered was a fluted lanceolate projectile point, a unifacial scraper, a broken projectile point and 12 pieces of lithic waste debris. The fluted point clearly has affinities to Early Paleo-Indian technology and represents the oldest known artifact from the University of Wisconsin – Madison campus. The trouble with both Brown and Brown and Wendt's reports are that no site boundaries are indicated and no appropriately scaled mapping was provided in either account. This meant that although a site was known to exist somewhere in the southwestern corner of Bill's Woods, its dimensions, contents and condition were unknown. The choice of Eagle Heights Field (47DA413) as the focal point of Phase I reconnaissance and Phase II investigations was based on the poorly known nature of the site.

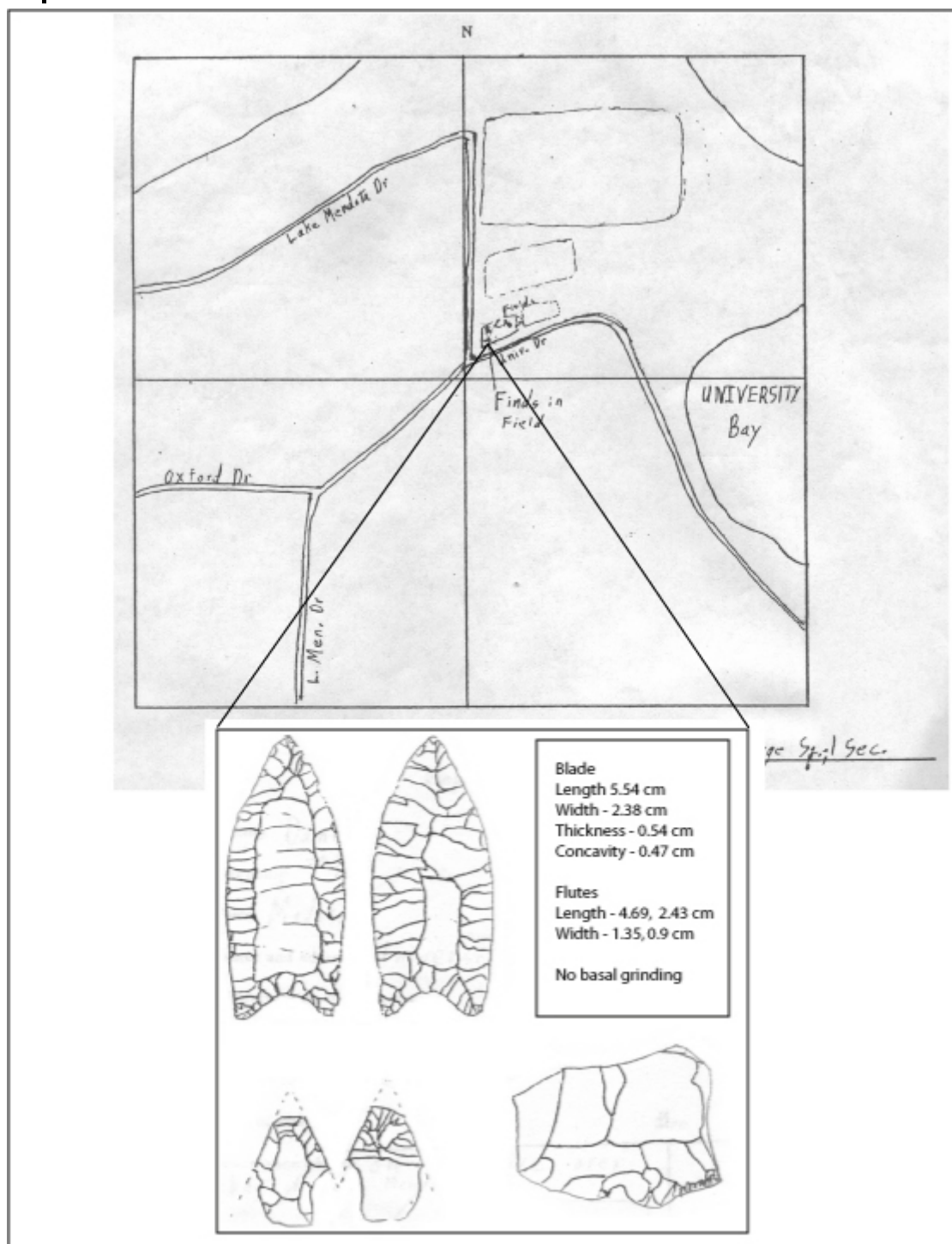


Figure 3.18 Dan Wendt's Map of 47DA413 - Eagle Heights Field and associated artifacts

Discussion of the 2004 Phase I Archaeological Reconnaissance: Archaeological investigation of the Eagle Heights Field began in the southwestern corner of the area. Transects of shovel probes were excavated at 10-meter intervals over the entire site area from south to north. This was done to ascertain areas of artifact concentration that might be suitable for further investigation with more intensive excavation. The results were disappointing in that only 14 shovel tests were positive in the suspected area of 47DA413. Positive tests were located in transects 1, 2, 4, 6, 10,

11, 12, and 13. We had anticipated a more productive site, with not only more materials, but also areas with definable clustering. Such was not the case with only 17 artifacts being recovered from what appears to be random scattering of areas across the site (Appendix A). Artifacts included two pieces of fire-cracked rock (FCR), one piece of slag, one utilized flake, one uniface tool and 12 pieces of lithic waste debris. The waste debris was primarily made from heat-treated Prairie du Chien chert (a locally available lithic raw material) with a single piece of Galena chert and a single piece struck from an unknown variety of chert. With an assemblage this small, it is impossible to address issues of lithic technology, style or cultural affiliation. Based on the Phase I testing, we could not make any additional statements on the Paleo-Indian component or for that matter any other cultural affiliation.

The shovel testing indicated that all areas of the site had been subjected to plowing confirming what had been observed in the aerial photographs. The use of this area as an agricultural field for a number of decades may explain in part the random distribution of artifacts across the area, and it may also explain the lack of materials recovered. Plowing moves materials from their points of original deposition to other areas in some cases simulating a random distribution. The other factor that must be considered is that plowing brings to the surface artifacts that were formerly buried. This then provides artifact collectors an opportunity to remove items leaving the site without diagnostic artifacts and the impression that the site was not particularly productive. Despite these factors, additional testing was completed and the results are presented under the Results of the Phase II Determinations of Eligibility.

Recommendations:

See the Recommendations section of the Results of the Phase II Determinations of Eligibility for 47DA413 Eagle Heights Field.

47DA1232

Location: NW ¼, NW ¼, SW ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.17)

Geographic Location and Relationship to Landscape: This site is located on a relatively flat terrace east of Lake Mendota Drive, south of a north/south running access road in the northwest corner of Bill's Woods. The site was once a plowed agricultural field, but has since been turned over to the Lakeshore Nature Preserve to be returned to a semi-natural state. The site overlooks the Class of 1918 Marsh (once part of University Bay – prior to 1892)

Elevation: Between 890 and 910 feet ASL

Vegetation and Land use: The site area was once an open agricultural field and has since been allowed to return to a more natural state. Aerial photographs of Bill's Woods from the 1930s through the 1960s show the area as consisting of between one and three distinct agricultural fields. Apparently, the earliest field covered the western half of Bill's Woods, but was then subdivided at one point into three. After the fields ceased to be used for agricultural purposes, a number of pioneer species of trees have moved in and have been accompanied by invasive species of shrubbery including buckthorn and honeysuckle. At the present time, the field is being used as a natural preserve and recreational area.

Soils: McHenry Silt Loam – 6-12% slope

Site Description: Artifacts were found within an area 110 meters wide (east/west) by 80 meters long (north/south). This yields a site area of 0.88 hectares or 2.17 acres. The site is roughly rectangular with a distribution of artifacts roughly crossing the site in a diagonal from southwest to northeast.

Site History: This site was previously unknown.

Discussion: One of the interesting results of the complete testing of Bill's Woods was the appearance of another archaeological site north of the previously known Eagle Heights Field (47DA413) site. This site was discovered during systematic shovel testing at 10-meter intervals from south to north. Transects 2, 3, 5, 7, 8 and 10 produced a total of 12 positive shovel tests. Like 47DA413 – Eagle Heights Field, the distribution of positive shovel tests appears somewhat random although one could make an argument for a southwest to northeast distribution of materials.

The site was not particularly productive in that it produced a total of 14 artifacts consisting of Euro-American (2 pieces of slag, 1 piece of clear bottle glass) and Native American (11 pieces of lithic waste debris) materials (Appendix A). The Euro-American debris is not unexpected considering the use of the site area as an agricultural field and recreational area. There is certainly no evidence of a building or farmstead at this location. The Native American material is not diagnostic and therefore it is impossible to ascribe a cultural affiliation. There were a total of 11 pieces of lithic debris made predominantly from Prairie du Chien chert (8 pieces). The remaining items were made from Galena chert (3 pieces). Of the 11 pieces of debris, there was one complete flake, two broken flakes, two flake fragments, five pieces of debris (shatter) and one multifaceted core. All items had been struck from heat-treated chert.

The shovel test profiles confirmed that the site had been heavily plowed and that if there are any intact materials, they would have to be in subsurface features. There was no evidence observed to suggest such features exist.

47DA1232 Management Issues:

1. This site is in an area that is under pressure for development of facilities.
2. The cultural affiliation of this site was not determined.
3. The site has been damaged by agricultural practices in the past.

47DA1232 Management Recommendations:

This site has been damaged by decades of plowing and the consequent erosion. The artifacts recovered from the site were not diagnostic and therefore cultural affiliation cannot be ascertained at this time. No Native American ceramics or bone was recovered suggesting a low potential for sub-surface features and therefore intact archaeological deposits. We therefore make the following recommendations:

1. Based on what is currently known of 47DA1232, the site is not eligible for inclusion on the NRHP based on its own merits. However, shovel testing is a sampling design that has many inherent flaws, none the least of which is under representing site artifact densities and the presence of buried intact subsurface features.
2. 47DA1232 should be preserved in place and should be considered carefully before being chosen as a building site
3. No earthmoving activities should be conducted on or near 47DA1232 without additional testing and monitoring by a professional archaeologist. This includes tree and brush removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings

47DA1233

Location: NE ¼, NW ¼, SW ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.17)

Geographic Location and Relationship to Landscape: 47DA1233 is located along an old intermittent stream/wash in the center of Bill's Woods. A paved access road bisects the site. Lake Mendota Drive is approximately 160 meters to the west; University Bay Drive is approximately 130 meters to the south. The site overlooks the Class of 1918 Marsh, once a part of the University Bay.

Elevation: 884 feet ASL

Vegetation and Land use: 47DA1233 lies primarily in an area that is not depicted on the 1937 aerial photograph as being cultivated. The nature of the intermittent stream/wash may have been such that cultivation was not practical. The land is currently heavily wooded with a canopy predominantly of deciduous trees. The buckthorn and honeysuckle present at the other two sites discovered in Bill's Woods is not present indicating an older part of the forest. The land is currently being used as a nature preserve and recreational area.

Soils: Kidder Loam 12-20% slopes.

Site Description: 47DA1233 is roughly rectangular and covers an area 90 meters east/west by 50 meters north/south. This yields an area of approximately 0.45 hectares or 1.11 acres.

Site History: This site was previously unreported.

Discussion: This site was discovered while systematically shovel testing Bill's Woods in 10 and 15-meter intervals. A total of 5 positive tests were used to define the boundaries of the site. The tests were found in transects 13, 14, and 25. An examination of the map for this site indicates that there is a considerable distance between the positive tests in transects 13 and 14 and 25. This opens the possibility of their being to distinct habitation loci, but for the time being, based on the low artifact density and the presence of an access road through the middle of the

site; it seems most prudent to maintain a single site number for this distribution of positive shovel tests.

A total of 11 artifacts were recovered from the five positive shovel tests. The most frequently found artifact class was Native American lithics. Of the 10 pieces of waste debris recovered, four were Galena chert, one was made from Prairie du Chien chert and five flakes were made from an unidentified raw material (Appendix A). There were two broken flakes recovered along with five flake fragments and three pieces of lithic debris (shatter). One piece of clear bottle glass was also found.

No diagnostic materials were recovered making it impossible to assign a cultural affiliation. The profiles from the shovel tests were inconclusive in regards to the level of disturbance of the site, but based on photographs, this site may not have been plowed. The site is interpreted here as a small lithic scatter.

47DA1233 Management Issues:

1. Cultural and temporal affiliation was not established during the initial Phase I testing.

47DA1233 Management Recommendations:

Based on the lack of diagnostics, the low density of artifacts and the lack of any indicators that may suggest a more productive site with intact subsurface features, the following recommendations are made:

1. This site is not eligible for inclusion on the National Register of Historic Places based on our current understanding of the site.
2. The presence of more Galena chert in the lithic assemblage may be significant in separating this site from 47DA413 – Eagle Heights Field and 47DA1232. There is some research potential for this site and as a consequence we recommend that any earthmoving activities (scraping, excavating, tree removal, utilities installation, etc) in the area of the site for either construction or maintenance purposes be preceded by additional Phase I archaeological survey using shovel testing at tighter intervals.

II. Pharmaceutical Gardens Tract

Area Boundaries: The Pharmaceutical Gardens Tract is located northwest of University Bay Drive and is bounded by Lake Mendota Drive on the east, Oxford Road on the west, and Eagle Heights Apartments to the northwest. This parcel is just less than one acre in area (Figure 3.16, 3.19).

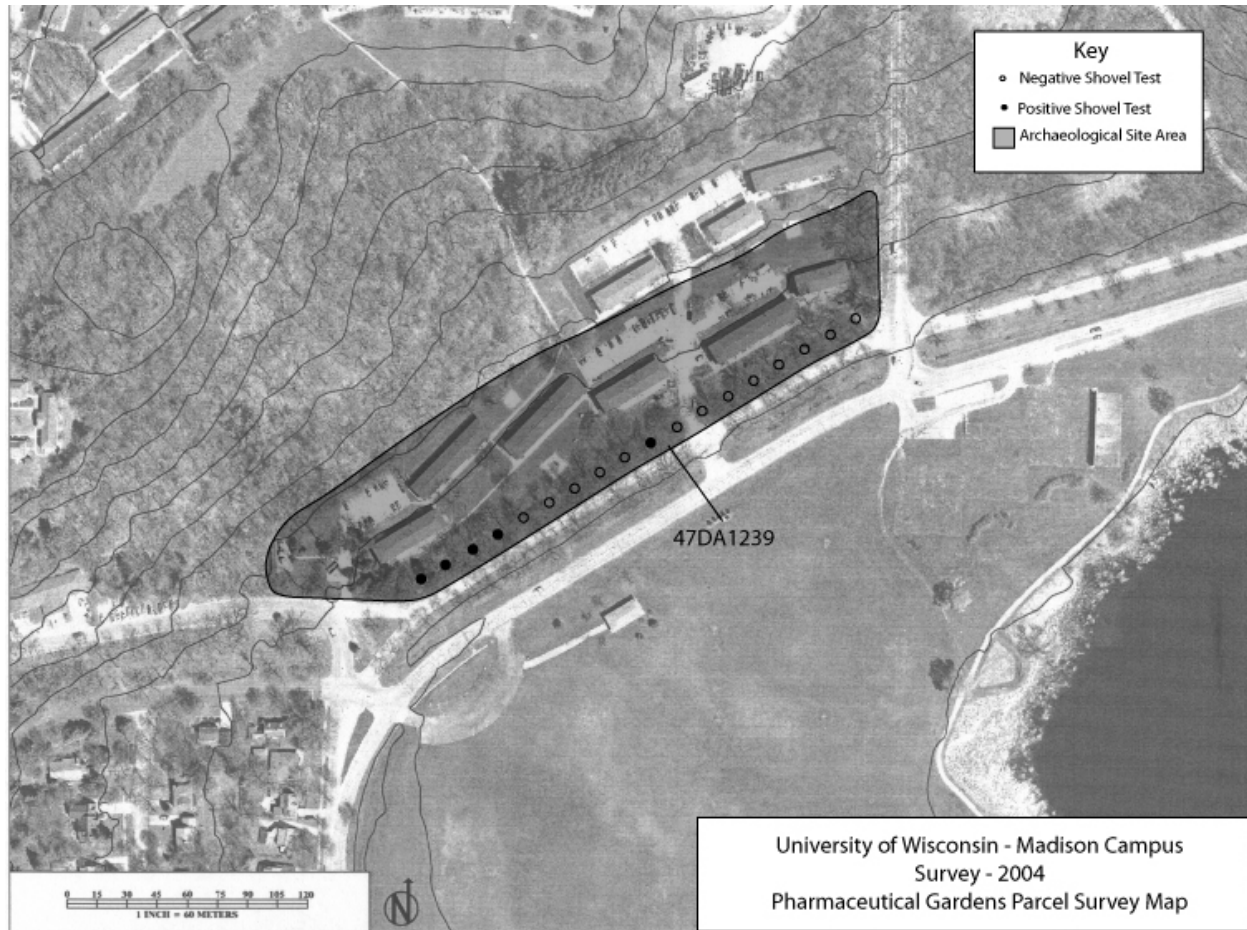


Figure 3.19 Pharmaceutical Gardens Parcel survey map.

Archaeological Testing Conducted: 1.) Shovel testing at 15 meter intervals

Testing Results: A single transect of shovel tests was excavated from east to west in a narrow wooded strip north of the Howard Temin Lakeshore Path. Five shovel tests were positive. These tests contained both Euro-American and Native American materials. A single site previously identified in the archives and literatures search for this project (47DA1239) was tested.

47DA1239

Location: N $\frac{1}{2}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$ and the SE $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, of Section 16, Township 7 North, Range 9 East (Figure 3.16)

Geographic Location and Relationship to Landscape Features: This site is located along the base of a gently north sloping hill overlooking the former University Bay Marsh. Lake Mendota Drive is along the eastern border, University Bay Drive forms the southern border and Oxford Road is the westernmost border. This area was formerly part of the University Farms and was used as an experimental pharmaceutical garden.

Site Description: This site was reported to Brown through a third person who had obtained a collection of artifacts from the Pharmaceutical Experimental Garden. The location of those gardens is known and therefore the site location is known. However, no details of the site area or other contents of the site have survived.

Site History: The history of 47DA1239 is clouded by the length of time from which artifacts were initially removed from the site until they were reported to Charles E. Brown. What can be said for sure is that Brown examined a set of artifacts in April of 1943 and was told by their owner that they had come from the pharmaceutical gardens located on the university farm (Figure 3.15). The following is from Brown's report:

Mexican terra cotta figurines and heads in the collection of Dr. Charles W. Harrington, 1315 Spring Street, Madison, found by Geo. Bent some years ago, in the Pharmaceutical Experimental Garden on the University of Wisconsin Farm at Eagle Heights. Specimens examined by Charles E. Brown, April 1943. This field of the Farm fronts on the old Picnic Point Bay Marsh, now farm fields.

(Brown 1943a)

This description was supplemented by an additional sheet which included some hand-written description as well as four drawings of the objects recovered from the field (Figure 3.20). The text from this sheet reads as follows:

Pottery rattle (animal with comb on head), 2 pottery heads – human beings, one with headdress and one with perforated disk-shaped earrings. Animal head (dog) from vessel? Found by Geo. Bent while working with Prof. Richtman in Pharm. garden on UW. Farm. Before 1915

(Brown 1943b)

The available information regarding the four unusual artifacts indicates that the pieces were first found sometime prior to 1915 by individuals who worked in the pharmaceutical gardens. At some point Harrington came to possess them and he showed them to Brown who identified them as being of Mesoamerican origin. There are several weak links in the chain of events that may indicate that the site is bogus, while there are several other factors that may indicate that the site has some legitimacy. The primary weakness of the identification of the site rests on the fact that the finder of the artifacts is not the person who reported them. Furthermore, the report of the site came 28 years after their discovery. There is room for all sorts of errors and deception given these two weaknesses. However, there are some additional factors that need to be considered.

First, the pieces sketched on Brown's manuscripts do not necessarily appear to be Mesoamerican in origin. They could certainly have been found in a Mississippian assemblage that could potentially indicate an origin for the pieces within the region. Secondly, if it is true

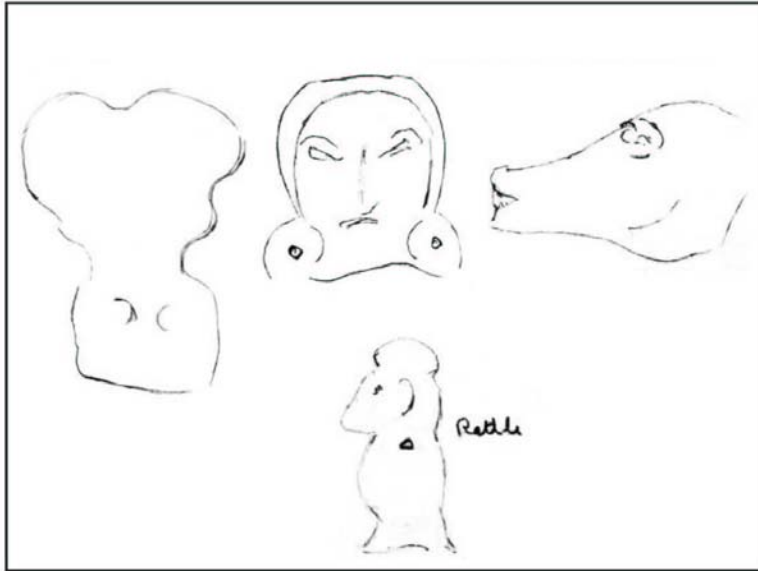


Figure 3.20: Artifacts from 47DA1239.

that the artifacts were recovered in the Pharmaceutical Gardens prior to 1915, it seems unlikely that terra cotta figurines would have been obtained in Mexico (or in the United States for that matter) and then brought to a farm field in Madison, Wisconsin to be discarded there. Third, there appears to have been some type of Mississippian tradition presence in the University Bay area (see 47DA1236). Admittedly, the foundations for the identification of this site are somewhat shaky. However, if the artifacts are genuine and their location is accurate, then the research value would be quite high.

Discussion: The portion of 47DA1239 that was tested is peripheral to the areas where the garden beds are depicted on maps and aerial photographs. However, the potential for archaeological remains was present and as such, a single transect of shovel tests was excavated at 15-meter intervals across the southern end of the site. Five shovel tests were found to be positive. The majority of the positive shovel tests were located on the western end of the transect and produced a total of 16 artifacts (Appendix A). The Euro-American materials consisted of one piece of coal, seven pieces of cement, five pieces of brick, one piece of stoneware ceramic, one piece of green bottle glass, one piece of brown bottle glass, and one piece of windowpane glass. A single Prairie du Chien chert lithic waste flake fragment was also recovered.

None of the artifacts recovered were particularly diagnostic although it seems clear that the Euro-American debris is associated with the construction and inhabitants of the Eagle Heights Apartments facility north of the area tested. The lithic flake is more promising, but contamination from another source cannot be ruled out at this time. The trees in this parcel were mature, but probably not more than 50 to 75 years old and the shovel test profiles were not particularly informative on the relative condition of the soils in the tract.

47DA1239 Management Issues:

1. This site was not tested in areas that are more likely to produce archaeological materials in 2004.

2. Cultural and temporal affiliation was not determined for this site.
3. This site is located in an area that is or will be under pressure for future development
4. Site boundaries were not determined based on the limited nature of the archaeological testing.

47DA1239 Management Recommendations:

The area where the ceramic figurines supposedly came from was used for agricultural purposes from at least 1915 until the late 1950s/early 1960s. This would mean that there is potential for extensive damage to the site. However, the site is likely to be located at the base of the hill and some of that damage may have been mitigated by erosion and protective deposition. The construction of Eagle Heights Apartments would be a far more destructive process and any portions of the site within the footprint of construction are undoubtedly destroyed. The reality is that the precise site boundaries, and therefore the condition, is unknown, and only additional work will clarify the situation. It is therefore recommended that:

1. Geomorphological testing should be conducted to ascertain the extent and degree of the disturbances in the area of the former Pharmaceutical Gardens.
2. Additional Phase I archaeological reconnaissance be conducted to determine the presence or absence of additional archaeological remains.
3. 47DA1239 should be preserved in place and should be considered carefully before being chosen as a building site.
4. No earthmoving activities should be conducted on or near 47DA1239 without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

III. Picnic Point West Parcel

Area Boundaries: The Picnic Point West parcel was defined largely using the roads and pathways that are present throughout the western half of Picnic Point. It should be noted that the designation “Picnic Point West” is not equivalent with any of the Lakeshore Nature Preserve terminology for this area as the entire Picnic Point complex is not subdivided by the Lakeshore Nature Preserve. It should also be noted that in the field, the Picnic Point West Parcel was divided into a northern and southern halves. In an effort to reduce redundancy, for the purposes of this report, the northern and southern halves of Picnic Point West are combined. The eastern boundary was chosen on the basis of the western boundary of the 2001 Picnic Point Survey (Christiansen III 2001a). The southern boundary of the area is the northern shoreline of University Bay, the eastern boundary of the area is the westernmost end of 47DA121- Picnic

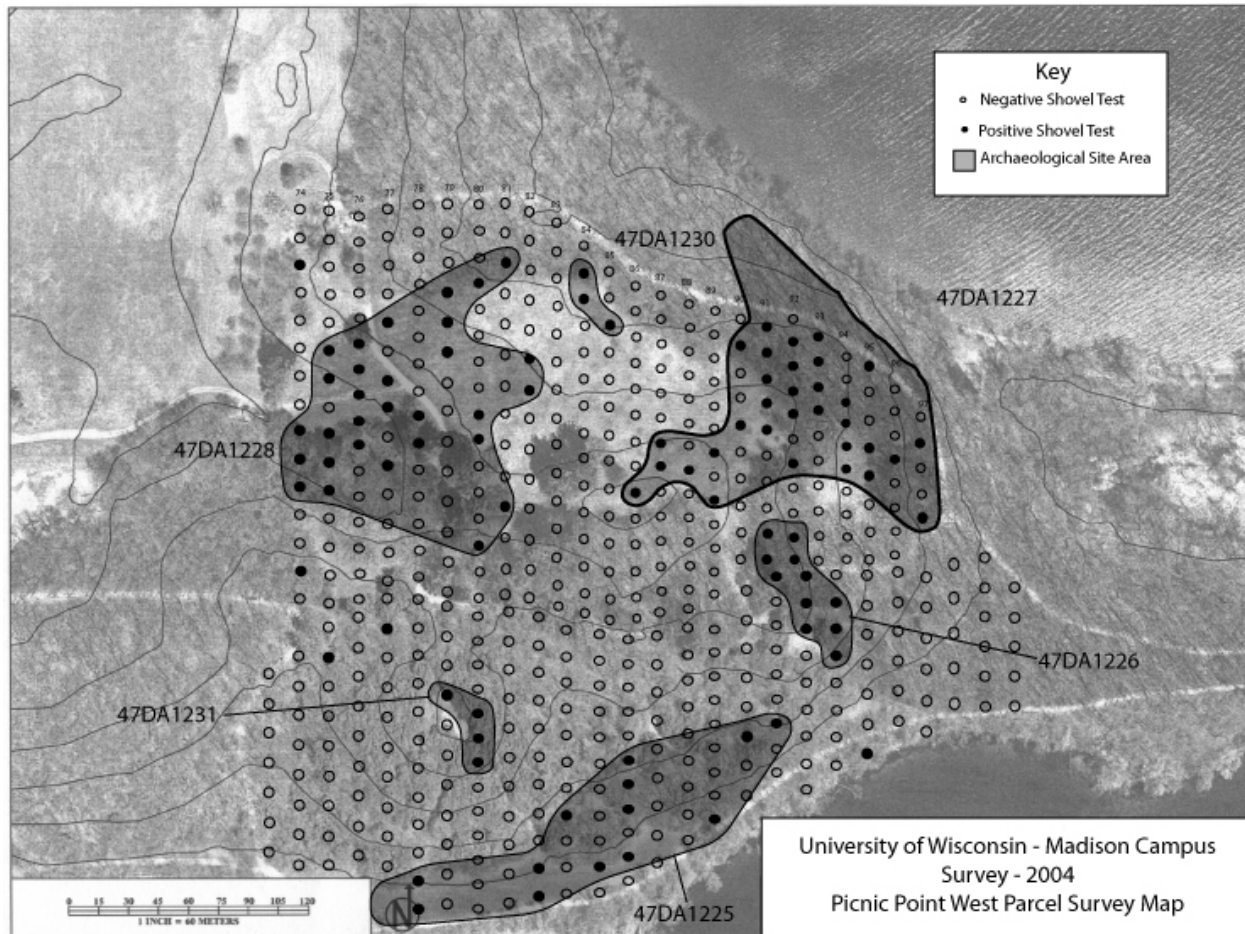


Figure 3.21: Picnic Point West Parcel survey map.

Point Mound Group, the northern boundary is the access road forming the southern boundary of Caretaker's Woods and the western boundary is the current boundary between the wooded portion of eastern Picnic Point and the open fields of Biocore and Eagle Heights Community Gardens. In all, the Picnic Point West parcel is approximately 27 acres in area (Figure 3.16, 3.21).

Archaeological Testing Conducted: 1.) Shovel testing at 15 meter intervals

Shovel Testing Results: The southern half of Picnic Point West was tested using 26 transects of shovel tests spaced 15 meters apart. A total of 247 shovel tests were excavated of which 29 were positive for Native American and Euro-American materials. Two sites were identified wholly within the southern half of Picnic Point West, while a third site crossed into the northern half of Picnic Point West. Shovel test transects were excavated from north to south using a central access road as the baseline. The northern half of Picnic Point West was surveyed using 24 transects of shovel tests spaced 15 meters apart. A total of 308 shovel tests were recorded with a total of 72 positive shovel tests indicating the presence of three archaeological sites excluding the crossover site from the southern half of Picnic Point West. The central access road for Picnic Point West was used as the baseline for south to north transects in the northern half. Altogether six archaeological sites were defined for Picnic Point West.

Site Descriptions

47DA1225

Location: SE ¼, NW ¼, SE ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.21).

Geographic Location and Relationship to Landscape: This site is located on a gentle slope at the base of a hill overlooking University Bay. The southern limit of the site is roughly parallel to the southernmost bicycle/pedestrian path that runs along the Picnic Point shoreline. The majority of the site is located within an open grass field, but materials do extend into the tree line to the north.

Elevation: 851 feet ASL

Vegetation and Land use: 47DA1225 is located within an area that is both wooded and in short manicured grass. The open lawn area is the southernmost while the site extends northward into a planted wooded lot. At the present time the area is used for recreation.

Soils: Colwood Silt Loam

Site Description: The site boundaries for 47DA1225 parallel the Picnic Point shoreline of University Bay in an area roughly 280 meters east/west by 70 meters north south yielding an area of 1.96 hectares or 4.84 acres.

Site History: This site was not recorded in the ASI, however, there are some notations on George R. Fox's survey map for Madison (Fox n.d.) (Figure 3.12). The marks appear to represent a habitation area; however, this interpretation is purely speculation on the part of the author.

Discussion: This site was identified during systematic shovel testing of the western end of Picnic Point in 15-meter intervals during the spring of 2004. A total of 15 positive probes were distributed along 10 north to south running transects. Twenty-seven artifacts were recovered from these tests including one piece of plastic, 25 pieces of lithic waste debris and a single early stage reduction biface (Type 1) made of Prairie du Chien chert. The waste debris consisted of three complete flakes, six broken flakes, 12 flake fragments and four pieces of lithic debris (shatter) (Appendix A). By far the most frequently encountered raw material was locally derived Prairie du Chien chert (n=19) followed by Galena chert (n=4) and then a single piece each of Silurian and an unknown type of chert. There were no diagnostics recovered in the shovel testing and the assemblage is too small to draw any firm conclusions from. Based on the distribution of debris types it seems likely that bifacial reduction strategies were employed to create tools, but this is tentative pending further excavation and increased samples as well as the identification of the components present at the site.

Shovel test profiles and early photographs of Picnic Point suggest that this site was used for pasture and on occasion plowed for agricultural use prior to it being purchased by the University of Wisconsin.

47DA1225 Management Issues:

1. The boundaries of this site were not adequately defined in the 2004 archaeological survey.
2. The temporal and cultural affiliation of the site was not determined in 2004.
3. The condition of the archaeological deposits was not determined in 2004.
4. This area is accessible, flat and in a scenic location. Although it is part of the Lakeshore Nature Preserve, this area may be considered potentially suitable for development.

47DA1225 Management Recommendations:

The area of 47DA1225 has clearly been impacted by the agricultural practices in the distant past and the planting of the landscape in the northern portion of the site. There may be other natural forces that have worked to damage the site, but the extent of these impacts is unknown. The shovel testing of the site was not particularly informative indicating a somewhat diffuse lithic scatter over a broad area. This may be a reflection of survey bias or collector bias (when the area was open to agriculture). Given the location of the area (immediately adjacent to University Bay) and the nature of other archaeological sites to the east on the Picnic Point peninsula (intact sites with high potential to contribute to the history of the area) it is recommended that:

1. 47DA1225 may be eligible for inclusion on the NRHP.
2. Additional Phase 1 archaeological testing should be conducted at shorter intervals (10 meter) to ascertain that the site is indeed one site and not several small sites or activity areas.
3. This site should undergo additional archaeological testing to ascertain the condition of the site, the site type and cultural affiliation
4. No earthmoving activities should be conducted in this area without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches and buildings.

47DA1226

Location: NW ¼, NE ¼, SE ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.21)

Geographic Location and Relationship to Landscape: This site is located on a relatively flat extension of a hilltop overlooking University Bay to the south and the peninsula portion of Picnic Point Bay to the east. A small access road bisects the site.

Elevation: 858 feet above sea level

Vegetation and Land use: At the present time this site is in a small clearing on the top of the hill. It is surrounded by a variety of deciduous trees and associated understory (see Modern Vegetation of Picnic Point in Section 1). This portion of Picnic Point is used for recreation purposes.

Soils: Kidder Loam 12-20% slopes

Site Description: 47DA1226 is amorphous in shape and occupies a southeastern trending extension of a hilltop overlooking University Bay to the south. The site is bisected by an east/west access road leaving approximately two-thirds of the site south of the road and the remaining one-third is on the north side. Positive shovel tests indicate that the site is approximately 80 meters north/south by 70 meters east/west yielding an area of 0.56 hectares (1.38 acres).

Site History: This site was previously unrecorded.

Discussion: 47DA1226 was identified during systematic shovel testing at 15-meter intervals using the small east/west access road as a baseline and working from north to south. Positive shovel tests were recorded in Transects 65, 66, 67 and 69 as well as in the south to north transects of Picnic Point North Transects 91 and 92. A total of 12 positive shovel tests produced 18 lithic artifacts. Seventeen of those artifacts were lithic waste debris including one complete flake, five broken flakes, seven flake fragments, three pieces of debris and a single bifacial core (Appendix A). The majority of the waste debris was made from Prairie du Chien chert (n=9) followed by Galena chert (n=5) and an unknown variety of chert (n=3). A single Type 3 biface made from Silurian chert was also recovered. The lithics indicate a preference for the use of locally available materials and the debitage profile indicates bifacial reduction. Unfortunately, none of the materials is diagnostic as the biface is incomplete.

The shovel test profiles indicate a relatively deep 'A' soil horizon suggesting that there may be some integrity to the soils in the area. Photographs depict the area as being either in pasture or wooded, but these photos are only a "keyhole" view into the past and can only serve as a general reference for the specific time of the photograph.

47DA1226 Management Issues:

1. The site's cultural and temporal affiliation was not determined in the 2004 survey.
2. The condition of the archaeological deposits was not ascertained in the limited testing that was conducted in 2004.
3. There is an access road that bisects the site.

47DA1226 Management Recommendations:

This site did not produce any diagnostics in the formal sense, but did produce a biface and a number of flakes in a tight cluster of positive shovel tests. The possibility of intact soils also lends itself to the possible significance of 47DA1226. Given the sites location, its possibility for intact soils and the presence of substantial lithic debris (the bifacial core and nearly finished Type 3 biface) it is recommended that:

1. This site should undergo additional archaeological testing to ascertain the condition of the site, the site type and cultural affiliation and its potential for inclusion on the National Register of Historic Places
2. No earthmoving activities should be conducted in this area without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance/widening, and the installation of facilities such as fire pits, park benches and buildings.

47DA1227

Location: W ½, SE ¼, NE ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.21)

Geographic Location and Relationship to Landscape: This site is located on a northeast trending spur of a hill overlooking Lake Mendota to the north, University Bay to the south and Picnic Point to the east.

Elevation: 861 feet above sea level.

Vegetation and Land use: This area is currently an open field along its southern and western margins, but its northern and eastern margins are located within a relatively mature wooded area. In the past, the open area has been used as an orchard and a pasture, but the northeastern portion has been at least somewhat wooded since the 1920-30s.

Soils: Kidder Loam 12-20% slopes

Site Description: This is a rather large site encompassing the top of a hill and a northeastern trending slope down onto a flat terrace overlooking Lake Mendota. Based on positive shovel tests the site appears to be 165 meters southwest/northeast by 135 meters southeast/northwest. This yields an area of approximately 2.23 hectares or 5.51 acres.

Site History: This site is depicted on George R. Fox's Madison Quadrangle (Fox n.d) as well as the Charles E. Brown Atlas for Madison Township, but it was never incorporated into the ASI.

Discussion: 47DA1227 was identified during systematic shovel testing at 15-meter intervals in the northeastern end of the Picnic Point West parcel. A total of 35 positive shovel tests distributed among 14 transects (Transects 86 – 97 and 111, 112) were used to define the site boundaries. This site is one of the largest that was found during the fieldwork phase of the

survey and produced a total of 228 artifacts (Appendix A). Artifacts consisted of both Euro-American and Native American debris. Euro-American materials consisted of one fork, one wire nail, 12 pieces of slag, one 0.22 short caliber bullet and casing, one piece of terra cotta pottery, one piece of unidentified ceramic, 17 shards of clear bottle glass, one piece of window pane glass, one piece of brown bottle glass, and two pieces of green bottle glass. Native American artifacts were more numerous and included: one piece of fire-cracked rock (FCR), one small mammal bone, one utilized flake (Galena chert), one spokeshave (Galena chert), 1 stemmed projectile point, and 185 pieces of lithic waste (Figure 3.22).

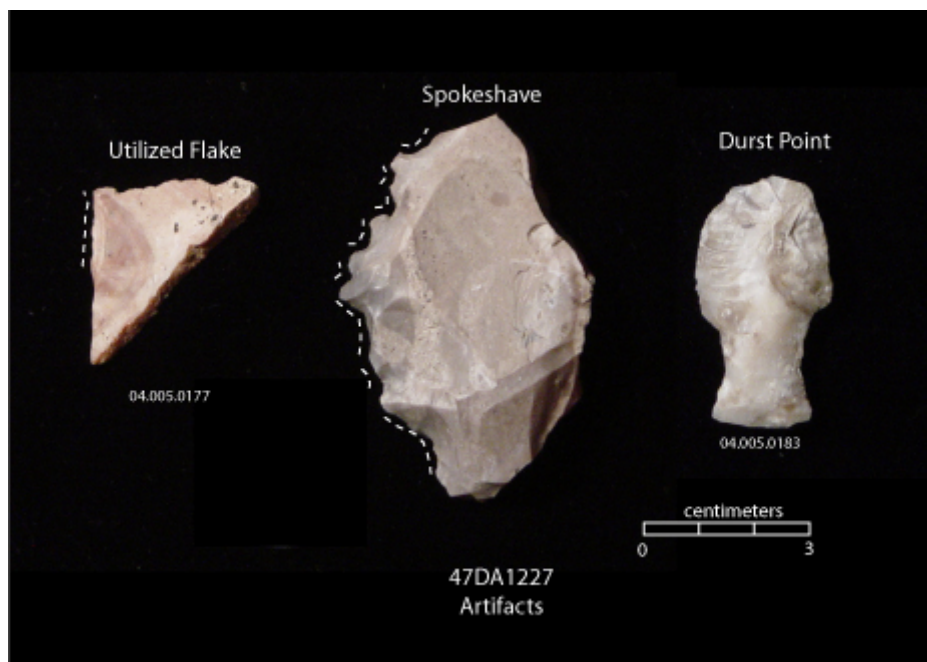


Figure 3.22: Artifacts from 47DA1227.

The projectile point is a Durst Stemmed point made from heat-treated Prairie du Chien chert. This point type is associated with the Late Archaic Durst Phase (1000 – 500 BC). The lithic assemblage from this site is large by comparison to the other sites located during the survey. The 185 pieces of lithic debris consisted of 19 complete flakes, 32 broken flakes, 120 flake fragments, 13 pieces of shatter and one multi-faceted core. Galena chert was the minority raw material (n=58) while Prairie du Chien chert was the most commonly found raw material (n=123). Four pieces of lithic waste were struck from an unidentified chert. The distribution of flake types suggests that a bifacial reduction strategy was used to produce the waste material observed. This lithic technology is common at Late Archaic sites and the presence of the Durst Stemmed point certainly indicates that there is a substantial Late Archaic presence at 47DA1227. Two expedient tools were noted in the inventory, both made of Galena chert. The utilized flake is a thinning flake that has been broken and used to scrape some substance. The spokeshave is particularly interesting in that it has at least four working edges, all of various diameters ranging from 3.5 to 6.5 mm indicating that it was used for very small diameter cylindrical objects, perhaps bone needles or fish hooks. Additional use-wear analysis would undoubtedly narrow the material or object down.

It is clear that this site has been impacted to some degree by Euro-American land use that might include plowing for agricultural purposes, lumbering and the installation of an orchard.

The degree of disturbance however is unknown. Based on the high density of lithic debris, including a single shovel test that produced nearly 100 flakes, it is highly likely that there are intact subsurface features at this site. In addition, there is some reason to believe that there may be intact soils in the northeastern portion of the site based on aerial photographs and the presence of some mature deciduous trees. It is highly likely that this site is eligible for inclusion on the National Register of Historic Places.

47DA1227 Management Issues:

1. 47DA1227 has been used as an orchard, pasture and been allowed to return to a wooded state. It is clear that this area has been used for various purposes and there is reason to assume that it may be used again for such purposes.
2. Cultural and temporal affiliation were determined for 47DA1227.
3. Condition of the archaeological deposits was not determined in 2004.
4. There is an east-to-west running maintenance road that bisects the site.

47DA1227 Management Recommendations:

This site is large in area, has a relatively high density of artifacts and may contain intact soils. As a consequence, this site should be treated with care. Based on the potential this site has to be on the NRHP, the following recommendations are made:

1. This site should undergo additional archaeological testing to ascertain the condition of the site deposits and collect additional information on cultural affiliation.
2. No earthmoving activities should be conducted in this area without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches and buildings.
3. This site should not be chosen for future development without careful consideration.

47DA1228

Location: NW ¼, SW ¼, NE ¼, NE ¼ and the SW ¼, SW ¼, NE ¼, NE ¼, of Section 16, Township 7 North, Range 9 East (Figure 3.21)

Geographic Location and Relationship to Landscape: This site is located on a southeast trending spur of a hill overlooking Lake Mendota to the east and in days past, University Bay to the south. At the present time a north/south access road runs through the site roughly bisecting the site in two equal pieces.

Elevation: 898 feet above sea level.

Vegetation and Land use: The western half of 47DA1228 is in a wooded area on top of a hill while the eastern half is in an open field. The land is currently used for recreation, but in the past, the parcel was used as a farm.

Soils: Kidder Loam 12-20% slopes.

Site Description: 47DA1228 is 120 meters north/south by 120 meters east/west yielding an area of 1.44 hectares or 3.56 acres.

Site History: This is a previously unrecorded archaeological site.

Discussion: 47DA1228 was identified during systematic shovel testing of the western edge of the Picnic Point West parcel in 15 meter intervals with north to south transects. While the field crew was excavating tests along the top of a knoll overlooking a meadow to the east, it became clear that a house foundation was present along with associated brick sidewalks and indications that a fenced in yard had once existed at this location. Historic research indicates that this was the former residence of Edward and Alice Young who owned Picnic Point between 1925 and 1941 when the property was purchased by the University of Wisconsin (Figure 3.23).



Figure 3.23: Stevens/Young House circa 1920s (CLP U0027).

The history of the house and the house site is more complex than this as a house is depicted on a Madison Township plat dated to 1861 at the Young house location. At that time the parcel was owned by James Heeran who apparently sold the property to John Boeringer sometime around 1864. Boeringer apparently lived on site while he operated a dance hall and refreshment stand. His business was not successful and he eventually sold the Picnic Point parcel to Morris E. Fuller and Breese J. Stevens in 1883. Stevens established a “hobby farm” on the property that included livestock and agricultural fields. In 1903 Stevens died and his daughters inherited Picnic Point. One of the Stevens sisters was married to a Dr. Jackson and the three of them lived there for 22 years until they sold all but the 16 acres of Second Point to Edward Young. Young and his wife tore down the barn and outbuildings, remodeled the farmhouse and built a horse stable (Figure 3.24). On September 4, 1935, the farmhouse burnt down and the Youngs eventually sold the property in 1941 to the University of Wisconsin.



Figure 3.24: Stevens/Young Picnic Point Farm outbuildings. (CLP-U0128)

The 2004 archaeological testing revealed the presence of the farmstead foundation (really a depression at this point), the backyard (some portions of the fences still remain somewhat intact), and the probable extent of the outbuildings as seen in the scatter of Euro-American debris (Figure 3.25). No direct evidence of a barn, stable or additional buildings was observed in the testing. A total of 30 positive shovel tests distributed throughout nine transects (Transects 74-82) were used to identify the site boundaries.

The positive shovel tests produced 102 artifacts, the majority of which were American artifacts (Appendix A). Debris included 1 large mammal bone, 50 pieces of metal (22 wire nails, 10 square-cut nails, 6 pieces of wire, 1 farm staple, 1 hinge and 10 unidentified pieces of metal), 5 pieces of slag, 3 pieces of coal, 4 pieces of cement, 5 pieces of brick, 4 pieces of historic ceramics (3 sherds of whiteware, 1 sherd of yellow ware) and 23 shards of glass (12 pieces of clear bottle glass, 9 pieces of window glass, 1 piece of brown bottle glass, 1 glass button). All of the Euro-American debris post-dated 1850 in age and the majority seemed to be late nineteenth – early twentieth century in age. This, of course, fits nicely with what is known of the property and property owners.

There is also an ephemeral Native American component to the site as some Native American artifacts were also recovered. Native American debris includes: one piece of fire-cracked rock, 1 Galena chert sidescraper, 4 lithic waste flakes, and a single fabric impressed Native American body sherd (Figure 3.26). None of the material was diagnostic and as a consequence it is impossible to identify a cultural/temporal affiliation other than there is a Woodland Tradition component present on the site.

Clearly, the importance of this site is linked to its Euro-American component. The history of the property and house is extensive, involves well-known Madison individuals (Breese J Stevens, Morris Fuller and E.J. Young), and may have a time depth that exceeds the 1860s. The features associated with the house such as the privy, well, barn, and any areas associated with the disposal of household and farm-related debris are of considerable research interest to historic archaeologists relating material culture to broader themes such as the shift from regional to national manufacturing, the role of working farms versus “gentleman” farms, conceptions of rural and urban landscapes, the adoption of experimental agricultural technology and the comparisons of outward appearance to material culture reality.

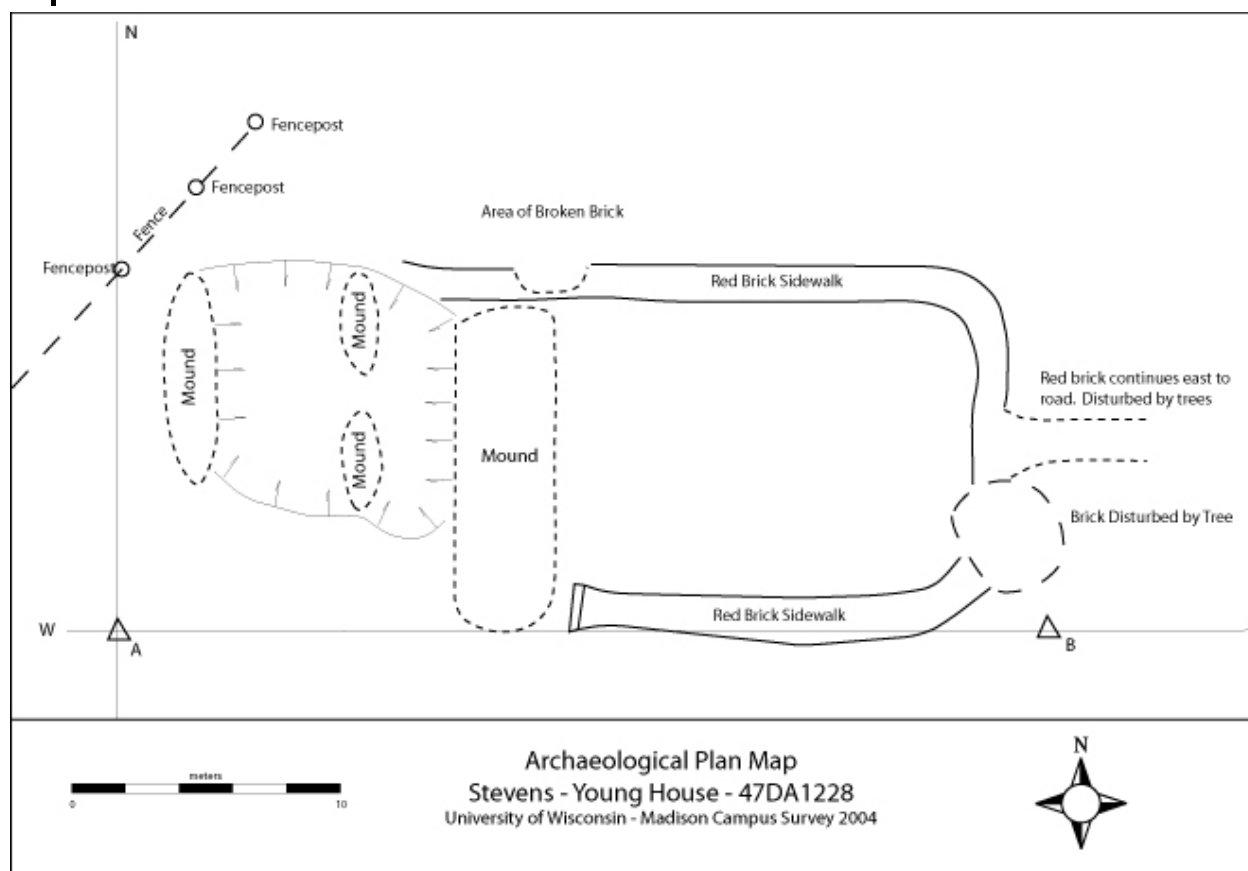


Figure 3.25: Site map-Stevens/Young House site area - 47DA1228.

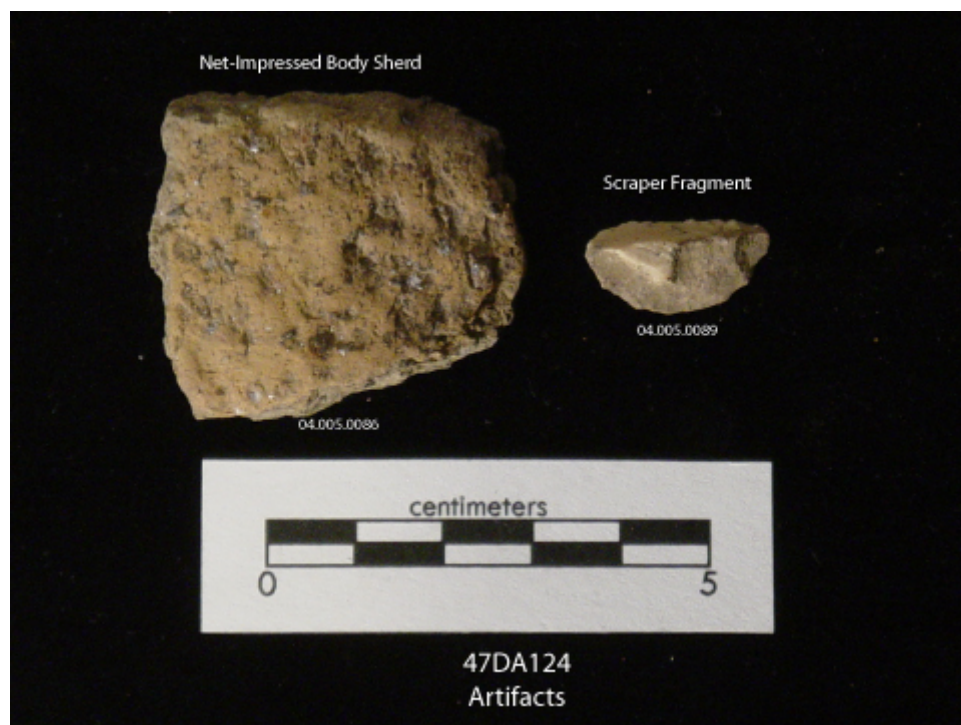


Figure 3.26: Artifacts from 47DA124.

47DA1228 Management Issues:

1. While the depression of the house was identified in 2004, the location of a well, privies, and trash dumps were not.
2. The precise location of outbuildings such as the barn was not determined in 2004.
3. The site is bisected by a major access road.
4. Sites of this type dating to this time period have not typically been seen as worth preserving.

47DA1228 Management Recommendations:

47DA1228 has the potential to be significant in providing important information about the history of Madison and the development of the University of Wisconsin campus. Furthermore, the implications of potential research at this site have wider ramifications for the state of Wisconsin and life in the late eighteenth and early nineteenth centuries. It is therefore recommended that:

1. Additional literature and archive research be conducted to create a land use and ownership history as well as establish plans for the farmstead illustrating building locations and other cultural features
2. Additional archaeological testing is warranted at this site. Additional Phase I testing should be conducted at closer intervals to identify cultural features such as building locations, wells garbage dumps and privies. Phase II testing should include controlled excavations to ascertain the condition and extent of located features.
3. No earthmoving activities should be conducted in this area without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches and buildings.
4. This site should not be chosen for future development without careful consideration

47DA1228 Future Research Recommendations:

1. Research at this site should focus on the nature of the economic relationships between the tenants and the owners of this property and the relationship between somewhat urban tenant farmers and their rural counterparts in other parts of southern Wisconsin.
2. Future research could also address comparisons of “gentlemen farmers” and their role in the development of the Madison community.

3. The geographically close relationship between the Stevens/Young farm and the University Farms represents an opportunity to explore the incorporation of experimental agricultural technologies into private farming.
4. The occupation of the Stevens/Young farm spans the transition between local production of food and goods and the nationalization of this type of production. Future research could evaluate the timing and importance of this transition in the Madison area.

47DA1230

Location: NE ¼, SW ¼, NE ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.21)

Geographic Location and Relationship to Landscape: This site is located on the south side of an east-west trending access road that skirts Lake Mendota. To the south is a wooded lot line opening into an open field that was once part of a University of Wisconsin orchard. The topography at this location is gently sloping down and to the northeast towards Lake Mendota. On either side of the western and southern sides of the site is higher ground.

Elevation: 876 feet above sea level.

Vegetation and Land use: 47DA1230 is currently covered by a young deciduous forest that has developed since the mid-1930s. At the present time, the land is being used for recreational purposes and is part of the Lakeshore Nature Preserve.

Soils: Kidder loam 12-20% slopes.

Site Description: 47DA1230 is a small ovate shaped site with its long access running approximately north/south and its short access running east/west. Three positive shovel tests defined the site in two transects yielding site dimensions of 30 meters by 20 meters. Site area has been calculated at 0.06 hectares or 0.15 acres.

Site History: This site was previously unrecorded.

Discussion: 47DA1230 was discovered during systematic shovel testing of the northern portion of the Picnic Point West parcel at 15-meter intervals. The site boundaries were determined with three positive shovel tests that were distributed between two transects (Transects 84 and 85). A total of four pieces of lithic waste debris were recovered, three of which were flake fragments and the fourth was a piece of shatter (debris) (Appendix A). All four pieces were struck from Prairie du Chien chert and none of them is diagnostic. No other artifacts were recovered.

The site area is depicted on aerial photographs from the 1920-30s as having been open pasture and it seems likely that at one time the area was under cultivation. Shovel test profiles were not definitive, but suggested that the area had been plowed at some point in the past. No diagnostic artifacts were recovered and it is therefore impossible to determine a specific cultural or temporal affiliation.

47DA1230 Management Issues:

1. Cultural and temporal affiliations were not determined in the 2004 testing.
2. Condition of the archaeological deposits was not determined.

47DA1230 Management Recommendations:

It is likely that this site is not eligible for inclusion on the National Register of Historic Places. The artifact density was low, no evidence was recovered that would indicate the presence of subsurface features, and it seems likely that this area has been impacted by agricultural activities. It is therefore recommended that:

1. No further archaeological testing is warranted at 47DA1230.
2. 47DA1230 should be preserved in place and the location considered carefully before being chosen as a building site.
3. No earthmoving activities should be conducted on or near 47DA1230 without additional testing and monitoring by a professional archaeologist. This includes tree and brush removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

47DA1231

Location: NW ¼, NW ¼, SE ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.21)

Geographic Location and Relationship to Landscape: 47DA1231 is located on a small south trending spur of a hill overlooking University Bay to the south. To the north is an east/west access road. To the west is a north/south access road.

Elevation: 869 feet above sea level.

Vegetation and Land use: 47DA1231 is located on a small spur that is covered in fairly dense vegetation including a fully developed canopy and understory. This area is used for recreational purposes.

Soils: Kidder Loam 12-20% slope.

Site Description: 47DA1231 is ovate in shape with a north/south dimension of 50 meters and an east/west dimension of 20 meters yielding an area of 0.10 hectares (0.25 acres).

Site History: This site was previously unrecorded.

Discussion: This site was discovered during systematic shovel testing at 15 meter intervals in north to south running transects. Archaeological materials were recovered from four positive shovel tests located in Transects 54 and 55. Artifacts recovered from these tests included: one fragment of brown bottle glass, two bottle caps, and five pieces of lithic waste debris (Appendix A). The Native American material consisted of one broken flake, two flake fragments, and two pieces of lithic debris (shatter). The lithics were primarily made from Prairie du Chien chert with only a single piece of Galena chert. No diagnostics were among the artifacts recovered making it impossible to ascribe a cultural affiliation. The debris appeared to be very recent and clearly of Euro-American origin.

The shovel test profiles were not conclusive in determining whether the soils had been disturbed through agriculture. Photographs from the early twentieth century indicate that the land was open and used for pasture and may have been cultivated as well.

47DA1231 Management Issues:

1. Cultural and temporal affiliations were not determined based on the limited nature of the materials that were recovered.
2. Site function was not determined due to the low artifact density
3. The condition of the archaeological deposits was not determined due to the limited nature of the archaeological testing.

47DA1231 Management Recommendations:

The low density of artifacts, the lack of diagnostics and the questionable condition of the soils for the site suggest that the site has little or no potential for being considered significant under any of the NRHP criteria for significance. This does not mean that the site might not be important when framed within an NRHP district nomination or a research design that includes a settlement pattern study. It is therefore recommended that:

1. No further archaeological testing is warranted at this location.
2. 47DA1231 should be preserved in place and should be considered carefully before being chosen as a building site.
3. No earthmoving activities should be conducted on or near 47DA1231 without additional testing and monitoring by a professional archaeologist. This includes tree and brush removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

IV. Observatory Hill Parcel

Area Boundaries: The Observatory Hill parcel is approximately 3.9 acres and is bounded on the north by Observatory Drive, on the south by an east/west running footpath, on the west by

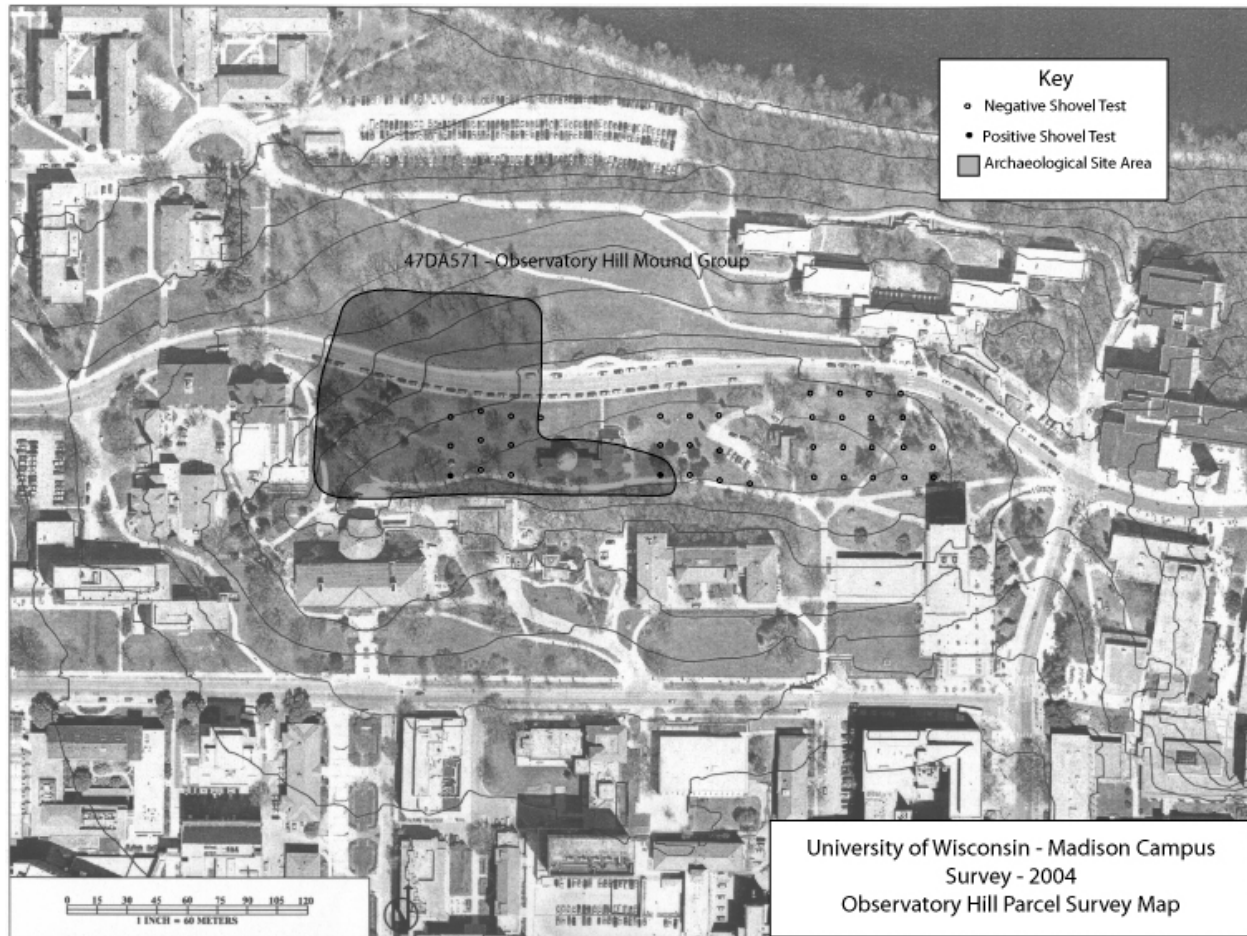


Figure 3.27: Observatory Hill Parcel survey map.

47DA571 and by the intersection of Charter Street and Observatory Drive on the east (Figure 3.27).

Archaeological Testing Conducted: 1. Shovel testing at 15 meter intervals

Testing Results: A total of 10 shovel test transects were used to test the areas around the buildings on the top of Observatory Hill. A total of 38 shovel tests were excavated of which two were positive. These two tests were separated by a distance of 100 meters. There is one site listed as being present on Observatory Hill and that is the Observatory Hill Mound Group (47DA571). The artifacts from the positive shovel tests are believed to be part of this site.

47DA571 – Observatory Hill Mound Group

Location: SW, NE, SE, SW, SE Section 15, Township 7 North, Range 9 East (Figure 3.27)

Geographic Location and Relationship to Landscape: This site is located on a hill overlooking Lake Mendota to the north. This hilltop is south of Observatory Drive and is on either side of the Washburn Observatory. Agricultural Hall is to the south.

Elevation: 910 feet above sea level

Vegetation and Land use: This site is maintained in manicured short grass and is used for a variety of University of Wisconsin functions. The Washburn Observatory and Observatory Hill Office Building are present along the very top of the ridge and it is a common thoroughfare for students walking from east to west.

Soils: Kidder loam 12-20% slopes

Site Description: This site is known primarily for its famous mound group, but there is growing evidence to support some type of occupation that perhaps pre-dates the mound construction on the ridge. The site is estimated to be 160 meters east/west by 40 meters north/south yielding an area of approximately 0.64 hectares (1.58 acres)

Site History: This site is one of the most famous of the archaeological sites on the University of Wisconsin – Madison campus, but largely for its Late Woodland stage effigy mounds that included a bird mound, a two-tailed turtle effigy, a panther mound and a linear mound (Figure 3.28). At least one artifact was recovered on the site on August 19, 1938 by Raymond Roberge near the twin-tailed water spirit mound (Roberge 1938) (Figure 3.29). The artifact recovered appears to be a lanceolate point, but he reports finding other materials as well:

It was found near the sidewalk, where hundreds of people no doubt noticed it but failed to recognize it. I spotted it about 8 feet away, though just a small part of it was showing. Also picked up a considerable amount of archaeological garbage. Pieces of flint, quartz and bone, all this I am adding to my collection...

(Roberge 1938)

Roberge does not indicate the quantities or more specifics for the other materials that he found. He does include a drawing of the projectile point and it appears to be Late Paleo-Indian in appearance.

Discussion: The results of the 2004 survey were disappointing in that very little material was recovered from the testing. One positive shovel test was recorded in Area 1 located on the west side of the Washburn Observatory while the other was located on the east side of the observatory. A total of two broken flakes and a single flake fragment were recovered from the tests (Appendix A). All three artifacts had been struck from Prairie du Chien chert and none of the three were diagnostic. At the present time, the Roberge find is the only diagnostic artifact that has been recovered and it suggests a Late Paleo-Indian stage (10,000 to 7,000 BC) component at the site.

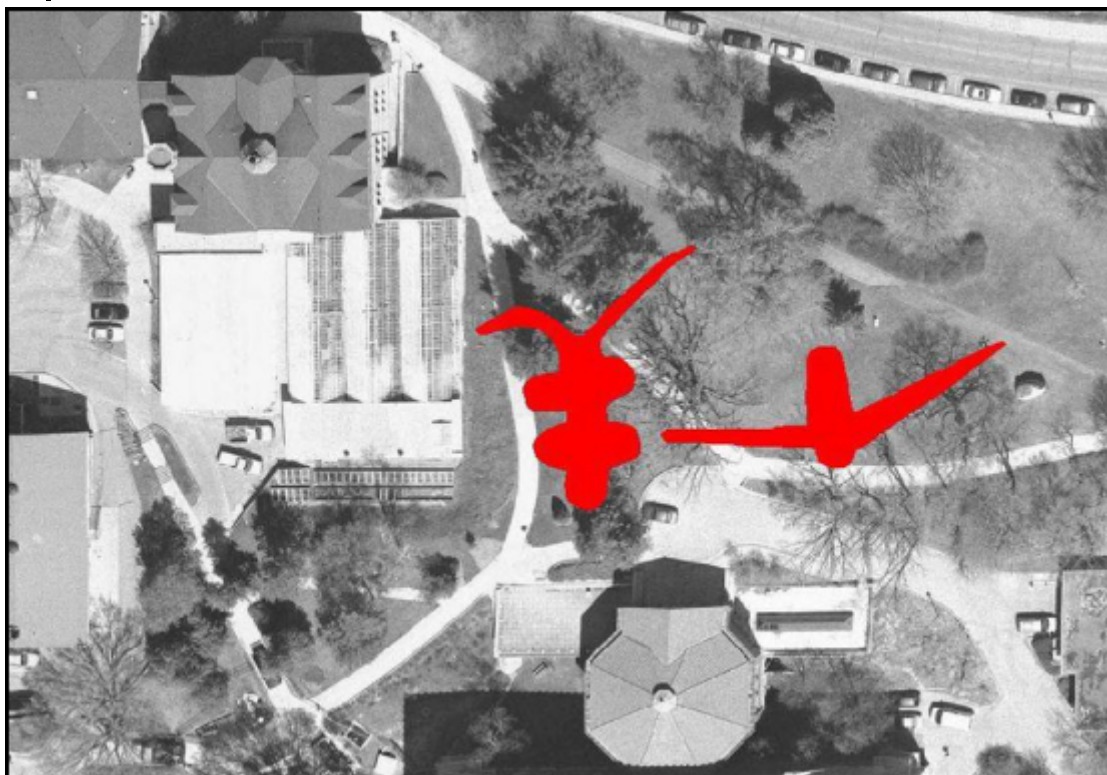


Figure 3.28: Observatory Hill Mound Group. (Rosebrough, 2003)

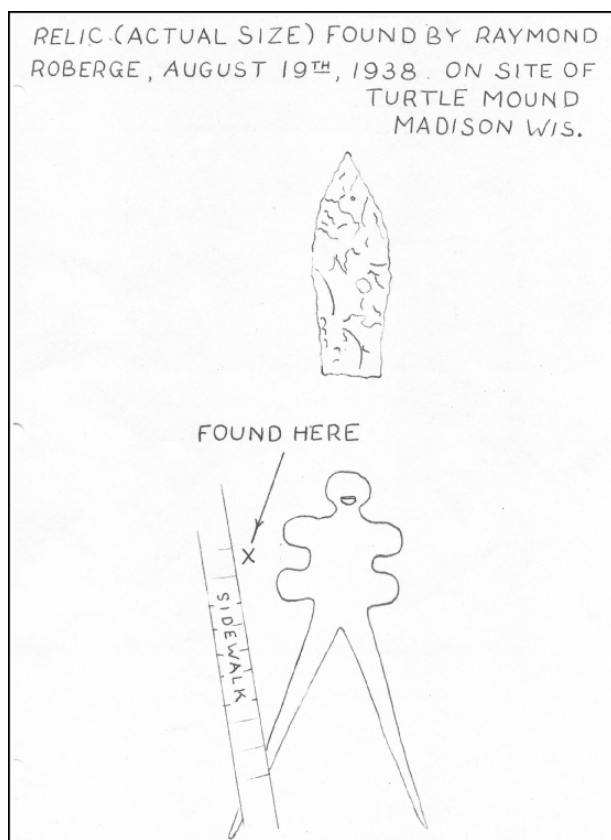


Figure 3.29: Paleo-Indian projectile point found near the twin-tailed water spirit.

47DA571 Management Issues:

1. The site boundaries for the mounds are extended beyond the immediate area of the mounds.
2. The precise location of the habitation site boundaries is unknown.
3. The cultural affiliations for the site have not been verified.
4. The extent of building and facilities damage to the archaeological deposits was not determined.
5. There are sidewalks within five feet of the mounds which is in violation of Wisconsin Statutes 157.70 Burial Sites Preservation.
6. There is regular damage to the soils near the mounds from maintenance vehicles conducting snow removal.
7. The area is under pressure for building and facility development.

47DA571 Management Recommendations:

The Observatory Hill Mound Group is listed on the National Register of Historic Places and as such is acknowledged as a significant site. The nomination however, is for the mounds, not any potential habitation areas. If the site is indeed a Late Paleoindian site, it may expand the site boundaries considerably. As such, the following recommendations are made:

1. This site should undergo more thorough Phase I archaeological testing at closer intervals (5 or 10 meters) to determine the presence or absence of additional archaeological materials on the ridge top.
2. The southernmost sidewalk that currently passes within five feet of the mounds should be closed and removed. An alternative path should be chosen to the north of the mounds in the area that was previously used as a road.
3. Maintenance of the lawn in the vicinity and on top of the mounds should be conducted using push lawn mowers.
4. Maintenance of the sidewalks during the winter (i.e. snow removal) should be conducted using either shovels or snow blowers as opposed to trucks with snowplows. It has been demonstrated that the trucks are too large for the sidewalk and consistently damage the site.
5. No earthmoving activities should be conducted in this area without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths and buildings

6. This ridge should not be chosen for construction without careful consideration of the cultural resources present.

V. Lakeshore Residence Hall

Area Boundaries: The Lakeshore Residence Halls parcel is approximately 4.1 acres in area and is bounded on the west by the Crew House, on the south by Adams and Trip Halls, on the north by Lake Mendota and on the east by the network of paved sidewalks that eventually merge into the Howard Temin Lakeshore Path (Figure 3.30).

Archaeological Testing Conducted:

1. Shovel testing at 15 meter intervals
2. Random pedestrian survey

Testing Results: A total of six transects of shovel tests were excavated in the Lakeshore Residence Hall parcel. These transects were oriented east to west and a total of 40 shovel tests were excavated of which seven were positive. These seven tests were used to further refine site boundaries for the previously identified archaeological site Observatory Hill Village (47DA1207).

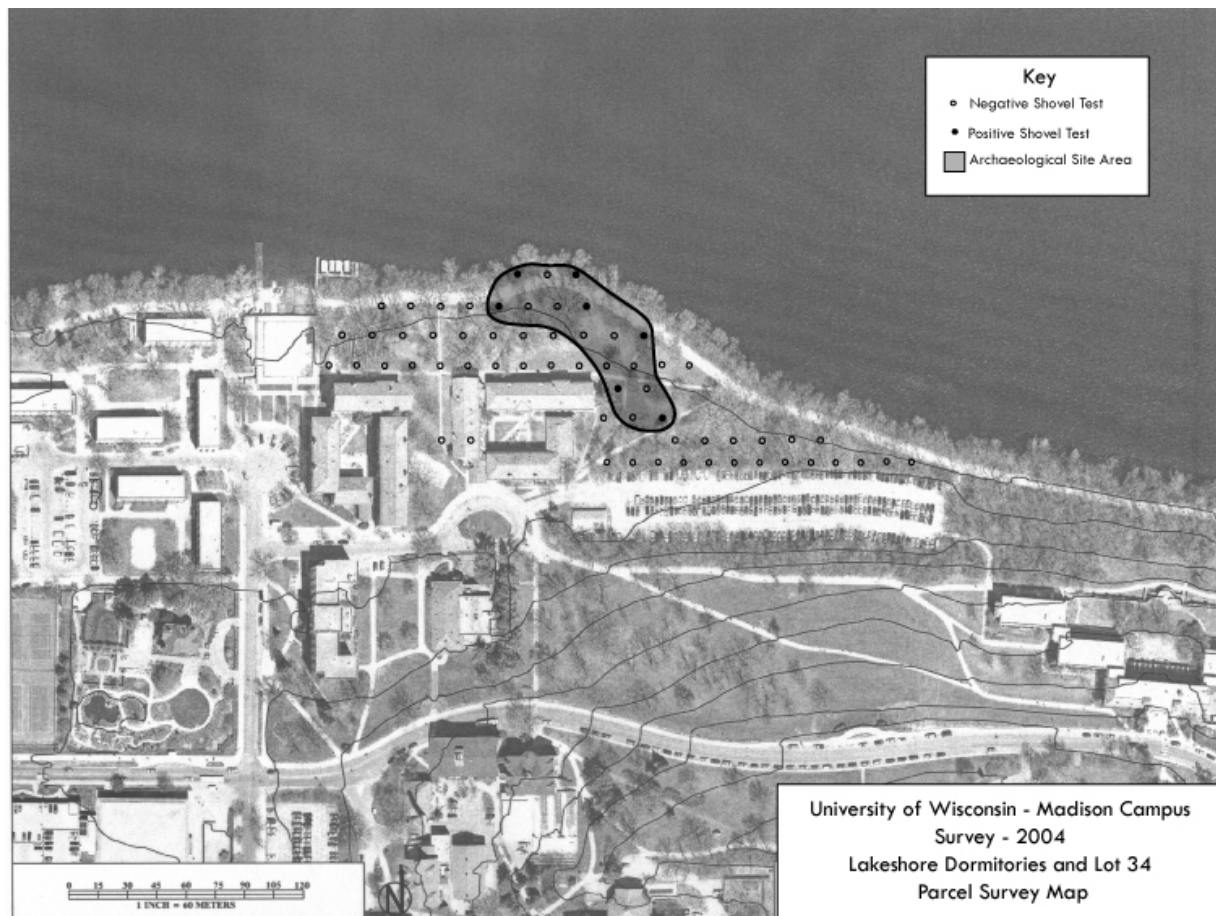


Figure 3.30: Lakeshore Residence Halls and Lot 34 parcel survey map.

47DA1207 – Observatory Hill Village

Location: NW ¼, NE ¼, SW ¼, SE ¼ of Section 15, Township 7 North, Range 9 East (Figure 3.30)

Geographic Location and Relationship to Landscape: The site is located on the south shore of Lake Mendota, at the base of Observatory Hill, below the Washburn Observatory and the Observatory Hill Mound Group. It is north of Observatory Drive, on the University of Wisconsin-Madison campus. The site occupies a small point of land extending into Lake Mendota. It extends south to Tripp Hall, wrapping around the eastern end of the residence hall. The Howard Temin Lakeshore Path runs over the northern margin of the site.

Elevation: 856 feet above sea level.

Vegetation and Land use: This site is located within a wooded area with some substantial deciduous trees present. There is no underbrush as this area is in manicured short grass lawn. At the present time, the area is used by the Lakeshore Residence Hall for a variety of recreational purposes.

Soils: Dodge Silt loam 2-6% slopes.

Site Description: The Observatory Hill Village (47DA1207) as currently defined is approximately 100 meters northwest/southeast by 30 meters southwest/northeast yielding an area of 0.07 hectares or 0.17 acres in size.

Site History: Information on this site was first published in a 1912 article by Charles E. Brown on burial mounds along the shores of Lake Mendota. Brown wrote;

In the orchard and fields below Observatory Hill and the Horticulture building evidences of an Indian camp and workshop site have been found. Numerous flint arrowpoints and several grooved stone axes and celts have been picked up here by local collectors in the past. Mr. A.O. Barton has a grooved axe from this site.
(Brown 1912:9)

Brown restated his earlier description in an article on the mounds on the University of Wisconsin – Madison campus (Brown 1914). In that article, Brown states:

In the orchard below Observatory Hill and between it and the Lake Mendota shore, evidences of an Indian camp and workshop site have been found. Flint chips were formerly scattered over the ground in parts of this orchard. Numerous flint arrow points and several grooved stone axes and celts have also been found here in past years.
(Brown 1914:385)

The last published report of this site can be found in a description provided to Charles E. Brown on August 24, 1940 by Arthur Quan as part of a report on two destroyed mounds on the northern slope of Observatory Hill. Apparently, Quan used to fish along the Lake Mendota shoreline and

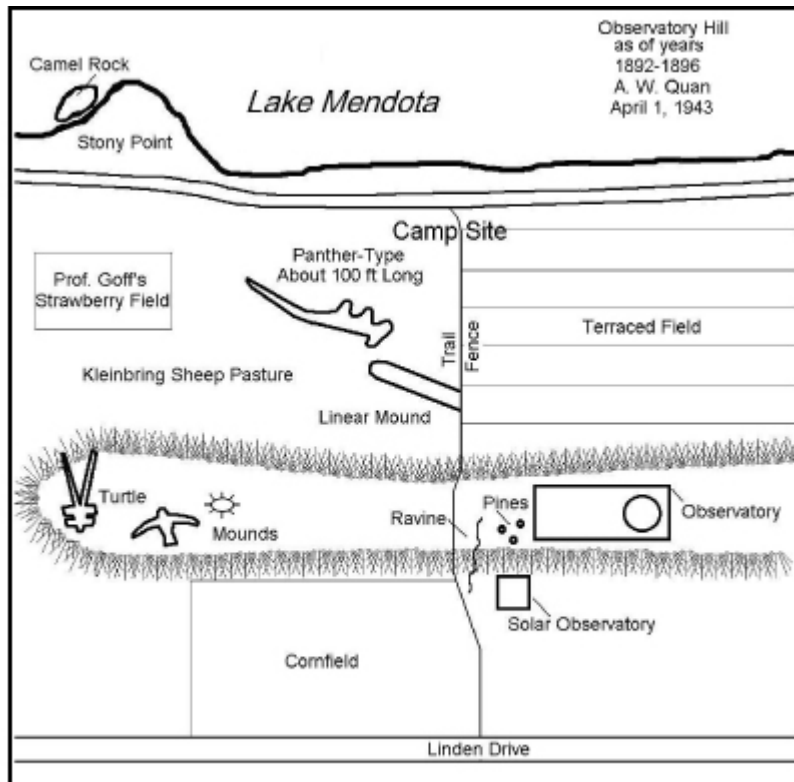


Figure 3.31 Redrafted Map of Arthur Quan's 1943 Sketch Map of Observatory Hill (taken from the NRHP Nomination Form)

passed the mounds on Observatory Hill on a regular basis between 1892 and 1896. In April of 1943, Quan and Brown visited the location of the destroyed mounds and Quan furnished Brown with a sketch map that indicated the location of a “camp site” at the base of Observatory Hill (Figure 3.31).

Discussion

This site was finally listed on the ASI in September of 2003, but as can be observed from the Site History, it actually has a long history of being reported and discussed and even mapped. The descriptions provided in the literature only barely resemble the results of the archaeological testing in that the testing is much more narrowly confined to an area in front of the Lakeshore Residence Hall. After a review of the literature it seems likely that the village visited by Brown and Quan was perhaps much larger and than our current definition of the site. The site area discussed by Brown encompassed the area of the old orchard (immediately west of Elizabeth Waters Hall) and Lot 34 and may have extended west into the area of Adams and Tripp Halls where the Phase 1 testing revealed at least a portion of the site. The terracing of the orchard has probably disturbed portions of the site and the excavation of the terrace for Lot 34 undoubtedly removed a large portion of the site. There are still areas to the north of Lot 34 that include the terrace that the Howard Temin Lakeshore path traverses that may contain artifacts and intact soils.

The Phase 1 survey was conducted using transects of shovel tests at 15-meter intervals. A total of 6 transects of tests were placed in east to west orientations and six of 40 shovel tests

were found to contain Native American debris. The materials recovered were lithic tool manufacture waste debris that included 3 broken flakes, 2 flake fragments, 2 pieces of debris (shatter), and a Type 1 biface made of Prairie du Chien chert (Appendix A). The lithic waste was predominantly Prairie du Chien chert with only a single flake having been struck from Galena chert. No diagnostics were recovered.

The testing that was conducted in 2004 overlapped with previous reconnaissance survey that was done in October of 2003 (Salkin 2003b). It is unfortunate that the literature search for that project did not include the acknowledgement of this site that had been placed on the ASI in September of 2003 or the historic references cited above for its location. The fieldwork for the 2003 project did not identify the sites location and as a consequence, the contractors that installed the lake water force main were in the process of excavating and destroying parts of the Observatory Hill Village the very day that our fieldwork was conducted. In two instances, earthmoving equipment destroyed the area of our positive tests as we hurriedly recorded the test locations. The area between Adams and Tripp Halls had some older growth trees in the vicinity indicating that there might be some integrity to the deposits in this area.

47DA1207 - Observatory Hill Village Management Issues:

1. The site boundaries identified in 2004 do not match the historic descriptions of the site suggesting that there is more archaeological site that has not been identified.
2. The cultural and temporal affiliations of 47DA1207 were not determined in the 2004 testing.
3. The extent of disturbed areas was not determined for the site in the 2004 testing.
4. The site was damaged by the installation of a lake water force main.
5. The site is in an area of heavy pedestrian and recreational traffic.

47DA1207 - Observatory Hill Village Management Recommendations:

The Observatory Hill Village (47DA1207) is a documented and previously known site that the 2004 survey has apparently encountered in the area north and east of Adams and Tripp Halls. A portion of the site has been disturbed by the installation of utilities within the footprint of the Howard Temin Lakeshore Path, by the construction of Adams and Tripp Halls, by the creation of Lot 34, and theoretically by the terracing of the Observatory Hill slope for the creation of an orchard. However, the complete extent of this damage is unknown and the following recommendations are made:

1. Additional Phase I testing is recommended for areas to the west of Elizabeth Waters Hall (the former UW orchard), for the Howard Temin Lakeshore Path in the area of 47DA1207 and for the area immediately north of Lot 34. This testing should be conducted at closer intervals (10-meter intervals) to identify the extent of the site and/or the possibility that there are a number of sites in the area.

2. Phase II testing involving more substantial excavation units is also warranted based on the possibility of intact soils between the dormitories and the lakeshore.
3. No additional earthmoving activities should be conducted in this area without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths and buildings.
4. This area should not be chosen for construction without careful consideration of the cultural resources present in this area.

VI. Caretaker's Woods Parcel

Area Boundaries: The Caretaker's Woods parcel boundaries were defined by the Lake Mendota shoreline to the northeast, a west to east running paved road to the south and the southern edge of the Biocore fields to the west. The Biocore field edge can be roughly defined as an extension of the north/south road that intersects the west-east road (Figure 3.32).

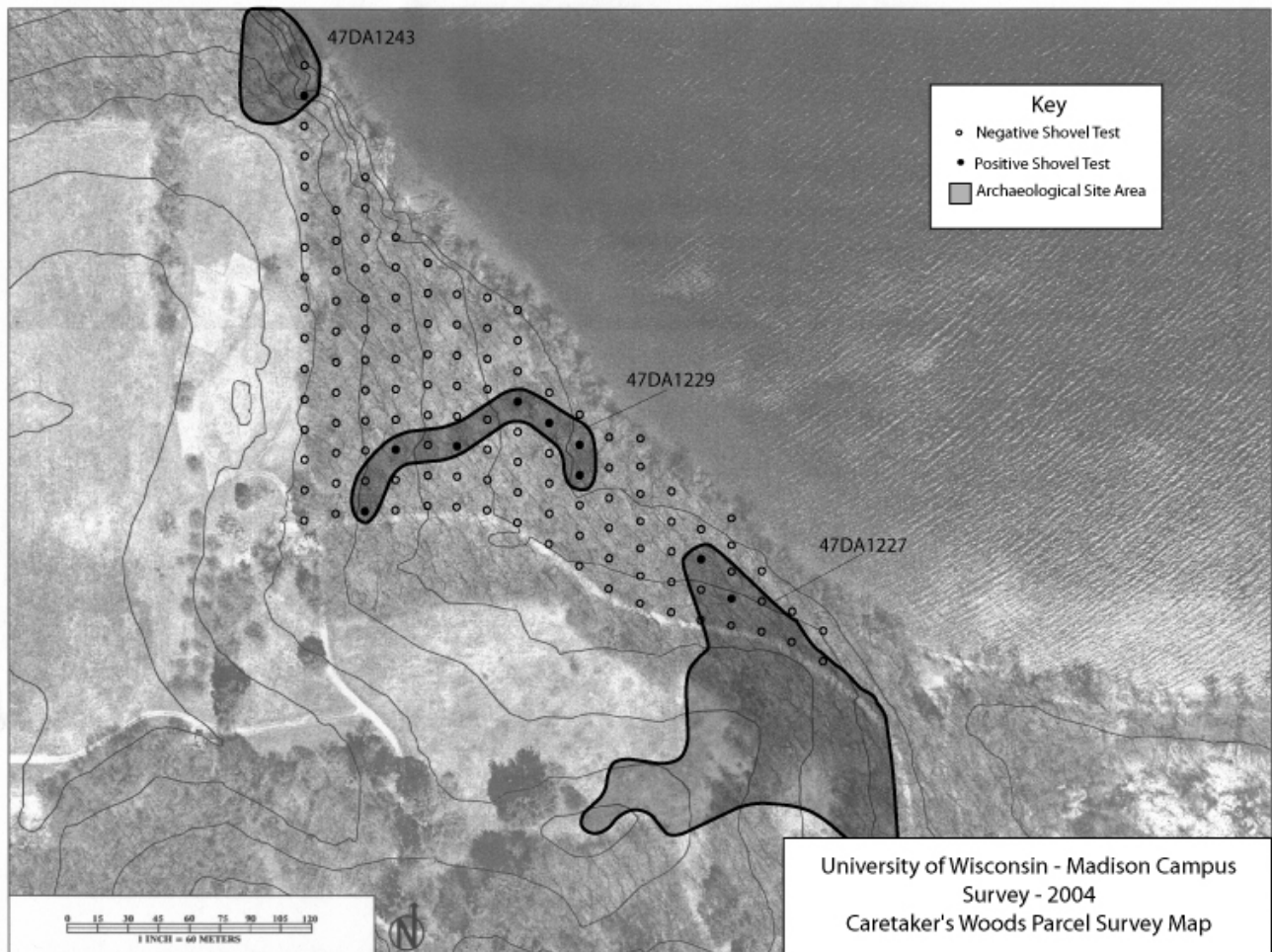


Figure 3.32: Caretaker's Woods Parcel survey map.

Archaeological Testing Conducted: 1.) Shovel testing at 15 meter intervals

Testing Results: The Caretaker's Woods parcel is approximately 7.4 acres in area and was tested using 18 transects of shovel tests oriented from south to north. A total of 139 shovel tests were excavated of which nine were positive. A single site was identified wholly within the Caretaker's Woods parcel (47DA1229) while the northern edge of a second site overlapped from the Picnic Point West parcel (47DA1227)

47DA1229

Location: SE ¼, NW ¼, NE ¼, NE ¼ of Section 16, Township 7 North, Range 9 East (Figure 3.32)

Geographic Location and Relationship to Landscape: This site is located to the north of a paved access road that runs from the Biocore fields to Picnic Point and east of the Biocore fields. The site is on a slight incline overlooking Lake Mendota to the northeast.

Elevation: 885 feet above sea level.

Vegetation and Land use: The Caretaker's Woods is a maturing hardwood forest that has some history of being more open at one time. At the present time, there is a developed canopy and very little underbrush. Aerial photos from the 1920-30s indicate that some of the trees were present at that time. At the present time, the area is used for recreational purposes.

Soils: Kidder Soils 25 – 30 percent slopes.

Site Description: The site was defined on the basis of positive shovel tests which were excavated in an area of 120 meters by approximately 40 meters. This yields an approximate site area of 0.48 hectares or 1.19 acres.

Site History: This is a previously unrecorded archaeological site.

Discussion: 47DA1229 is a scatter of lithic waste debris that was found during systematic shovel testing of the Caretaker's Woods parcel at 15-meter intervals. A total of seven positive shovel tests in six transects were used to define the site boundaries. The remains from the positive tests were exclusively lithic waste debris from the manufacture of stone tools. Forty-eight pieces of debris were recovered including 3 complete flakes, 2 broken flakes, 41 flake fragments and 2 pieces of debris (shatter) (Appendix A). The raw materials that had been utilized include Silurian chert (n =1 flake), Prairie du Chien chert (n =46) and an unidentified chert (n=1). The majority of the flakes (n=41) came from a single positive shovel test (shovel test 5, transect 106). No diagnostics were recovered.

The vegetation, aerial photographs and the shovel test profiles indicate that this area has not been subjected to intensive agricultural for at least 100 years. It is likely that there are intact deposits within 47DA1229. Unfortunately, no diagnostics were recovered making cultural or temporal affiliation identification impossible at this time.

47DA1229 Management Issues:

1. Cultural and temporal affiliations were not determined in the 2004 testing.
2. Site boundaries were somewhat diffuse.

47DA1229 Management Recommendations:

The location of this site immediately adjacent to Lake Mendota coupled with evidence for high artifact density and the possibility of intact soils make 47DA1229 a good candidate for additional archaeological testing. It is therefore recommended that:

1. Additional Phase I testing should be conducted at closer intervals to determine more precise site boundaries and obtain a larger sample of artifacts
2. 47DA1229 should undergo a Phase II-Determination of Eligibility for inclusion on the National Register of Historic Places.
3. 47DA1229 should be preserved in place and should be considered carefully before being chosen as a building site.
4. No earthmoving activities should be conducted on or near 47DA1229 without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

VII. Frautschi Point/Second Point Woods Parcel

Area Boundaries: The Frautschi Point/Second Point Woods parcel is approximately 28 acres in area and is bounded on its eastern and northern edges by Lake Mendota. The southern edge of the parcel is defined by the section line between Section 9 and 16. The western boundary is defined by Lake Mendota Drive and an old property line (Figure 3.33).

Archaeological Testing Conducted: 1.) Shovel testing at 15 meter intervals
2.) Opportunistic surface collection

Testing Results: The Frautschi Point/Second Point Woods parcel was tested using 26 transects of shovel tests spaced 15 meters apart. A total of 409 shovel tests were excavated of which 60 were positive for Native American and Euro-American materials. A total of four sites were defined including; 47DA1240, 47DA1241, 47DA1242, and 47DA1243.

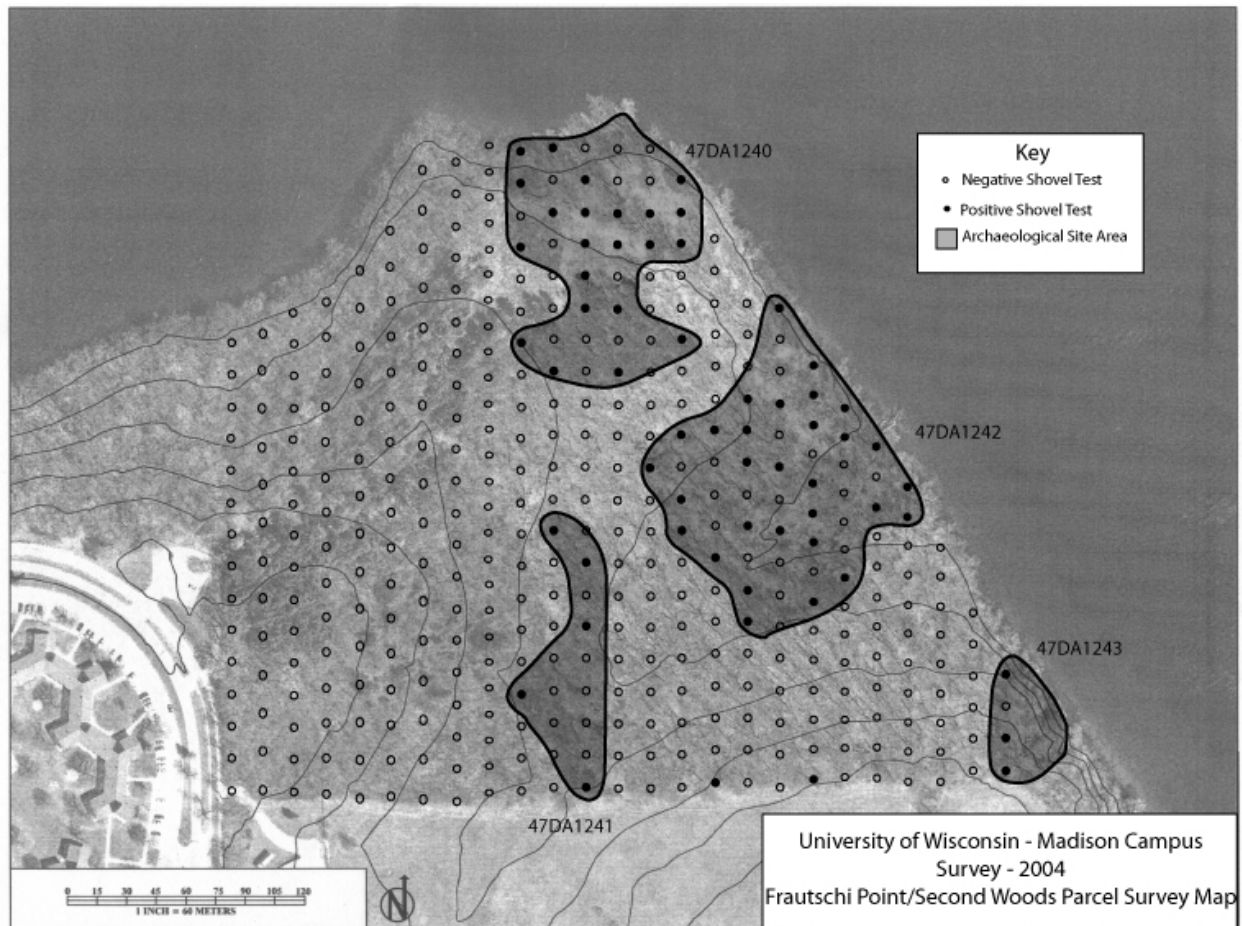


Figure 3.33: Frautschi Point/Second Point Woods parcel survey map.

47DA1240

Location: SW ¼, NE ¼, SW ¼, SE ¼ and the SE ¼, NW ¼, SW ¼, SE ¼ of Section 9, Township 7 North, Range 9 East

Geographic Location and Relationship to Landscape: This site is located on flat terrain overlooking Lake Mendota to the north. The site includes the location of the former Jackson cottage (and associated outbuildings) although none of these structures is still standing. The primary access road for Frautschi Point runs through the middle of the site.

Elevation: 849 feet above sea level

Vegetation and Land use: 47DA1240 is located in a young second growth forest with some older trees, and in some places, considerable underbrush. This site was in use as a private residence until relatively recently and there are still vestiges of roads, turnarounds and concrete slabs. The land is currently under the stewardship of the LAKESHORE NATURE PRESERVE and is being returned to a semi-natural state. The land is used primarily for recreation at this point.

Soils: Dodge Silt Loam

Site Description: The site boundaries for 47DA1240 were defined on the basis of 22 positive shovel tests in an area that was approximately 105 meters by 105 meters yielding a site area of 110 hectares or 2.72 acres.

Site History: This site was the former Jackson cottage, but it also contains a previously unreported Native American component.

Discussion: 47DA1240 was the former residence of Dr. Reginald Jackson Sr. and his wife Elizabeth Stevens (Figure 3.34, 3.35). Elizabeth Stevens was the daughter of Breese J. Stevens who owned the Picnic Point and Second Point parcels prior to his death in 1903. Elizabeth and her sister Amelia inherited B.J. Stevens's property and retained ownership of Second Point when Picnic Point was sold to E.J. Young in 1925. Elizabeth was married to Jackson and they built several structures on Second Point including the residence that once stood on the site of 47DA1240. The archaeological testing conducted in late November and early December of 2004 identified this site while systematically shovel testing what has come to be called Frautschi Point (for the benefactors John and Jerry Frautschi who purchased the property from the State Medical Society and Northwestern University and donated the land to the University of Wisconsin) in 15 meter intervals.



Figure 3.34: Former residence of Dr. Reginald Jackson Sr. and his wife Elizabeth Stevens.

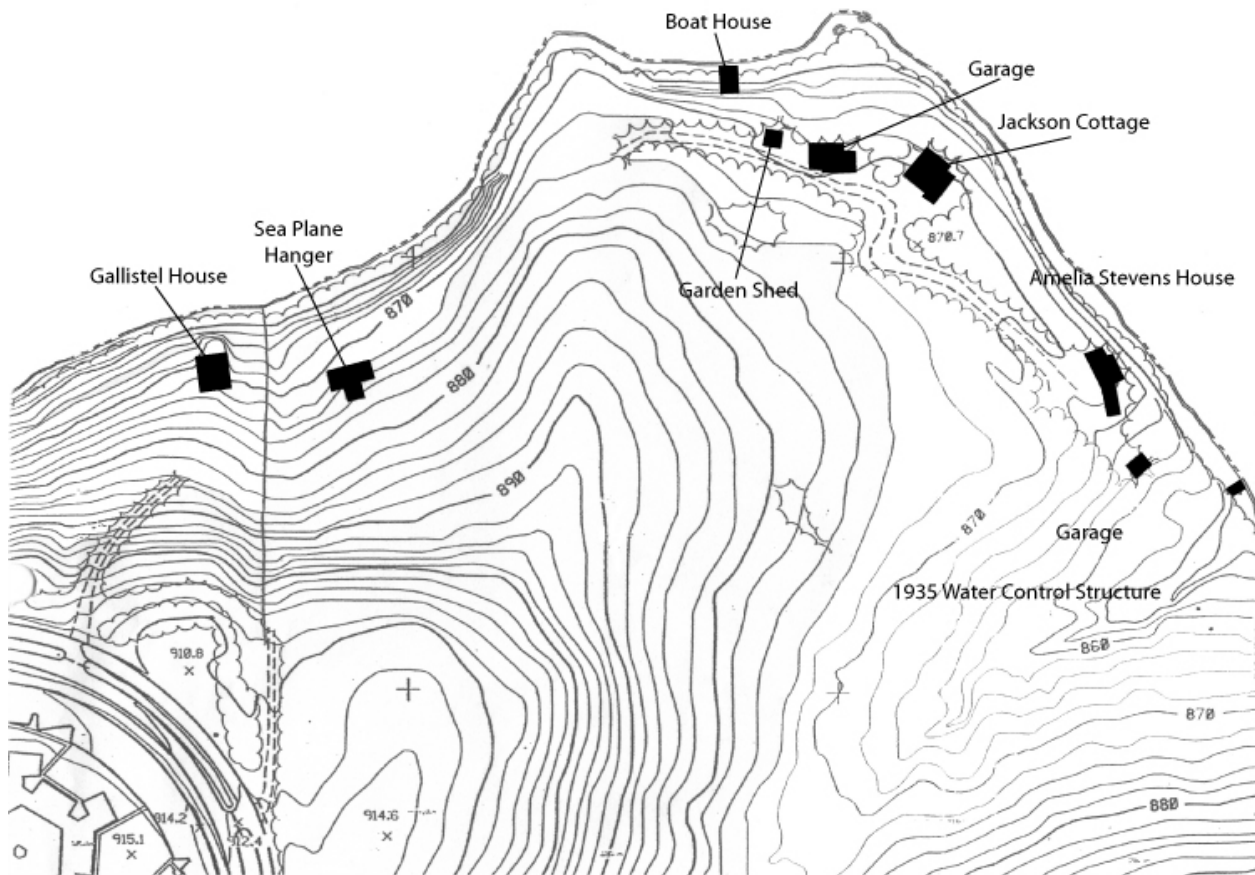


Figure 3.35: Property of Dr. Reginald Jackson Sr. and his wife Elizabeth Stevens.

A total of 22 positive shovel tests were recorded in seven transects. The positive tests were clustered along the northern shore of Frautschi Point where the Jackson home was known to have been. Along with positive shovel tests, evidence for the presence of the home and outbuildings was also observed on the surface including cement rubble, concrete foundation fragments and other post-European contact debris. The positive shovel tests included both Euro-American and Native American debris (Appendix A). The Euro-American debris included 11 metal objects (9 wire nails, 2 unidentified metal fragments), 1 piece of coal, 1 piece of cement, 42 pieces of plaster, 1 porcelain horsehead-shaped figurine, 22 shards of clear bottle glass, 9 pieces of window pane glass, 3 pieces of green bottle glass, and 1 piece of milk glass. All pieces were clearly twentieth century in origin based on artifact style and historic documentation. The Native American materials included 16 pieces of lithic manufacture waste made primarily from Prairie du Chien chert, but with lesser quantities of Galena chert, Silurian chert (probably from Blue Mounds State Park) and an unidentified variety of chert. There were 3 complete flakes, 6 broken flakes, 5 flake fragments and 2 pieces of debris (shatter). No diagnostic artifacts were recovered.

The structures associated with the Jackson cottage have been torn down and there are no extant buildings associated with this property at the present time. It is clear that the Native American deposits have been compromised to some degree by the erection of the Jackson cottage and possibly by the removal of those structures. Aerial photographs from the 1920-30s indicate a wooded area where the Jackson cottage once stood and there is some possibility that

areas adjacent to the structure locations may still hold some integrity. Only additional testing at the site would confirm this.

47DA1240 Management Issues:

1. The cultural and temporal affiliations of the Native American occupation(s) were not determined in the 2004 testing.
2. The area of this site is being returned to a semi-natural state which involves the removal of structures, the re-routing of access roads and paths, the planting of indigenous species and the removal of exotic species of brush and trees.
3. The site is located in an area of pedestrian and recreation traffic.

47DA1240 Management Recommendations:

47DA1240 is a multi-component site with both an undetermined Native American and historically documented American components. No diagnostic materials were recovered from 47DA1240 so it is impossible to assign a cultural or temporal affiliation. The site once was the location of the Jackson cottage, a relatively well-documented American occupation that dates from between the 1920s and the 1980s. At the present time, this site would be considered ineligible for inclusion on the NRHP. As such, the following recommendations are made:

1. No further archaeological testing is recommended at this time.
2. 47DA1240 should be preserved in place and should be considered carefully before being chosen as a building site.
3. The site should be maintained in natural vegetation to prevent erosion.
4. No earthmoving activities should be conducted on or near 47DA1240 without additional testing and monitoring by a professional archaeologist. This includes tree and brush removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings

47DA1241

Location: SW ¼, SE ¼, SW ¼, SE ¼, Section 9, Township 7 North, Range 9 East (Figure 3.33)

Geographic Location and Relationship to Landscape: 47DA1241 is located on gently sloping terrain overlooking a drainage channel to the south and east.

Elevation: 875 feet above sea level

Vegetation and Land use: 47DA1241 is located in what has been referred to as the Second Point Woods, a portion of Frautschi Point that has been wooded since the earliest available aerial photographs dating to the 1920s and 1930s. This area is characterized by a more developed

canopy and less underbrush than in other areas of Frautschi Point. At the present time the area is being used for recreation.

Soils: Dodge Silt Loam

Site Description: This site was identified on the basis of a series of positive shovel tests spread over three transects. The tests were themselves fairly spread out over an area approximately 120 meters long by about 30 meters wide. This yields an area of 0.36 hectares or 0.89 acres.

Site History: This site was previously unidentified.

Discussion: 47DA1241 is a diffuse lithic scatter spread over an area approximately 120 meters north/south by 30 meters east/west. The site was identified during systematic shovel testing of Frautschi Point at 15-meter intervals. A total of five positive shovel tests were recorded in three transects (Transects 14 – 16). All of the artifacts recovered (n=7) are lithics consisting of six pieces of lithic manufacture waste and a single Type 1 biface fragment (Appendix A). The manufacture waste consists of 3 broken flakes, 2 flake fragments and a single multi-directional core. The majority of the waste debris is made from Prairie du Chien chert (n=4) with the remaining two pieces being made from Galena chert and an unidentified chert type. The biface fragment is a Type 1 fragment indicating a more finished state before discard. This biface fragment is also made of Prairie du Chien chert.

The shovel test profiles are not particularly helpful in determining the extent of the disturbance to the soils although positive shovel tests in the southern part of the site appear to have a truncated “A” soil horizon while the northernmost tests appear to be more intact. No diagnostic artifacts were recovered from this site nor was there any evidence to suggest a more substantial occupation that might produce intact subsurface features.

47DA1241 Management Issues:

1. The cultural and temporal affiliations were not determined in the 2004 testing.

47DA1241 Management Recommendations:

47DA1241 is a relatively diffuse lithic scatter located in the southern portion of the Frautschi Point parcel. The artifact density was not particularly high and no diagnostic artifacts were recovered. This site appears to have low potential for being considered significant under any of the NRHP criteria. Based on the current understanding of this site, we make the following recommendations:

1. No further archaeological testing is recommended at this time.
2. 47DA1241 should be preserved in place and should be considered carefully before being chosen as a building site

3. No earthmoving activities should be conducted on or near 47DA1229 without additional testing and monitoring by a professional archaeologist. This includes tree and brush removal using heavy machinery, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings

47DA1242

Location: NE ¼, SE ¼, SW ¼, SE ¼, of Section 9, Township 7 North, Range 9 East (Figure 3.33)

Geographic Location and Relationship to Landscape: This site is located along a wash that drains the uplands of Eagle Heights to the south and west. The old road that skirts the northern shore of Frautschi Point terminates at the northern edge of the site and the whole area overlooks Lake Mendota to the north and east.

Elevation: 856 feet above sea level

Vegetation and Land use: The northeastern portion of 47DA1242 is located among more mature forest in an area that has been wooded since the 1920-30s while the remainder of the site is in younger forest that has been developing since the 1950s. At the present time, the site is being used for recreational purposes.

Soils: Dodge Silt Loam and Radford Silt Loam

Site Description: The boundaries for 47DA1242 were defined on the basis of 30 positive shovel tests distributed in an area approximately 150 meters by 134 meters. This yields an area of five acres or 2.02 hectares.

Site History: This site was the former residence of Ms. Amelia Stevens, daughter of Breese J. Stevens and sister of Elizabeth Stevens. The Amelia Stevens house may have been built sometime prior to 1905. The Native American component of the site was previously unknown.

Discussion: 47DA1242 was identified as a potential site based on a variety of sources including informant testimony and a sketch map of the Frautschi Point parcel (Figure 3.33, 3.36). The site was identified on the ground while systematically shovel testing Frautschi Point in 15 meter intervals. Thirty positive shovel tests were recorded in nine transects (Transects 4 – 12). A total of 153 Native American and Euro-American artifacts were recovered (Appendix A). Post-European contact era debris included 2 square cut nails, 48 unidentified metal fragments, 1 piece of lead, 1 metal washer, 1 piece of coal, 6 pieces of cement, 1 brick fragment, 1 shotgun shell, 1 piece of stoneware ceramic, 1 piece of clear bottle glass, 1 piece of brown bottle glass, 1 piece of green bottle glass and 53 shards of window pane glass. Native American materials included 2 utilized lithic flakes, 24 pieces of lithic manufacture waste debris, 1 Type 2 biface and 5 Native American ceramic sherds (Figure 3.37).



Figure 3.36: Former residence of Ms. Amelia Stevens.



Figure 3.37: Artifacts from 47DA1242.

The post-European contact debris is consistent with a twentieth century occupation of the site as is documented in the literature. The presence of nails and windowpane glass supports the identification of a structure on the site.

The lithic material from 47DA1242 is more extensive than that from the other sites on Frautschi Point. The largest category of lithic remains include waste flakes with 5 complete flakes, 4 broken flakes, 14 flake fragments, and a single piece of debris (shatter). Galena chert was the most commonly found raw material (n=13) followed by Prairie du Chien chert (n=9) and then Silurian chert (n=1) and an unidentified chert type (n=1). Two utilized flakes made from Galena chert were also identified along with a single Type 2 biface made from Prairie du Chien chert.

47DA1242 also produced Native American ceramics indicating that this site has a Woodland Tradition component. The sample is relatively small, only five sherds are present. Four of the sherds are grit-tempered and exhibit a cord-marked surface treatment. The fifth sherd is also grit-tempered and has a paste that is very similar to the other four. However, the fifth sherd is exfoliated so there is no way to determine the surface treatment or whether there was any decoration present. None of the sherds were rim sherds, but based on the temper, the paste, and the overall thickness of the sherds, it seems likely that these ceramics were produced by Late Woodland Stage Horicon Phase people sometime between AD 700 – 1000.

It is clear that the construction of the Amelia Stevens house has impacted the underlying Native American site; however, that disturbance is confined to the footprint of construction of the house. The shovel test profiles for this area seem to indicate a relatively deep “A” soil horizon with a gradual transition to the “B” suggesting that in some areas of the site, the soils are intact. The presence of ceramics and the overall density of artifacts at the site would suggest that there is potential for intact features and a potential to contribute to the history of the area. It seems unlikely that the American component would be a significant contribution to the site’s overall importance.

47DA1242 Management Issues:

1. The area of this site is being returned to a semi-natural state which involves the removal of structures, the re-routing of access roads and paths, the planting of indigenous species and the removal of exotic species of brush and trees.
2. The site is located in an area of pedestrian and recreation traffic.

47DA1242 Management Recommendations:

It seems likely that 47DA1242 would be considered significant if it can be verified that there are intact portions of the site. Although Late Woodland mound/cemetery sites are common in the Four Lakes Area, there are very few intact Late Woodland habitation sites that have been scientifically investigated and reported. Based on the potential of this site to yield information important to the history of the region, the following recommendations are made:

1. Additional Phase I testing should be conducted at closer intervals to determine more precise site boundaries and obtain a larger sample of artifacts
2. 47DA1242 should undergo a Phase II Determination of Eligibility for inclusion on the National Register of Historic Places.
3. 47DA1242 should be preserved in place and should be considered carefully before being chosen as a building site.
4. No earthmoving activities should be conducted on or near 47DA1242 without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

47DA1243

Location: NW ¼, NW ¼, NE ¼, NE ¼, of Section 16 and the SE ¼, SE ¼, SW ¼, SE ¼ of Section 9, Township 7 North, Range 9 East (Figure 3.33)

Geographic Location and Relationship to Landscape: 47DA1243 is located on relatively flat terrain at the base of a larger hill overlooking Lake Mendota to the east. The site is present along the south end of a footpath leading to the north and west in the Second Point Woods and Frautschi Point.

Elevation: 861 feet above sea level

Vegetation and Land use: 47DA1243 is located partially within an open mowed area and partially within the wooded southeastern corner of the Second Point Woods. The trees in this portion of the woods are generally more mature suggesting a relatively stable landscape over the last 70 to 100 years. At the present time, the land is used for recreational purposes.

Soils: Kidder Loam 12-20 percent slopes

Site Description: This site was defined on the basis of four positive shovel tests spread over two transects in an area approximately 60 meters by 30 meters or 0.44 acres (0.18 hectares).

Site History: This site was previously unrecorded.

Discussion: 47DA1243 was discovered during systematic shovel testing of the Caretaker's Woods and Second Point Woods in 15-meter intervals. A total of four positive shovel tests were recorded for this site. All of the material recovered was Native American and it consisted of one complete flake, six flake fragments and one piece of lithic debris (shatter) (Appendix A). Six of the flakes were made from Prairie du Chien chert while the remaining two were struck from Galena chert. A single grit-tempered, cord-marked body Native American ceramic sherd was recovered as well. The sherd was relatively thin and exhibited some weathering on the exterior

surface. Based on the temper and paste, it seems likely that this sherd was produced by Late Woodland Stage Horicon Phase people sometime between AD 700 and 1000.

The shovel test profiles from this area seem to indicate relatively intact soils. This conclusion is lightly supported by aerial photographs from the 1920s and 1930s which indicate the presence of Second Point Woods and a light scatter of trees in the northern portion of Caretaker's Woods. It seems likely that this area has some integrity and should be tested more thoroughly.

47DA1243 Management Issues:

1. The area of this site is being returned to a semi-natural state which involves the removal of structures, the re-routing of access roads and paths, the planting of indigenous species and the removal of exotic species of brush and trees.
2. The site is located in an area of pedestrian and recreation traffic.

47DA1243 Management Recommendations:

47DA1243 is a Native American site with at least a Late Woodland Stage component located at the interface between Caretaker's Woods and Second Point Woods overlooking Lake Mendota to the east. The site has not produced particularly diagnostic materials, but a single Native American ceramic sherd suggests a time period of AD 700 – 1000. The presence of ceramics may also be indicative of subsurface archaeological features as these are common on later Native American sites. The potential for intact soils is high at this location and it seems prudent to make the following recommendations:

1. Additional Phase I testing should be conducted at closer intervals to determine more precise site boundaries and obtain a larger sample of artifacts.
2. 47DA1229 should undergo a Phase II-Determination of Eligibility for inclusion on the National Register of Historic Places.
3. 47DA1229 should be preserved in place and should be considered carefully before being chosen as a building site.
4. No earthmoving activities should be conducted on or near 47DA1229 without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings.

VIII. Muir Woods Parcel

Area Boundaries: The Muir Woods parcel is bounded on the north by Lake Mendota, on the south by Observatory Drive, on the west by the Social Sciences Building and on the east by Helen C. White Hall. The Muir Woods occupies approximately 7.9 acres of down-slope terrain overlooking Lake Mendota to the north.

Archaeological Testing Conducted: 1.) Non- systematic pedestrian survey

Testing Results: This parcel was subjected to an initial walkover by the Principal Investigator along with the Crew Supervisor and Mr. Daniel Einstein. This parcel consists of a small, flat upland area that descends rapidly to another narrow flat belt immediately adjacent to the Lake Mendota shoreline where the Howard Temin Lakeshore Path is currently located. The vast majority of the parcel is on a slope at a 60 – 75 percent grade indicating areas that would not typically yield archaeological materials. The top of the hill was tested in 2003 by personal from the Wisconsin Historical Society Office of the State Archaeologist (Rosebrough 2003). The bottom of the hill has not been tested for the presence of archaeological materials.

Recommendations: This parcel was not thoroughly examined during the 2004 survey as other parcels were thought to represent higher priority and more potential for the presence of archaeological materials. At the present time, this parcel should not be considered to have been tested. The following recommendations are made:

1. Additional archaeological testing should be conducted along the Howard Temin Lakeshore Path and perhaps along the northern margin of Observatory Drive.
2. Additional archive and literature search should be conducted to identify other potential culturally significant properties.

IX. Lot 34 Parcel

Area Boundaries: The Lot 34 parcel was defined as the area immediately north of the Lot 34 parking facility and south of the Lake Mendota Shoreline. The east and west boundaries of the parcel are coterminous with the northward extrapolated eastern and western edges of the parking lot. The total parcel area was approximately 1 acre (Figures 3.16).

Archaeological Testing Conducted: 1.) Shovel testing at 15 meter intervals

Testing Results: Two transects of shovel tests were excavated from east to west. A total of 15 shovel tests were excavated, none of which were positive. Several of the tests exhibited severely disturbed soil profiles, probably as a result of the construction of Lot 34. The horizontal surface of Lot 34 is an artificial leveling of a slope of undetermined grade. Furthermore, this parking lot was apparently placed within an area that has previously been identified as an archaeological site by Brown as early as 1912 and by Arthur Quan as late as 1943 (see the discussion of 47DA1207 in the Observatory Hill Parcel section of this report) (Brown 1912:9; 1914:385). Quan provided C.E. Brown a map of the area in 1943 and indicated that village site materials had been found at the base of Observatory Hill. The 2004 survey identified what may be portions of 47DA1207 near Tripp Hall. It is unclear if this material is related to the habitation debris reported by Quan and Brown.

Recommendations: Additional testing was recommended in relationship to 47DA1207 – Observatory Hill Village in the section of this report on the Lakeshore Residence Halls Parcel. The same applies to this parcel because the current definition of Observatory Hill Village does

not seem to conform to the historically reported size of the site. To rectify this situation, the following recommendations are made:

1. Additional Phase I testing should be conducted at closer intervals to determine the extent of Observatory Hill Village and the possibility of intact archaeological remains in the vicinity of the Lot 34 parking facility
2. Geomorphological testing is recommended to identify intact land surfaces that may have been buried by the construction of Lot 34.

X. Natatorium Parcel

Area Boundaries: The Natatorium Parcel was defined on the west by the channelized course of Willow Creek, on the south by Observatory Drive and the Natatorium, on the East by the Natatorium and the parking lot associated with the Natatorium, and the northern boundary of the parcel was defined by the east/west oriented walkway behind the Natatorium. The Natatorium Parcel is approximately 1.25 acres in area (Figure 3.16).

Archaeological Testing Conducted: 1.) Shovel testing at 15 meter intervals

Testing Results: The Natatorium Parcel is located at the confluence of Willow Creek and Lake Mendota, an area that has been drastically altered by the channelization of Willow Creek. The original confluence was much wider than it is today and was surrounded by marshy terrain. At some point in the past, this area was filled and the outlet of Willow Creek was confined to its current channel. The testing that was conducted seemed to verify these observations, but also provided a surprise when two positive shovel tests were excavated. These two shovel tests were immediately adjacent to Willow Creek in areas that are clearly fill. The shovel tests each yielded a single piece of lithic waste. These pieces are clearly out of context and were brought in with the soils used to fill the marshy area around Willow Creek. These materials do not reflect an intact archaeological site and are not reported as such.

Recommendations: The area in the immediate vicinity of the Natatorium has been severely disturbed by the construction of the Natatorium and the channelization of Willow Creek. Furthermore, an unknown quantity of fill from another location has been brought in used to fill the wetlands once associated with the confluence of the creek with Lake Mendota. The following recommendations are made;

1. No further archaeological testing is warranted in the area tested in 2004.

XI. Biocore Field

Area Boundaries: The Biocore fields are located within the E ½, NW ¼, NE ¼, of Section 16, Township 7 North, Range 9 East (Figure 3.16).

Archaeological Testing Conducted: 1. Pedestrian Survey

Testing Results: The Biocore fields were not systematically examined in 2004. A small area of the fields had recently been plowed and this area was examined by GLARC personnel and Daniel Einstein. In the course of that informal survey, a small site was identified on the basis of materials that were recovered from the surface. The site is designated 47DA1234.

47DA1234

Location: NE ¼, NE ¼, NW ¼, NE ¼, of Section 16, Township 7 North, Range 9 East.

Geographic Location and Relationship to Landscape: This site is located on an exposed hill top that is currently under till by the Biocore project at the University of Wisconsin – Madison. The site is approximately 1233 feet (376 meters) east of Lake Mendota Drive and 1553 feet (473 meters) north of University Bay Drive (measurements taken from a USGS 7.5' quadrangle). The hill top overlooks Frautschi Point to the north and Lake Mendota to the northeast.

Elevation: 888 feet above sea level

Vegetation and Land use: The land is currently under till by the Biocore project. Aerial photographs going back to the 1920s indicate that this area has been cleared and used for agricultural purposes for at least the last 80 years and perhaps longer.

Soils: Kidder Loam 12-20% slopes.

Site Description: This site is approximately 40 meters north/south by 20 meters east/west. It should be noted that this is the only area that had been freshly plowed and the site boundaries may extend beyond the currently stated boundaries. The site area was calculated at 0.08 hectares or 0.2 acres.

Site History: This site was previously unidentified.

Discussion: 47DA1234 was identified in June of 2004 during an informal pedestrian survey of the some recently plowed Biocore fields overlooking Lake Mendota to the east. The entire area was walked at close intervals (1 meter). A total of 11 artifacts were recovered including 10 lithic waste fragments (1 complete flake, 3 broken flakes, 4 flake fragments and 2 pieces of debris) made from heat treated Prairie du Chien chert and a single broken Galena chert Type 1 biface (Appendix A). The broken biface has a distal transverse fracture that separated the haft element from the proximal end. Based on the remaining portions of the notches, this biface was probably a Middle Archaic stage Raddatz or Matanzas point dating to between 6000 and 1500 BC.

No attempt was made at determining the condition of the deposits or the site boundaries as this area was not formally part of the 2004 survey. There is absolutely no question the site has been damaged by agricultural practices in the past and present. The extent of that damage is unknown at the present time.

47DA1234 Management Issues:

1. The cultural and temporal affiliations of the site were not determined in 2004.
2. The condition of the archaeological deposits was not determined in 2004.
3. The site was under cultivation at the time of the survey in late spring/early summer of 2004.
4. The site boundaries were not determined as the site was outside of the project survey boundaries.

47DA1234 Management Recommendations:

1. The area that is currently being used by Biocore and the Eagle Heights Community Gardens needs to be integrated into a Phase I archaeological reconnaissance project so that archaeological sites located within this area can be identified and submitted to initial evaluations.
2. The tentative identification of 47DA1234 as a site with a Middle Archaic component should be evaluated using a more rigorous testing strategy that would include both surface and subsurface testing.
3. The area should be allowed to lay fallow until the nature of the archaeological site can be determined. This may come into conflict with the current Land use, but perhaps a compromise could be negotiated with the Biocore project.

Results of the 2004 Phase II Determination of Eligibility Testing

47DA413 Eagle Heights Field

Site Description/History

The archaeological history of 47DA413 was presented in a previous section of this report as the first work conducted in 2004 at this location by Great Lakes Archaeological Research Center involved a shovel test sampling of the area to define site boundaries. The unpublished manuscripts regarding this site indicate that it was first reported by C.E. Brown and his son Theodore at the end of 1928 when apparently the field was opened for the first time by the university. Brown and Brown's description of the location of the site is not specific enough to relate it to more modern landscape features, but a symbol located on the east side of Lake Mendota drive on Charles E. Brown's Atlas indicates that its location was within what is now called Bill's Woods. The location is unusual in that the university did not own that parcel in 1928, but it is conceivable that the university rented space from the Stevens family. Eagle Heights Field was reported again in 1975 by Dan Wendt who had recovered a fluted lanceolate point (probably a Gainey Point), a unifacial scraper, a small broken stemmed point and 12 waste flakes. The presence of a fluted point at the site indicates an Early Paleo-Indian stage occupation at the site that represents not only the earliest evidence for humans on the University

of Wisconsin – Madison campus, but also in the Four Lakes area. Sites of this age are considered significant because of their rarity and the potential to yield information about the earliest inhabitants of the state. As a result, a course of investigations were initiated in 2004 to determine the extent, nature and condition of the archaeological deposits at 47DA413 – Eagle Heights Field.

Methodology for Phase II Testing

The boundaries of 47DA413 – Eagle Heights Field were determined utilizing a shovel test sampling design that was executed in 10 meter intervals. The results of that testing were presented earlier in this report and will not be repeated here. Unfortunately, the shovel testing was not successful in identifying clusters or concentrations of archaeological debris and a series of intuitively placed test units was used to evaluate various portions of the site. A total of 14 one meter by one meter tests were used to investigate wooded areas along the southern, western, and eastern margins of the site as well as open areas on either side of a north/south dividing strip of woods. The focus of the testing was in the western field where Wendt reported finding the fluted point.

A datum was established east of Lake Mendota Drive and north of the Howard Temin Lakeshore Path (Figure 3.38). This location was chosen for the unobstructed line-of-sight along the Howard Temin Lakeshore Path as well as into the center of 47DA413. A second datum was established in the southwestern corner of the field, a third datum in the southeastern corner of the field, a fourth datum east of datum one along the Howard Temin Lakeshore Path and a fifth datum in the center of the open easternmost field. All test unit locations were derived from one of these datums (see Figure 3.38). A complete catalog of the recovered materials is presented in Appendix B.

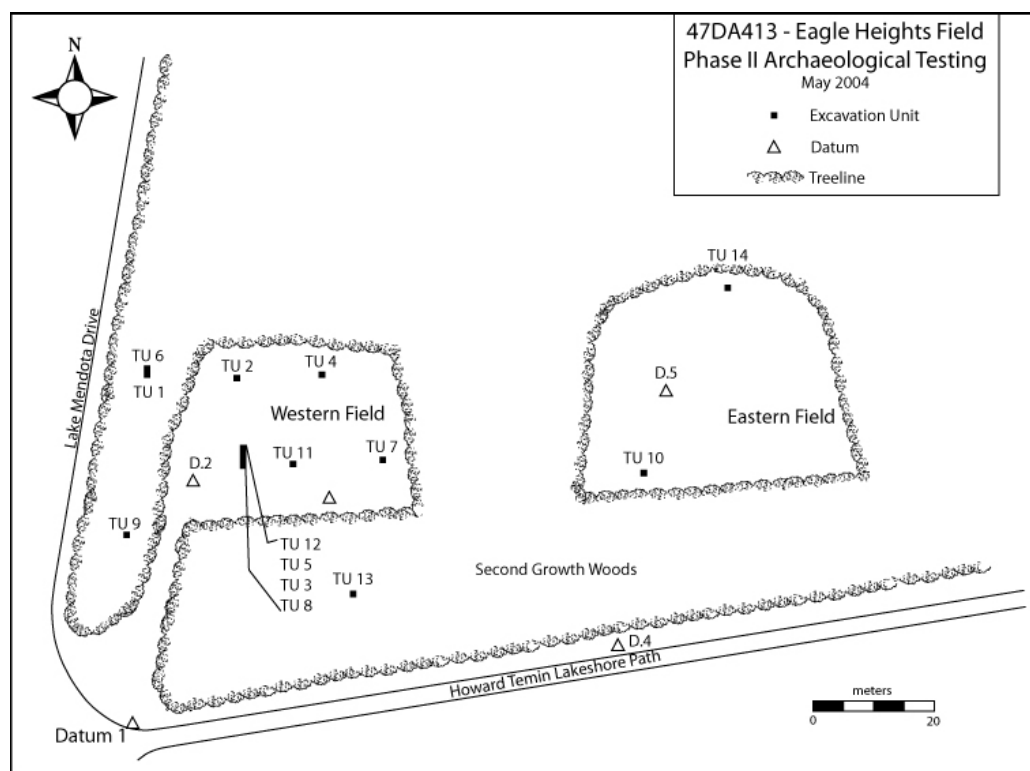


Figure 3.38. Site plan 47DA413-Eagle Heights Field.

Test Unit 1

Test Unit 1 was located in the northern portion of the wooded western margin of the site just north of where Dan Wendt reported recovering the fluted point. A total of four ten centimeter levels were excavated. Level 1 was sterile, level 2 produced Native American materials, level 3 produced both Euro-American and Native American materials and level 4 was sterile. The soil profile for Test Unit 1 consisted of an 10 centimeter 10YR 3/1 very dark grey silt loam "A" horizon overlying a 25 centimeter 10YR3/2 very dark grey brown clay loam "A"/"B" interface. The "B" horizon was a 10YR4/6 dark yellow brown clay that appeared at between 25 and 30 centimeters below the current ground surface (Figure 3.39). The abrupt nature of the A/B interface indicates that this area was plowed sometime in the distant past although the development of the upper portions of the "A" horizon and the presence of more mature trees in the vicinity of the unit indicates that it has been at least 30 to 40 years since this location was under till.

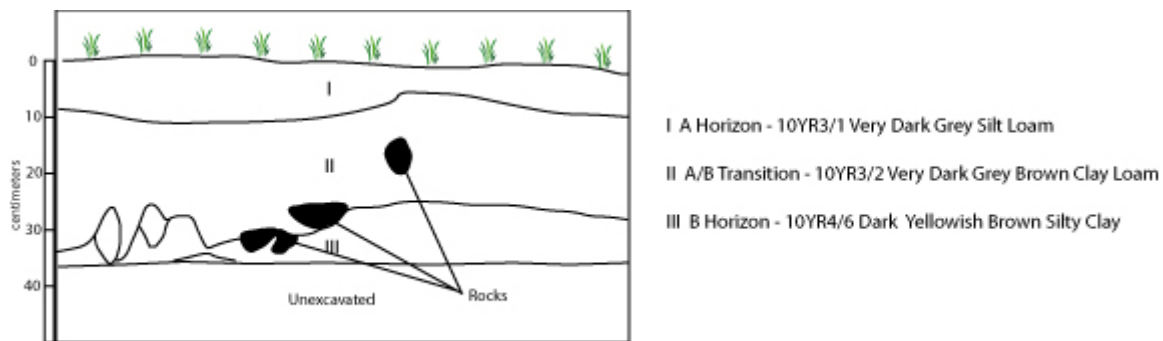


Figure 3.39: 47DA413 TU 1 North Wall Profile

Test Unit 2

Test Unit 2 was placed due east of Test Unit 1 in the open portion of the field. A total of 3 ten centimeter levels were excavated. Levels 1 and 3 were sterile, level 2 produced a single piece of brown bottle glass. The soil profile from the unit indicates a 25 centimeter "Ap" overlying a truncated "B" horizon (Figure 3.40). This unit is obviously in a heavily disturbed area.

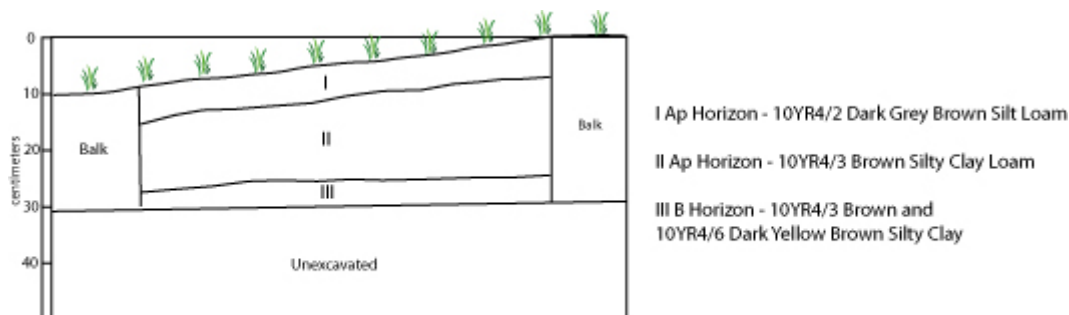


Figure 3.40: 47DA413 TU 2 West Wall Profile

Test Unit 3

Test Unit 3 was one meter by one meter in size and located to the south of Test Unit 2 in the southeastern portion of the open field. A total of four 10 centimeter levels were excavated. Level 1 was sterile, level 2 produced Native American debris, level 3 produced Euro-American and Native American materials and level 4 produced Native American artifacts. No features were identified during excavation and the eastern wall profile revealed a 25 centimeter “Ap” overlying a truncated “B” soil horizon (Figure 3.41). This unit is obviously located in a heavily plowed/disturbed area.

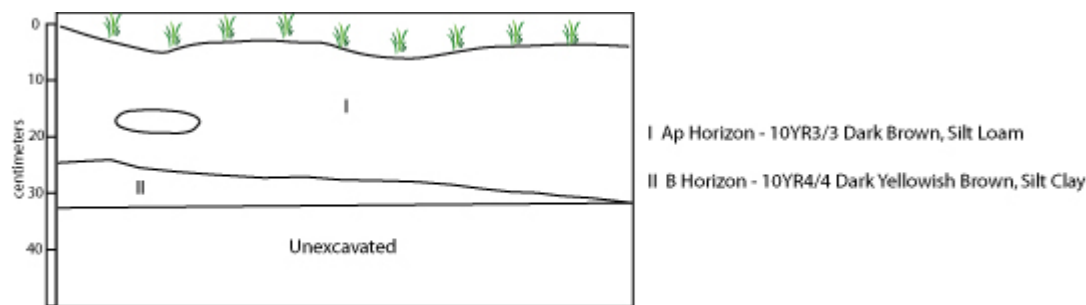


Figure 3.41: 47DA413 TU 3 East Wall Profile

Test Unit 4

Test Unit 4 was a one meter by one meter excavation placed in the northeastern corner of the open field area due east of Test Unit 2. Levels 1 through 3 were 10 centimeter arbitrary levels located within a well defined “Ap” horizon. Level 4 was primarily located within the truncated “B” horizon. The “Ap” horizon was a 10YR3/2 very dark grayish brown silty loam overlying the 10YR 4/6 dark yellowish brown sandy clay loam (Figure 3.42). Levels 1, 2 and 4 were sterile while level 3 produced metal wire and lithic waste flakes. No features were identified in either the profile or the planview. The mixture of Euro-American and Native American debris as well as the presence of a distinct plow zone indicates this unit was located in a heavily disturbed area.

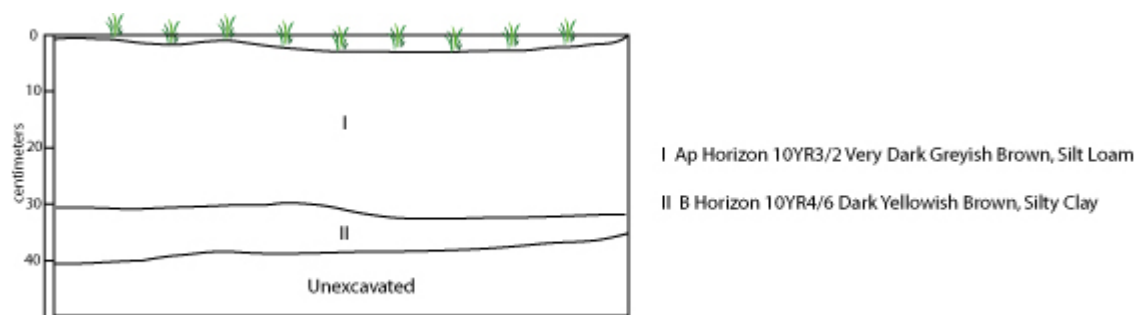


Figure 3.42: 47DA413 TU 4 North Wall Profile

Test Unit 5

Test Unit 5 was a one meter by one meter northern extension of Test Unit 3. A total of three arbitrary 10 centimeter levels were excavated. Level 1 was sterile; level 2 contained lithic debris, Native American ceramics and a piece of coal. Level 3 contained lithic waste and a piece of slag. Levels 1 and 2 and the top five centimeters of level 3 were located within a 10YR3/2 very dark grayish brown silt loam with granular structure. Beneath an abrupt transition, the truncated “B” horizon was a 10YR4/6 dark yellowish brown sandy clay loam with sub-angular

blocky structure (Figure 3.43). No features were observed in either the planview or the profile. The mixture of Native American and Euro-American artifacts in levels 2 and 3 as well as the abrupt transition between the “Ap” and the “B” soil horizons indicate a heavily disturbed area and deposits.

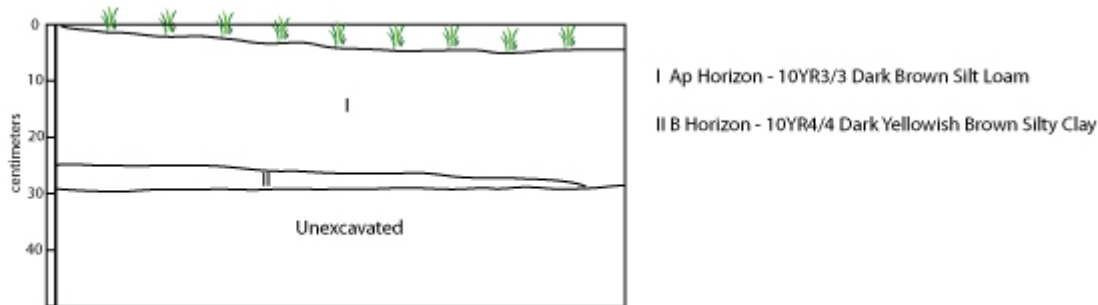


Figure 3.43: 47DA413 TU 5 East Wall Profile

Test Unit 6

Test Unit 6 was a one meter by one meter northern extension of Test Unit 1. Four arbitrary 10 centimeter levels were excavated of which levels 1, 2, and 4 were sterile. Level 3 produced five lithic waste flakes. No diagnostic artifacts were recovered and no features were identified within either the profiles or planviews for the unit. Levels 1 and 2 were located within a well defined 10YR 3/1 very dark grayish brown silt loam “Ap” horizon with a loose granular structure. The underlying “B” horizon was a 10YR4/4 dark yellowish brown sandy clay loam with sub-angular blocky structure (Figure 3.44).

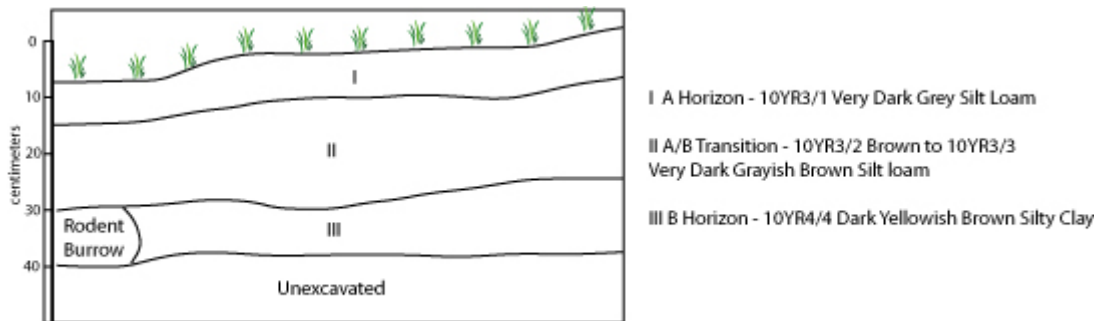


Figure 3.44: 47DA413 TU 6 West Wall Profile

Test Unit 7

Test Unit 7 was a one meter by one meter unit placed in the western half of the easternmost open field. Four arbitrary 10 centimeter levels were excavated of which only levels 2 and 3 produced waste flakes. The “Ap” horizon was 25 centimeters thick and was 10YR3/2 very dark grayish brown in color with a loose granular structure. The underlying “B” horizon was truncated and was a dark yellowish brown (10YR4/6) sandy clay loam with sub-angular blocky structure. No features were noted in the profiles or planviews of this unit (Figure 3.45).

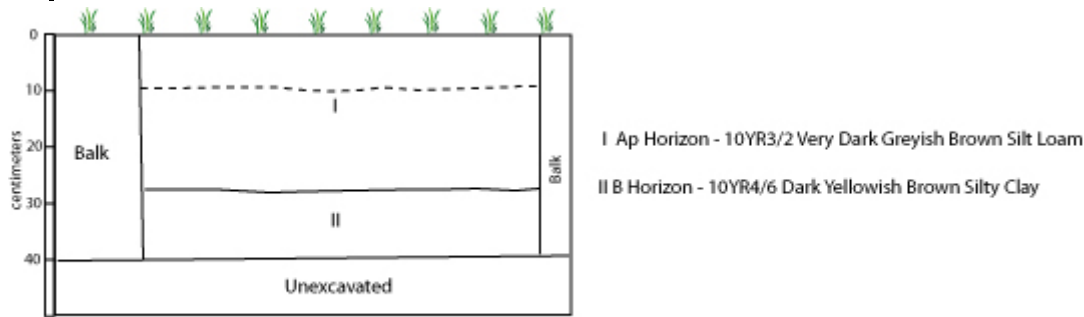


Figure 3.45: 47DA413 TU 7 North Wall Profile

Test Unit 8

Test Unit 8 was placed immediately to the south of Test Unit 3 to create a continuous three meter trench that included Test Unit 3 and 5. Three arbitrary 10 centimeter levels were excavated and levels 2 and 3 both produced lithic waste flakes. No subsurface features were noted in either the profiles or the planviews and no diagnostic materials were recovered. Levels 1 through 3 were all within the “Ap” horizon, a very dark grayish brown (10YR3/2) silt loam with granular structure. The “B” horizon was revealed at the very bottom of level 3 and was a 10YR4/4 dark yellowish brown sandy clay loam with sub-angular blocky structure (Figure 3.46).

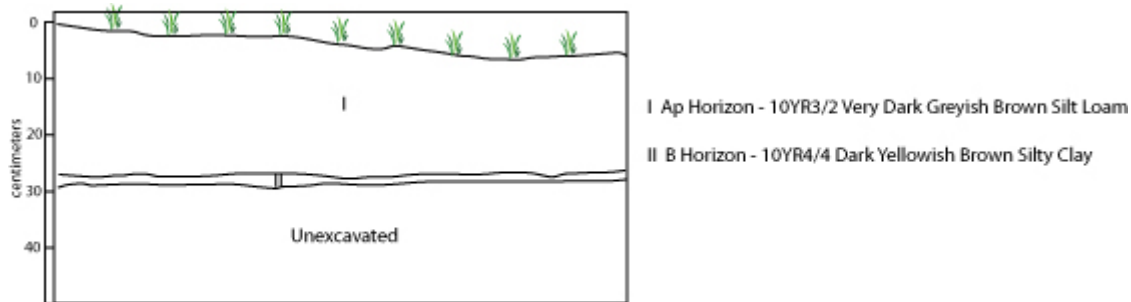


Figure 3.46: 47DA413 TU 8 East Wall Profile

Test Unit 9

Test Unit 9 was a one meter by one meter test excavation placed in the southwestern portion of Bill’s Woods within a wooded area to assess the extent, nature and condition of archaeological deposits. Four arbitrary 10 centimeter levels were excavated of which only level 4 was found to be sterile. Levels 1 through 3 each produced lithic waste flakes (a total of five). No features were identified and no diagnostic materials were recovered. The “Ap” horizon at this location was 33 centimeters thick and was a very dark grayish brown (10YR3/2) silt loam with granular structure. The “B” horizon was a dark yellowish brown sandy clay loam with sub-angular blocky structure. Although no post-European contact debris were recovered, it is clear from the north wall profile of the unit that this area was plowed in the past (Figure 3.47).

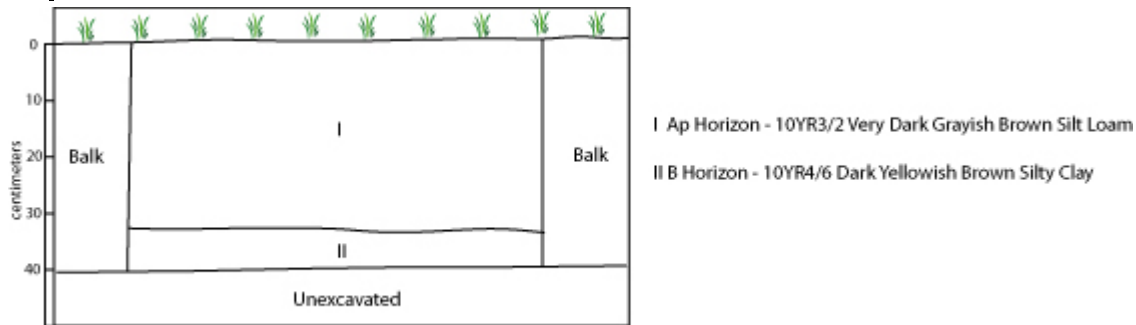


Figure 3.47: 47DA413 TU 9 North Wall Profile

Test Unit 10

Test Unit 10 was placed in the easternmost open field in Bill's Woods to assess the deposits identified there in the shovel testing. This unit was excavated in three 10 centimeter levels, all of which produced Euro-American debris although level 2 did include one possible utilized flake tool. The profile indicates a highly disturbed area with a 10 centimeter "Ap" horizon overlying a very disturbed fill episode that truncated the natural "B" horizon. The "Ap" horizon was a 10YR3/1 dark gray sandy loam with granular structure. The fill zone was a 10YR6/4 light yellowish brown sand mottled with 10YR4/4 dark yellowish brown sand loam. The northern edge of the profile revealed a natural "B" horizon that was 10YR4/3 brown sandy clay loam with sub-angular blocky structure. It is clear that this unit was placed within an area that has been severely disturbed in the past (Figure 3.48).

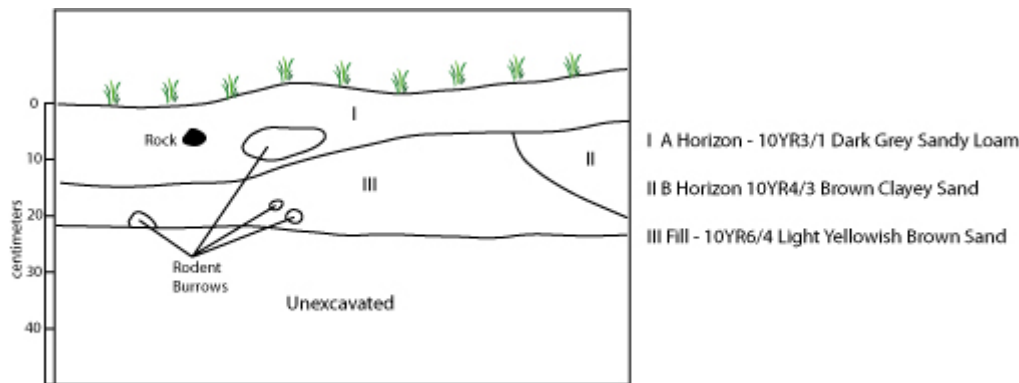
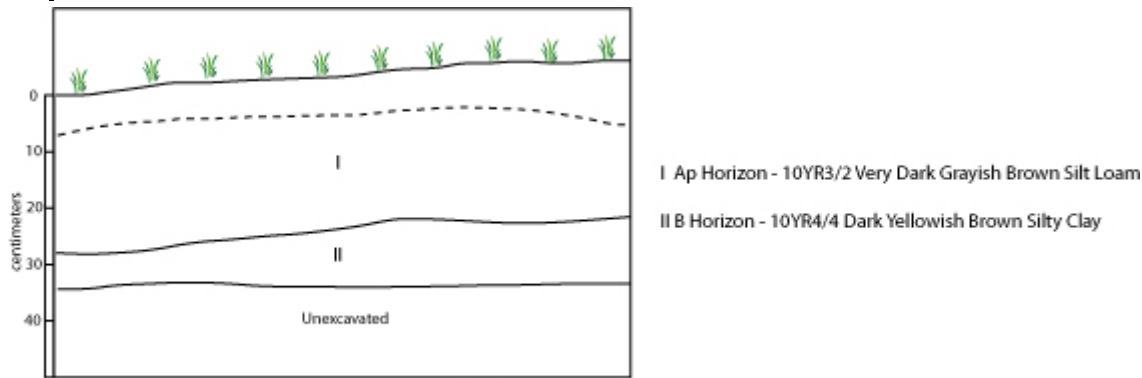


Figure 3.48: 47DA413 TU 10 West Wall Profile

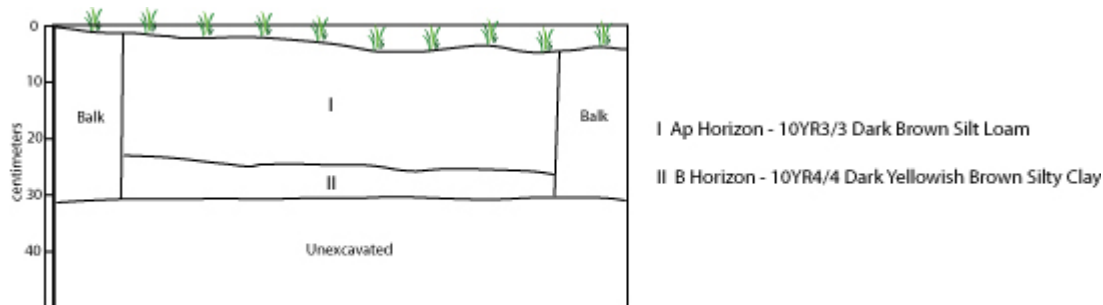
Test Unit 11

Test Unit 11 was a one meter by one meter excavation placed in the south central part of 47DA413 – Eagle Heights Field. A total of four arbitrary 10 centimeter level units were excavated of which levels 2 through 4 produced artifacts. Level 2 contained Euro-American and Native American debris, (flat glass, slag, lithic waste flake, Native American ceramics, unburnt bird bone) while levels 3 and 4 both contained lithic waste flakes. No features were observed in the profiles or planviews and no diagnostic materials were recovered. The "Ap" horizon was approximately 27 centimeters thick and was a dark brown silt loam with granular structure. The "B" horizon was a dark yellowish brown (10YR4/4) sandy clay loam with sub-angular blocky structure (Figure 3.49).



Test Unit 12

Test Unit 12 was the last unit added to the trench that included Test Units 3, 5 and 8. Test Unit 12 was a one meter by one meter northern extension of Test Unit 5. Native American artifacts were recovered in all three levels (including a spokeshave in level 2) to the exclusion of post-European contact debris. Levels 1 through 3 were arbitrary 10 centimeter levels with levels 1 and 2 being entirely within the “Ap” horizon and approximately two-thirds of level 3 being within the “B” horizon. No features were identified in the planviews or profiles for this unit. Based on the sharp transition between the “Ap” and the “B” horizon, it is clear that this unit is in an area that was heavily plowed and is therefore relatively disturbed (Figure 3.50).



Test Unit 13

Test Unit 13 was a one meter by one meter excavation placed in the southern wooded margin of 47DA413 – Eagle Heights Field to ascertain the degree of disturbance in an area that had a relatively developed deciduous canopy. Three arbitrary 10 centimeter levels were excavated of which levels 1 and 2 produced Native American artifacts. Level 3 was sterile. Level one produced a single Native American ceramic sherd and level 2 produced three lithic waste flakes. The “Ap” horizon in Test Unit 13 was approximately 20 centimeters thick and had a 10YR3/2 dark grey brown silt loam upper component and a 10YR4/3 brown silt loam lower component. The underlying “B” horizon was a truncated sandy clay loam and was dark yellow brown in color (10YR4/6). No features were identified in the profiles or planviews for the unit, no diagnostic materials were recovered, and no artifacts were recovered beneath the plow zone (Figure 3.51).

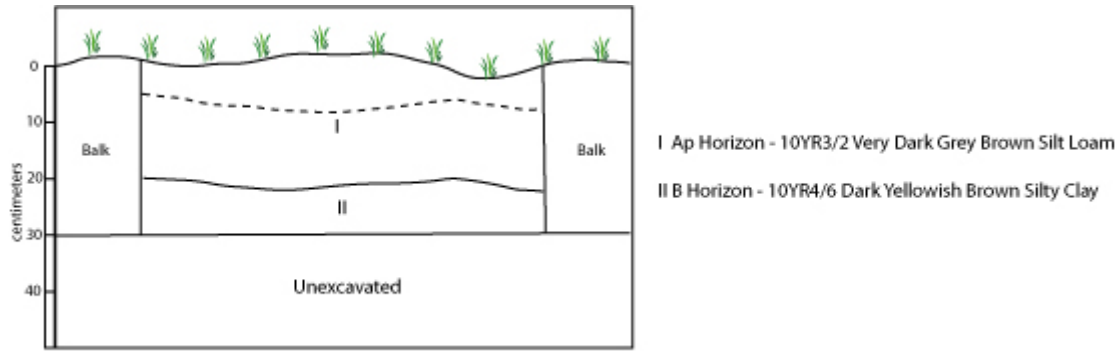


Figure 3.51: 47DA413 TU 13 North Wall Profile

Test Unit 14

Test Unit 14 was the last unit excavated at 47DA413 – Eagle Heights Field. It was located in the easternmost open agricultural field forming the easternmost portion of the site. Four 10-centimeter arbitrary levels were excavated; all of which produced post-European contact debris. Level 1 produced slag and asphalt; level 3 produced slag and broken window glass; and level 4 produced slag, window glass and brown bottle glass. No Native American material was recovered. The profile from Test Unit 14 indicates a fill episode overlying a 17 centimeter thick “Ap” horizon that is a dark brown silt loam (10YR3/3). The “B” horizon appears at 35 centimeters below ground surface and consists of a 10YR4/4 dark yellowish brown sandy clay loam. No archaeological features were noted in the profiles or planviews and the nature of the truncated “B” horizon indicates that this area has been under cultivation in the past (Figure 3.52).

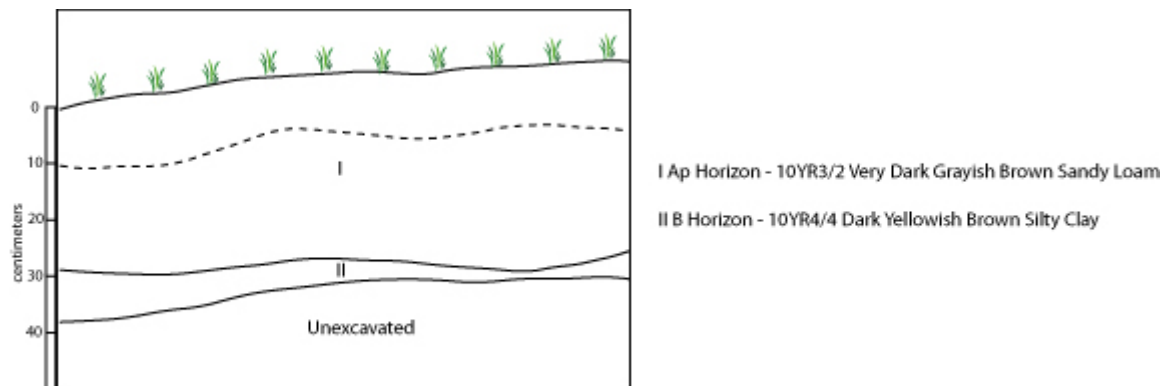


Figure 3.52: 47DA413 TU 14 West Wall Profile

Artifact Analysis

Lithics

Raw Materials

The lithic materials recovered from 47DA413 – Eagle Heights Field were made from essentially four different raw materials. (All lithic raw material descriptions are taken from Morrow (1994)). Prairie du Chien cherts (PDC) are derived from the Ordovician age dolomites of the Prairie du Chien Group that outcrop across southern Wisconsin, the Mississippi Valley

trench and the Fox River/Lake Winnebago/Green Bay waterways. The chert occurs in nodules and nodular beds that can be up to 30 centimeters thick. PDC cherts are typically oolitic and variable in color ranging from light to dark gray with diffuse streaking and irregular mottling of white, light gray and grayish tan. Oneota chert (from the lower part of the formation) has a swirled or marbled appearance that may be partially or completely oolitic. Chert from the Shakopee Formation is commonly completely oolitic.

Galena chert is also commonly found on-site and comes from the Ordovician Galena and Platteville Groups which outcrop in southwestern Wisconsin, northwest Illinois and northeast Iowa. The chert comes in nodules and nodular beds that can be up to 15 centimeters thick. In terms of color, Galena chert is typically light gray to pale grayish brown, is often mottled and sometimes faintly banded. Very small fossil bits are distributed throughout the chert along with fossil worm borings that appear as dark lines, dark spots or dark circles with lighter cores.

Moline Chert is also present at 47DA413 – Eagle Heights Field as an exotic raw material. Moline chert comes from the Pennsylvanian age Spoon River Formation and is abundant along the lower Rock River in Henry and Rock Island Counties in western Illinois. It typically occurs in beds ranging from 5 to 30 centimeters thick. The chert has a distinctive light gray to blue-black appearance with streaks and an abundance of tiny black specks of carbonized plant material.

Blanding Chert is a Silurian age chert with an origin in the Blanding Formation of the Llandovery Series which outcrops in parts of Clayton, Delaware and Dubuque counties in northeast Iowa. The chert is typically white to very light gray and pale yellowish in color. Typically it is faintly streaked and it contains small crinoid columnal fossils. Heat treated pieces are pink to pinkish gray in color with fine grain pieces attaining a satiny luster, but chalky pieces remaining dull.

Waste Flakes

Waste flakes are the byproducts of stone tool manufacture and typically constitute one of the more frequently found artifact classes on any archaeological site. At the Eagle Heights Field site, a total of 73 lithic waste flakes were recovered from the fourteen test units described in the previous section. Galena chert was the most commonly used raw material found in the 2004 sample and constituted 59 percent of the overall raw materials recovered on-site (n=43). The second most commonly found raw material was PDC chert representing 36 percent of the sample (n=26). Single pieces of Moline chert and milky quartz were recovered representing one percent each of the overall raw materials recovered. Two waste flakes struck from an unidentified raw material were also recovered. All materials utilized appear to have been heat treated.

In terms of flake morphology, waste flakes from each raw material category were tabulated separately. Waste flakes struck from Galena chert included three complete flakes, 14 broken flakes, 23 flake fragments and three pieces of debris (shatter). PDC waste flakes had a similar distribution with two complete flakes, five broken flakes, 10 flake fragments and nine pieces of debris (shatter). The Moline chert fragment was a broken flake and the milky quartz piece was debris (shatter). The two unidentified chert type pieces consisted of a broken flake and a flake fragment. Overall, it appears that *debitage* on-site was limited to tool production activities such as maintenance and biface production. No cores of any type were recovered which suggests that either there is sampling error (either through placement/number of our test units or previous collector activity) or lithic reduction was limited in its nature and/or scope.

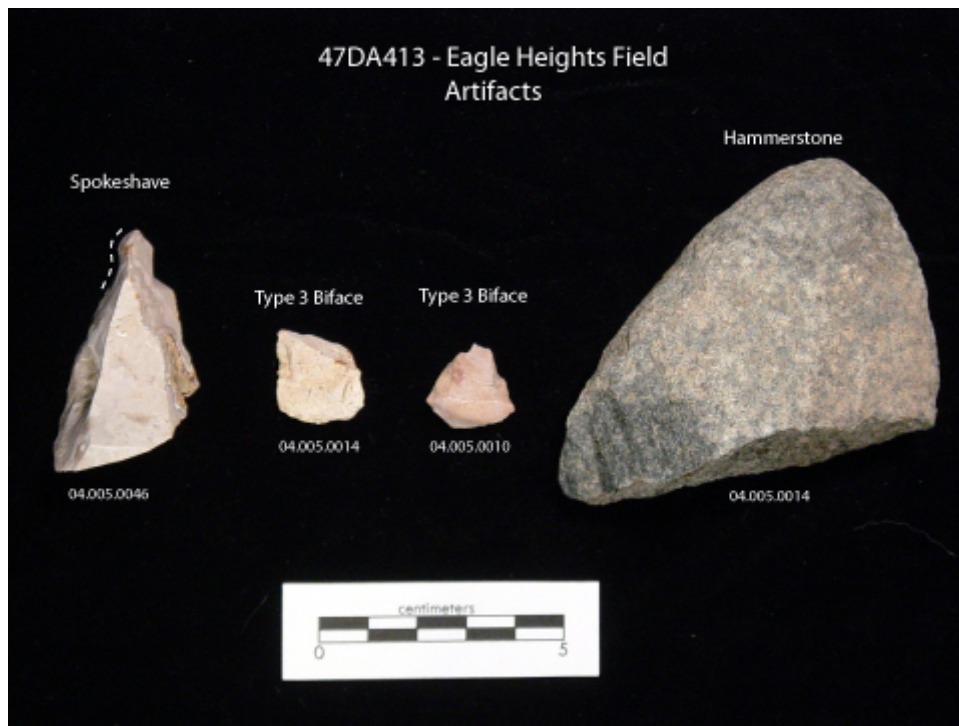


Figure 3.53: Eagle Heights Field Artifacts.

Tools

Four tools were recovered at 47DA413 – Eagle Heights Field including a basalt hammerstone, two Type 3 biface fragments and a utilized flake that may have been used as a spokeshave (Figure 3.53).

Hammerstone

The hammerstone appears to be broken and its current state is triangular in shape. One of the ends exhibits pitting and impact fractures. A fresh flake removal is present on one of the other corners of the hammerstone and this fracture could very well be the result of impact with a plow blade. The hammerstone weighs 227.97 grams, has a maximum length of 84.5 millimeters and a maximum thickness of 32.9 millimeters. There is also the possibility that this piece is a fragment of an unfinished groundstone tool such as an axe or celt as there appears to be pitting across the surface of the item. It does not, however, conform to any of the common forms that groundstone celts and axes take.

Type 3 Bifaces

Two Type 3 bifaces were recovered and both represent portions of finished projectile points. One of these Type 3 bifaces was a heat treated Galena chert projectile point tip that was recovered from Test Unit 1 in level 2. This point tip is 17.8 millimeters long with a maximum thickness of 7.3 millimeters. It was clearly broken in use as the fragment exhibits a longitudinal macrofracture (Dockall 1997) that separated the tip from the body of the projectile.

The second Type 3 biface is the distal end of a projectile point made of Blanding Chert. This projectile point base was recovered from Test Unit 5, level 2. The fracture that separated the base of the point from the body is a bending or longitudinal macrofracture (Dockall 1997; Titmus and Woods 1986). The fragment is 18.7 millimeters long, 17.9 millimeters wide and 7.1

millimeters thick with a total weight of 2.2 grams. This point base is fractured in such a way that it is impossible to determine a type for the point. It may fall either into the Kramer Stemmed or Durst Stemmed categories.

The final tool recognized from the lithic assemblage was a utilized piece of debris that may have been used as a spokeshave. The utilized piece is made from heat treated Galena chert and does not exhibit a defined dorsal or ventral surface. There are two areas (one 11 millimeter long, the other 9.5 millimeter) along one of the edges of the piece that exhibit evidence of having had contact with a hard substance. Although it seems likely that this piece was used to shape cylindrical objects, it is possible the scarring observed could be the result of trampling by animals or people or the result of being struck by farm machinery during plowing. Additional use-wear analysis could further define the nature of the utilization of this piece.

Native American Ceramics

The presence of Native American ceramics on 47DA413 – Eagle Heights Field was a surprise as this artifact class had not been mentioned previously by either Brown and Brown or Wendt. The sample was small, consisting of five small body sherds. All of the sherds were grit tempered and exhibited a relatively sandy paste. Two sherds were cordmarked, one sherd had a smooth surface and two sherds were exfoliated. All sherds were weathered and did not appear to be well-fired resulting in a minimum of surface detail. They ranged in thickness from 4.0 to 5.3 millimeters in thickness. Although no diagnostic rim sherds were recovered in the 2004 sample, it seems likely that all of these sherds were produced by Late Woodland Stage Horicon Phase people indicating that 47DA413 contains a Late Woodland component dating to sometime between AD 700 and 1000.

Post-European Contact Materials

Forty-seven post-European contact artifacts were recovered in the 2004 sample. All artifacts could be consistently dated to a post-1850 time frame and although some building materials were recovered (window glass), the majority of artifacts could be associated with either road building/maintenance activities or be considered general refuse.

Metal

A total of 4 pieces of wire were recovered from Test Unit 3, level 3. These pieces were non-descript and could date to any time after 1850.

Post-European Contact Debris

A variety of pieces were collected that fall under the general rubric of “Post-European Contact Debris.” Pieces included 15 pieces of slag, one piece of coal, seven pieces of asphalt, one piece of ceramic tile and three pieces of Styrofoam. The slag, coal and asphalt are likely to be related to road building and maintenance in the area, although slag and coal can be related to the use of coal fired furnaces and therefore be related to residential household refuse. The ceramic tile and Styrofoam appear to be more modern in origin and may be related to the construction of Eagle Heights housing and the activities of the residents.

Glass

Ten pieces of glass were recovered from the site. Seven shards were from clear window panes and three were brown bottle glass shards. The window pane glass is unusual, but given the numbers of people who utilize Bill's Woods and the predilections of many college-aged students, the brown bottle glass is not entirely out of place. The window glass is likely to have come from a domestic structure somewhere nearby. Given that Bill's Woods was once a part of the Stevens/Young farm and that the Raymer Farm and the Breitenbach farms were in close proximity, it seems likely that any of these farms were the origin of the glass as it was not uncommon for farmers to dispose of trash in agricultural fields on occasion.

Summary/Conclusions

Eagle Heights Field (47DA413) was first reported by Charles E. Brown and his son Theodore late in 1928 after which time the site was apparently promptly forgotten until 1975 when Dan Wendt retrieved a small surface collection that included a fluted Gainey point. At that point, Wendt reported the site and it was added to the Archaeological Site Inventory. Neither Brown and Brown nor Wendt included a detailed map of the site that indicated the extent of the site boundaries. Since that time, the field where the site is located has been allowed to lie fallow and is now in the process of returning to a more natural state. In 2004, personnel from GLARC began to investigate the nature of Eagle Heights Field by conducting systematic shovel testing at 10 meter intervals through the Bill's Woods area. The shovel testing provided a disappointingly small sample of artifacts that did not appear to be particularly clustered. Due to the fact that the site had produced a fluted point, additional testing was conducted at the site to determine the extent and condition of the archaeological materials as a prelude to determining the eligibility of the site for inclusion on the National Register of Historic Places.

A total of 14 one meter by one meter test units were distributed randomly across the site area testing both the wooded and non-wooded portions of the site. All tests indicated that the site has been extensively plowed, mixing any artifacts that had been present in the original "A" and top of the "B" soil horizons. Even areas that were now currently wooded exhibited mixing of the "A" and "B" horizons. No artifacts were recovered below the plow zone and no subsurface features were encountered. The artifacts recovered from the site indicate that it has a Early Paleo-Indian component (represented by the Gainey Point), a Late Archaic Durst phase or Early Woodland Lake Farms phase (represented by the stemmed point base fragment), and a Late Woodland Horicon Phase Component. Other components may be present, but the 2004 testing did not reveal their presence.

Sites with Early Paleo-Indian components are rare in Wisconsin and in general constitute an important and potentially significant cultural resource that may have the potential to contribute information to the history of the region even if they have been cultivated and there is mixing of the deposits. The presence of ceramics from a Late Woodland stage component may also signify the presence of intact subsurface features as Late Woodland peoples living in Wisconsin are known to have produced subsurface storage and refuse pits that can exceed the depth that a plow blade can reach. Should there be any intact subsurface deposits at 47DA413 – Eagle Heights Field, then the site might also be considered significant.

Eagle Heights Field – 47DA413 Management Issues:

Eagle Heights Field has a modern land-use history that goes back at least until the late 1920s and is only now just being returned to a natural state. However, a number of management issues are associated with this site.

1. The site may be under pressure for development given its location and current Land use.
2. The site will likely be managed by the Lakeshore Nature Preserve and returned to a natural state through the use of plantings and plant management.

Eagle Heights Field – 47DA413 Management Recommendations:

Eagle Heights Field (47DA413) is eligible because of the presence of Paleo-Indian material from the site. The possibility exists for intact subsurface features from the Late Woodland period as well. It is therefore recommended:

1. 47DA1229 should be preserved in place and should not be considered as a building site.
2. No earthmoving activities should be conducted on or near 47DA1229 without additional testing and monitoring by a professional archaeologist. This includes tree and brush removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved pedestrian/bicycle paths or the construction of buildings.
3. A formal nomination form should be submitted.

47DA124

Site Location: NE, SW, SW - Section 15, Township 7 North, Range 9 East
NW, SE, SW - Section 15, Township 7 North, Range 9 East
SW, SW, NE, SW - Section 15, Township 7 North, Range 9 East
SE, SE, NW, SW - Section 15, Township 7 North, Range 9 East
(Figure 3.54)

Site Description/History: The first published record of 47DA124 appears in 1909 as a brief mention attached to a description of 47DA119 – Willow Drive Mounds. Brown wrote: “Group of three effigy mounds in wooded pasture and on the Pleasure Drive, east of the creek on the Wisconsin University grounds. *Camp and workshop site in the adjoining cultivated field* (emphasis mine)” (Brown 1909:120). Brown visited the site again on December 31, 1928 with his son Theodore and reported:

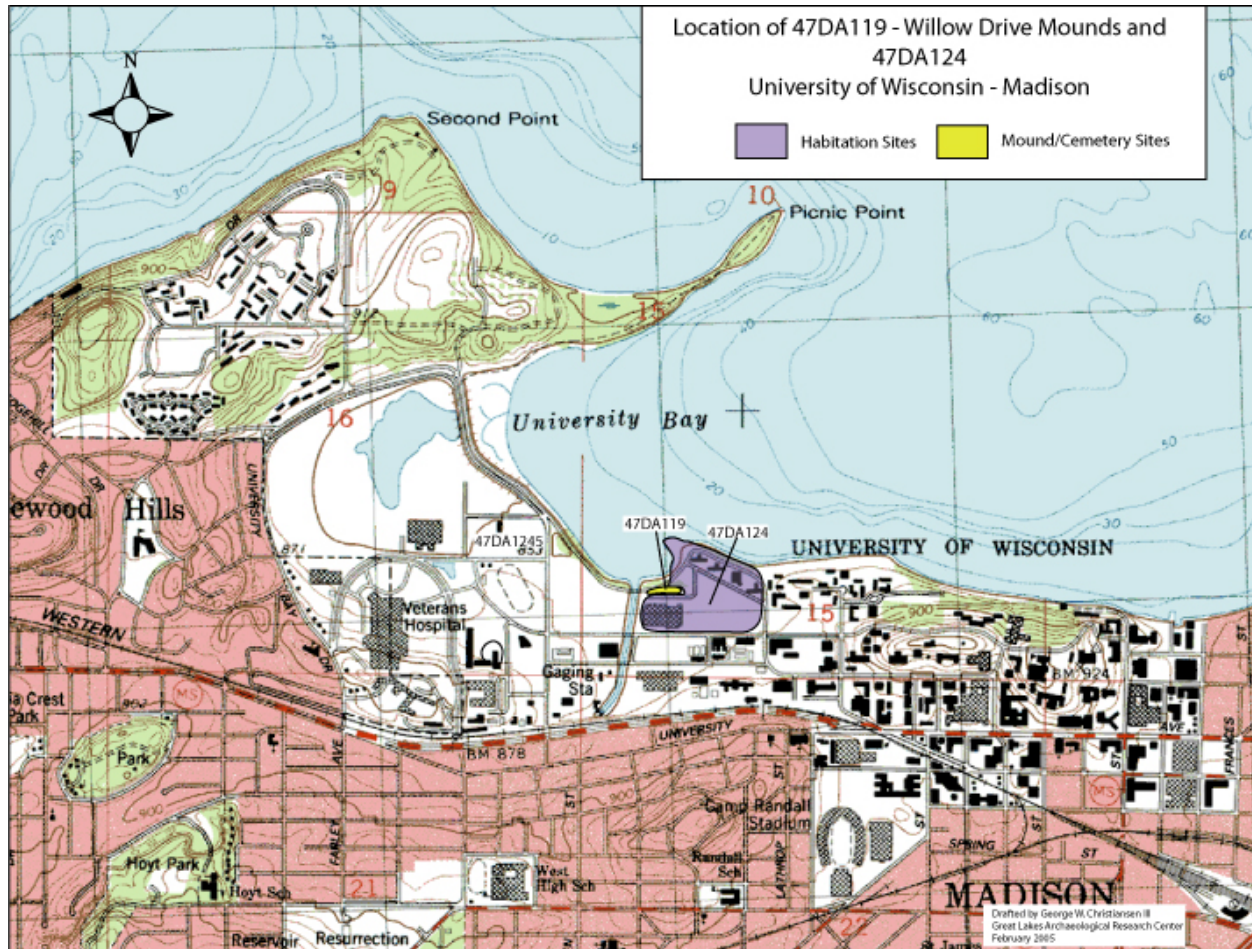


Figure 3.54: Location of site 47DA119-Willow Drive Mounds and 47DA124.

A wigwam site is indicated in the former University grove on the Lake Mendota shore near the University creek mound group. This grove has this year been in use as a hog-yard these animals disturbing the forest sod and exposing the hearthstones.

The grove is surrounded by a high wire fence and we were unable to gain admittance and examine the ground minutely. This site is about 75 feet back from the lake shore.

(Brown and Brown 1928a)

Brown's descriptions do not include any specific detail on the size of the site, its exact location nor the types of materials that were observed (with the exception of hearthstones).

In 1935 and 1937 the three prominent mounds of the adjacent mound group 47DA119 – Willow Drive Mounds were excavated producing a variety of artifacts from the mound fill as well as materials associated with the human burials entombed in the mounds (Figure 3.55). The artifacts from the mound fill may have bearing on 47DA124 as the fill for these mounds was likely to have been taken from the immediate vicinity thereby transferring the artifacts contained within soil to the mound locations. Baerreis reported Brown's finds in a 1966 *The Wisconsin Archeologist* article (Baerreis 1966). In that article he reported that Brown had recovered a

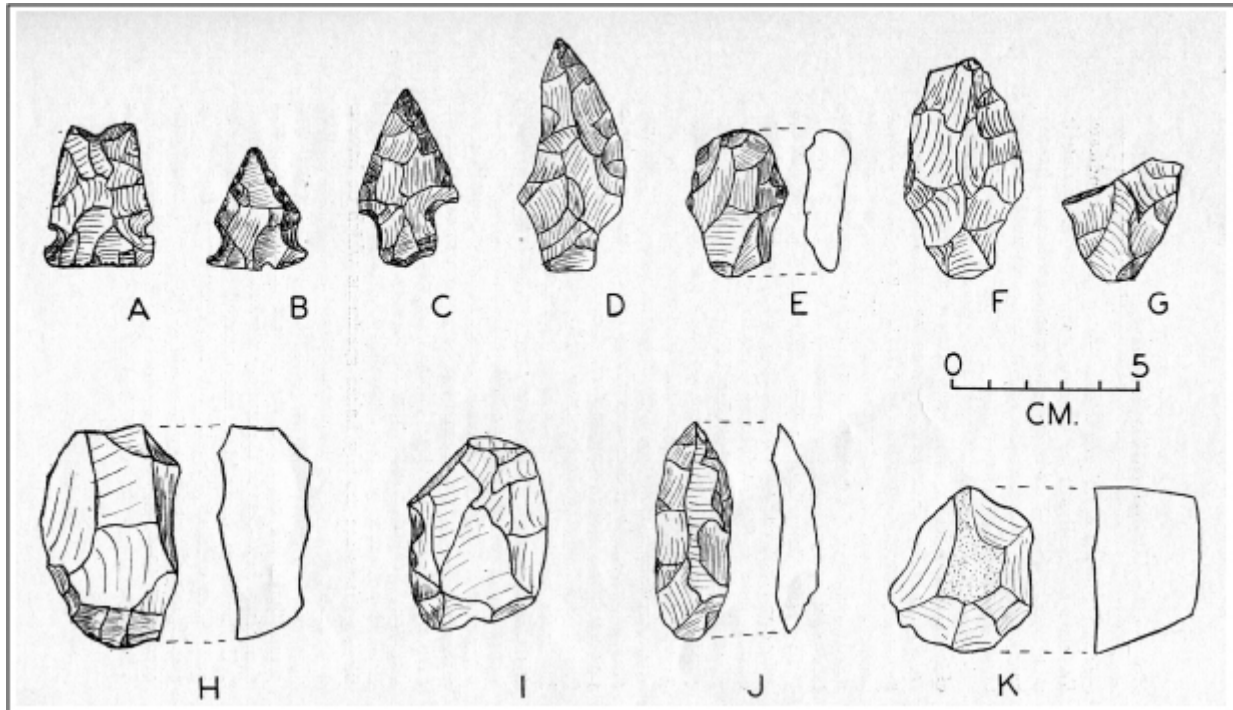


Figure 3.55: Artifacts from Brown's excavations at 47DA119 - Willow Drive Mounds.

Madison Side-Notched point (Middle Archaic affiliation 6000 – 1500 BC), a Monona Stemmed (probably a Preston Notched point, Late Archaic Preston Phase affiliation 1500 BC – 1000 BC), five Waubesa Contracting Stem points (Late Archaic – Early Woodland Lake Farms Phase affiliation 250 BC – AD 100), and a probable Madison Cord Impressed ceramic rim sherd (Late Woodland Horicon Phase affiliation AD 700 – 1000). It should be noted that mound fill can come from any number of places and not necessarily the immediate vicinity of the mounds. As such, the material recovered by Brown may or may not relate to 47DA124.

Additional information pertaining directly to 47DA124 would become available nearly 70 years after Brown's 1928 report when the area between the Natatorium complex and the Lake Mendota shoreline was considered as a potential building site for a new University of Wisconsin Crew House (Figure 3.56). In 1995 archaeological survey conducted by Midwest Archaeological Consulting for the architectural firm of Engberg Anderson and the University of Wisconsin – Madison (Karstens and Rusch 1995). The 1995 survey recovered 257 waste flakes, 97 ceramic sherds, 47 pieces of fire cracked rock, three utilized flakes, five bifaces, one core, and one scraper. Soil profiles in all of the areas tested indicated that the soils were intact throughout the area although some areas had suffered some erosion and some localized compaction. Karstens and Rusch tested the entire area considered for the proposed Crew House and found that the entire area produced archaeological materials. Their maps indicate that the site extends to building areas, paved roads, and the lakeshore with the implication that the site boundaries may extend into areas that were not tested in 1995. In a letter to the architectural firm, Lynn Rusch stated that "...if these materials are in an undisturbed condition, it is likely that the site would be eligible for listing on the National Register of Historic Places" (Karstens and Rusch 1995). Although no diagnostic materials were recovered, the ceramics seemed to indicate a Late Woodland stage component at the site.



Figure 3.56: Sketch map from survey completed in 1995 (Karsten and Rusch 1995).

In 2004, personnel from Great Lakes Archaeological Research Center conducted more intensive archaeological testing of portions of 47DA124 in an attempt to ascertain the condition and nature of the deposits at the site.

Methodology for Phase II Testing:

The Phase II methodology utilized for 47DA124 involved the placement of eight 1x1 meter test unit excavations in a variety of locations at the site. Locations were chosen somewhat intuitively based on the terrain, the vegetation and the shovel testing map provided in the Karstens and Rusch report. Two units were placed in the vicinity of the former putting green (Karstens and Rusch's Parcel 1), four units were placed in the wooded area between the mounds of 47DA119 – Willow Drive Mounds and the Howard Temin Lakeshore Path (Karstens and Rusch's Parcel 3 and two units were placed north of the Howard Temin Lakeshore Path and

south of Lake Mendota (Karstens and Rusch's Parcel 4). The only area that was not tested was Karstens and Rusch's Parcel 2 which was a wooded area bounded on the northwest by the Howard Temin Lakeshore Path, on the northeast by the Schuman Shelter and on the south by the open grass area of Parcel 1. This area did produce artifacts for Karstens and Rusch, but had the appearance of having been disturbed in the past and perhaps being the dumping site for known anthrax-ridden bovine carcasses. This was never confirmed and written sources were not sufficient to confirm or deny this location as a dumping ground.

Datum 1 was established relative to the position of the southernmost storage shed. All other datum were based on the location of Datum 1. Datum 2 was placed to the east to establish locations for Test Units 5 and 7. Datum 3 was placed to the north of Datum 1 and used to locate Test Units 2, 3, 6 and 8. Test Units 1 and 4 were located using the northernmost extension of Goodnight Hall (Figure 3.57). A complete catalog of recovered artifacts is presented as Appendix C.

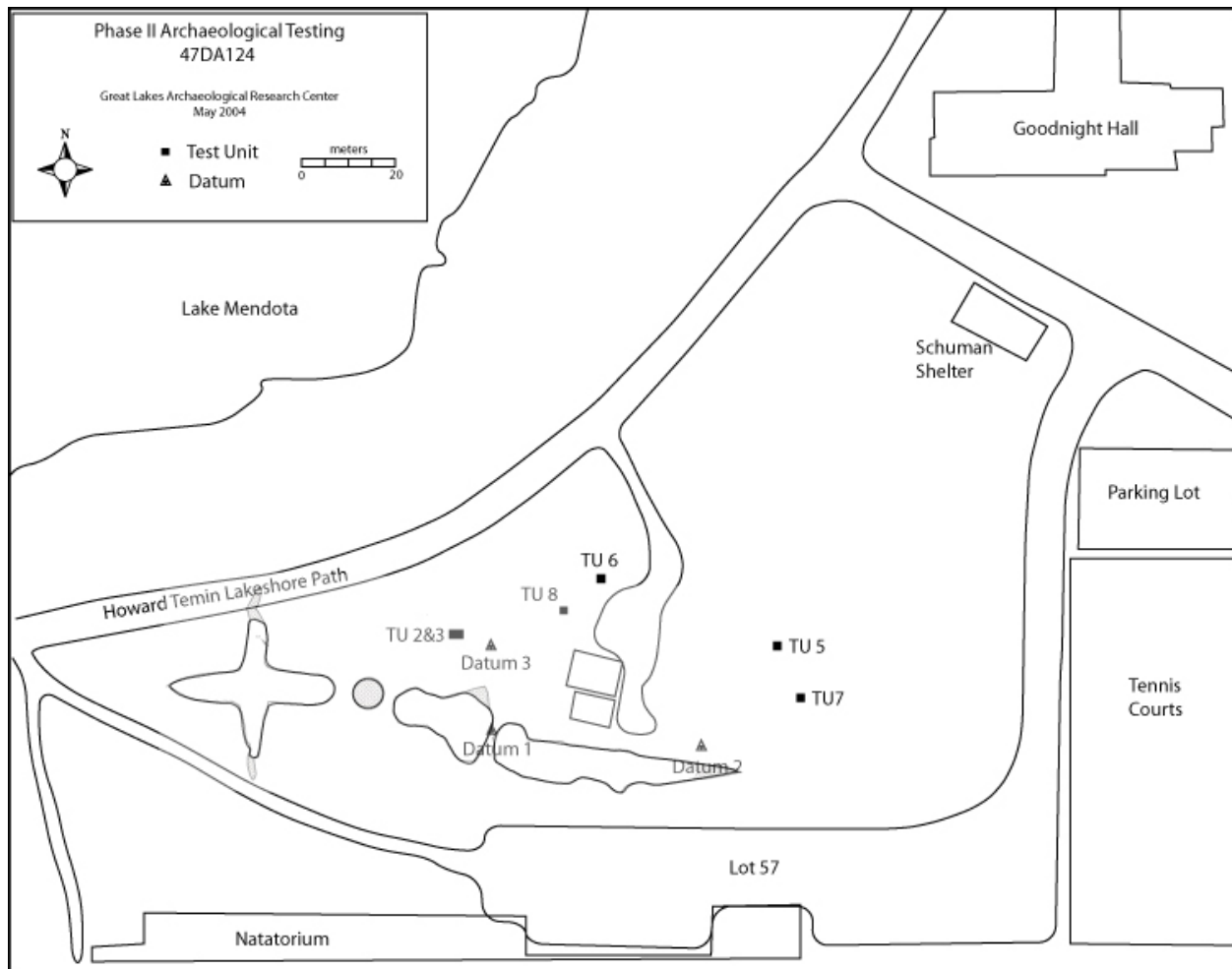


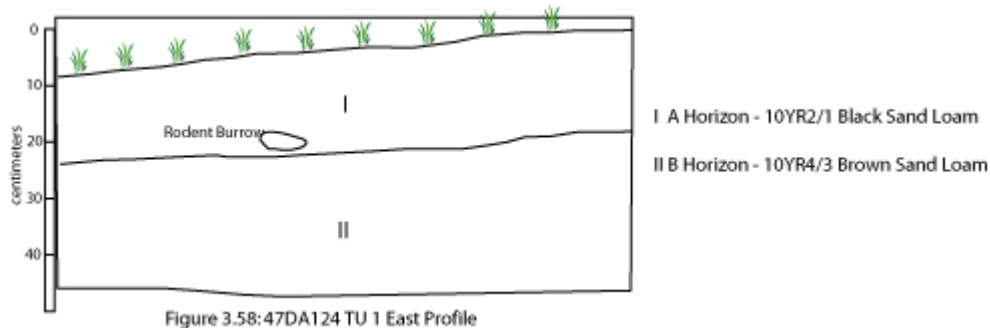
Figure 3.57 – Location of test units at 47DA124

Test Unit 1

Test Unit 1 was a one meter by one meter test unit located north of Goodnight Hall and adjacent to Lake Mendota east of Willow Beach. Four 10-centimeter levels were excavated of which the first two contained Native American and Euro-American materials, the third level

contained just Native American artifacts and the fourth level was sterile. The east wall profile indicates that there is approximately 20 centimeters of relatively undisturbed “A” horizon overlying an intact “B” horizon (Figure 3.58). Artifacts from this unit included; 26 waste flakes/debris, a single multidirectional core, brown and clear bottle glass, four bullet cartridges, a single piece of Euro-American whiteware ceramic, and eight pieces of miscellaneous post-European contact debris (slag, plastic, coal, asphalt, a rubber strap, and tin foil).

Although there are a fair number of Euro-American artifacts were present in this unit, this is probably due in large part to the units proximity to the Howard Temin Lakeshore Path (formerly Willow Drive and Madison Park and Pleasure Drive) and its location in a scenic location that is ideal for picnics and swimming. The lowest level did not contain post-European contact materials and it seems likely that this portion of the site is relatively intact.

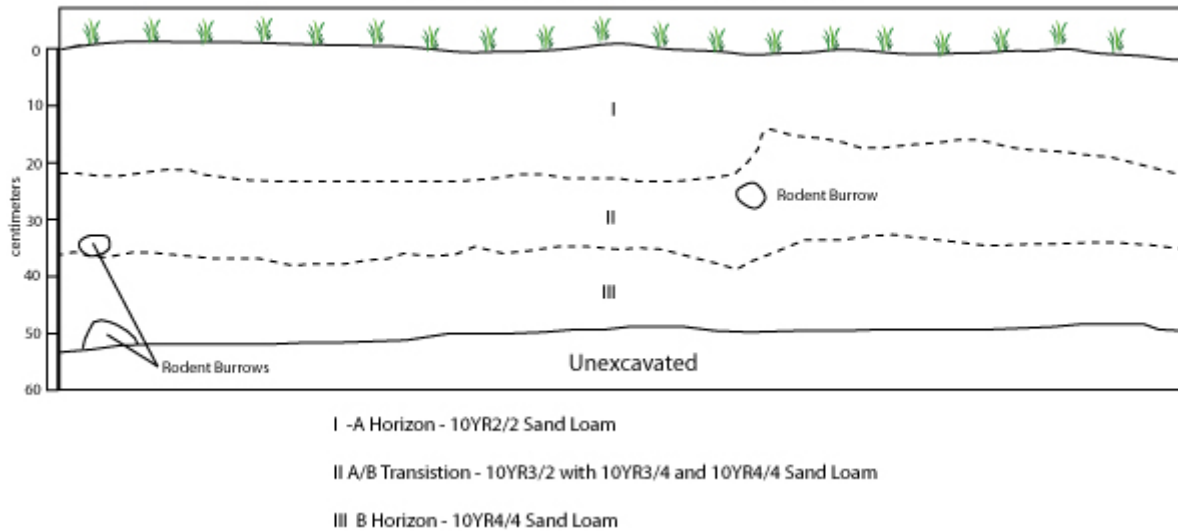


Test Unit 2 and 3

Test Units 2 and 3 were two 1x1 meter excavation units that were combined to form a single one meter by two meter excavation. These two units were placed in the wooded area north of the two problematical effigy mounds of 47DA119 – Willow Drive Mounds. A total of five 10-centimeter levels were excavated in both units. Level 1 in each unit was sterile, level 2 produced both Euro-American and Native American artifacts, and levels 3 through 5 contained nothing but Native American materials. The soil profiles from these two units were taken from the north wall and indicate a well developed 35 centimeter thick 10YR2/2 (Very Dark Brown) silt loam “A” horizon with granular texture. The “B” horizon is a 10YR4/4 dark yellowish brown sandy clay loam with fine subangular blocky texture (Figure 3.59). This profile is indicative of a non-disturbed area. No features were noted in the profiles or in planview.

A total of 126 artifacts were recovered from Test Units 2 and 3. Post-European contact debris included three pieces of clear bottle glass, two pieces of plastic, and one piece of slag. Native American materials included; 98 pieces of lithic waste, one Type 1 biface, one Type 2 biface, one corner-notched projectile point, eight pieces of fire-cracked rock, and 11 Native American ceramic sherds (including three incised-over-cordmarked sherds). The projectile point is a small corner-notched variety with ambiguous cultural affiliation. The three incised-over-cordmarked sherds are undoubtedly Dane Incised and have a late Early Woodland stage affiliation (Lake Farms phase, 250 BC – AD 100).

Figure 3.59: 47DA124 Test Units 2 and 3 North Wall Profile



Test Unit 4

Test Unit 4 was a one meter by one meter excavation unit placed in close proximity to Test Unit 1 near Lake Mendota. A total of three 10-centimeter levels were excavated through a weakly developed “A” soil horizon. The “A” horizon was 20 centimeters thick and consisted of a black (10YR2/1) sand loam with granular structure. The underlying “B” horizon was a brown (10YR4/3) sandy clay loam with very fine subangular blocky structure (Figure 3.60). Levels 1 and 2 produced both Euro-American and Native American artifacts while Level 3 produced only Native American materials. No features were noted in the planview or profile for this unit. The soils did not have the appearance of being heavily disturbed, but it did appear that some erosion had taken place reducing the thickness of the “A” horizon.

Test Unit 4 had a low density of artifacts with only 38 artifacts being recovered from the three excavated levels. The majority of artifacts were lithic waste (n=28) with the remainder being post-European contact materials. Similar to Test Unit 1, a light scatter of post-European contact debris was present in the upper levels including a large mammal bone, five pieces of bottle glass (one clear, two blue and two green), a single .22 short caliber cartridge, two bottle caps and a piece of coal. There were no Native American diagnostics and the Euro-American debris is of a common nature that could have been generated any time in the recent past.

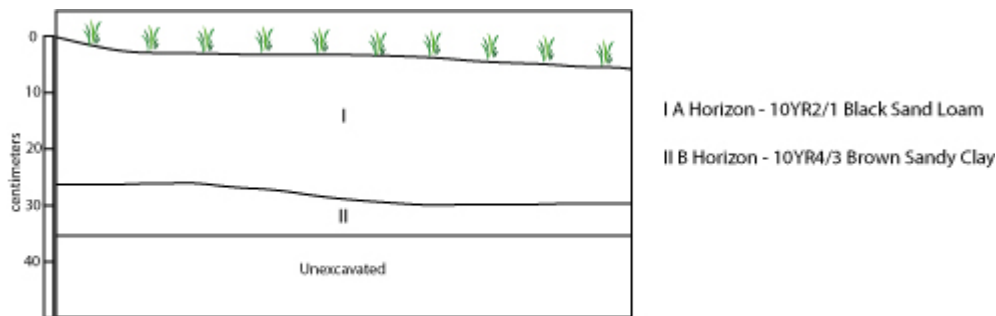


Figure 3.60: 47DA124 TU 4 West Wall Profile

Test Unit 5

Test Unit 5 was the first unit to be placed in the area of the former putting green in an open area that is currently maintained in grass. The unit was placed on relatively flat terrain under a canopy provided by large mature trees. A total of seven 10-centimeter levels were excavated. No Euro-American artifacts were recovered and all levels produced Native American artifacts. The profile from the north wall of the unit indicates a 35 centimeter well developed "A" horizon consisting of a black (10YR2/1) sandy loam with granular texture. A large rodent burrow was revealed in the profile that extended from 10 – 25 centimeters in the north wall profile. The transition from the "A" to the "B" horizon is diffuse indicating natural development. The "B" horizon is a 7.5YR4/4 yellow brown sandy clay loam with fine subangular blocky structure (Figure 3.61).

The most frequently encountered artifacts from Test Unit 5 were lithic waste flakes with 20 complete flakes, 38 broken, 64 flake fragments and nine pieces of debris being recovered. Eighteen pieces of fire cracked rock were also recovered. Surprisingly, 51 Native American ceramic sherds were also recovered. No diagnostic rim sherds were recovered, but there was one punctated body sherd, 21 cordmarked body sherds, six smoothed body sherds and 23 exfoliated body sherds. The sherds are all thin with grit temper and a sandy paste. The small decorated body sherd has faint punctates similar to those found on some Madison Cord Impressed vessels suggesting a Late Woodland stage Horizon Phase component is present.

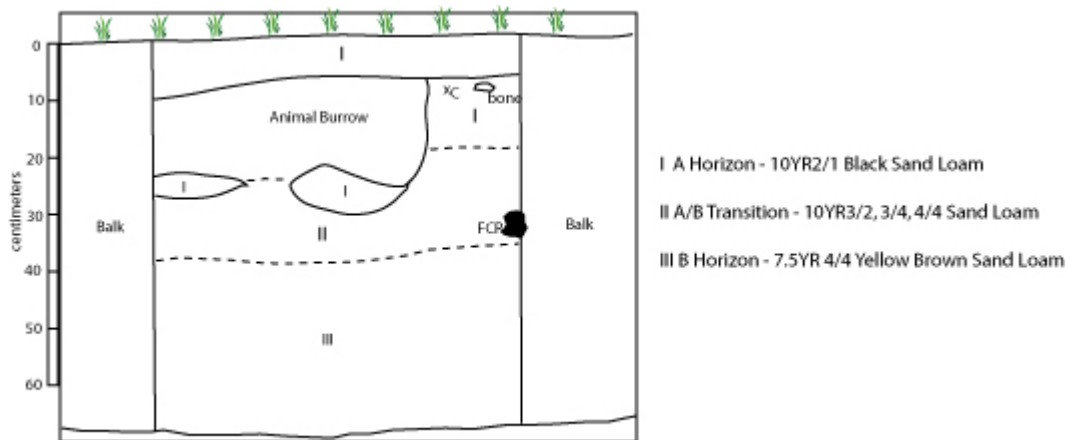


Figure 3.61: 47DA124 TU 5 North Wall Profile

Test Unit 6

Test Unit 6 was a one meter by one meter excavation placed to the northeast of Test Units 2 and 3 along the top of a hill that slopes upwards to the northeast. A total of four 10-centimeter arbitrary levels were excavated to expose the subsoil. The west wall profile of the unit indicates a 30 centimeter 10YR2/1 black sandy loam "A" horizon with a granular structure. The "B" horizon was a 10YR4/6 dark yellowish brown sandy clay loam with very fine subangular blocky texture (Figure 3.62). Euro-American debris was found along with Native American materials in levels 1 through 3 with level 4 being producing only Native American debris.

Euro-American debris was limited to five pieces of slag, some plastic wrapper fragments, and a metal eyelet. Native American materials included 39 pieces of lithic waste (two complete flakes, eight broken flakes, 24 flake fragments and five pieces of debris), one Madison

Triangular projectile point, three pieces of fire cracked rock and seven Native American ceramic sherds (five cordmarked body sherds, two exfoliated body sherds). The Madison Triangular projectile point is almost certainly an arrowhead and dates to sometime after AD 500/700. The ceramics are indicative of a Late Woodland Horicon phase component dating to between AD 700 and 1200.

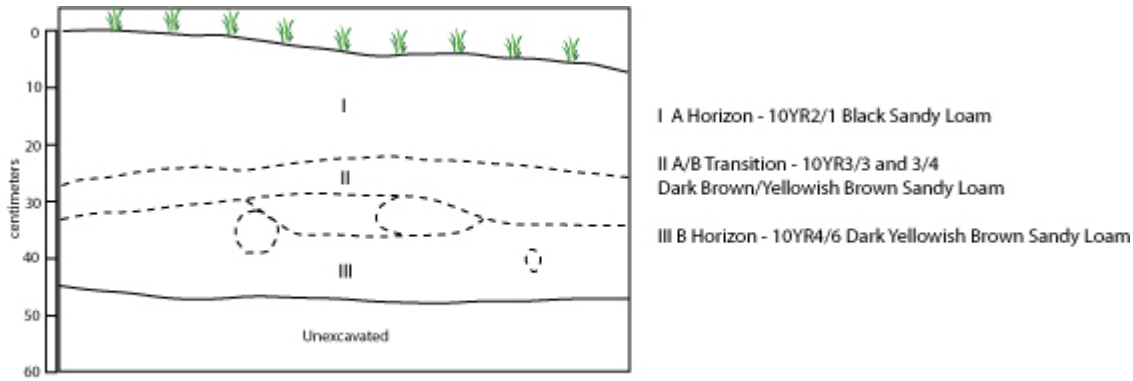


Figure 3.62: 47DA124 TU 6 West Wall Profile

Test Unit 7

Test Unit 7 was placed in the grass-covered former putting green north of the Natatorium. Test Unit 5 was located to the northwest. A total of four 10-centimeter level units were excavated. Level 1 was sterile; levels 2 and 3 produced Native American and Euro-American materials, and level 4 contained only Native American artifacts. The south wall profile from the unit depicts a 25 centimeter thick 10YR2/2 very dark brown silt loam "A" horizon with granular structure overlying a 10YR4/4 dark yellowish brown sandy clay loam with fine subangular blocky structure (Figure 3.63). There was no evidence for plowing at this location nor were any features noted in the planview or profile.

Artifact density for this unit was low by comparison to some of the other units excavated at 47DA124. Lithic waste was the most abundant artifact class with 11 pieces being recovered (one complete flake, two broken flakes, seven flake fragments and one multidirectional core). Also recovered were five pieces of fire cracked rock, two pieces of Native American ceramics (one smooth surface body sherd and one exfoliated sherd, both are probably Early Woodland stage sherds) and two metal artifacts (one piece of wire and one 1941 Mercury head dime). No diagnostic Native American materials were recovered and the Euro-American debris is all relatively recent.

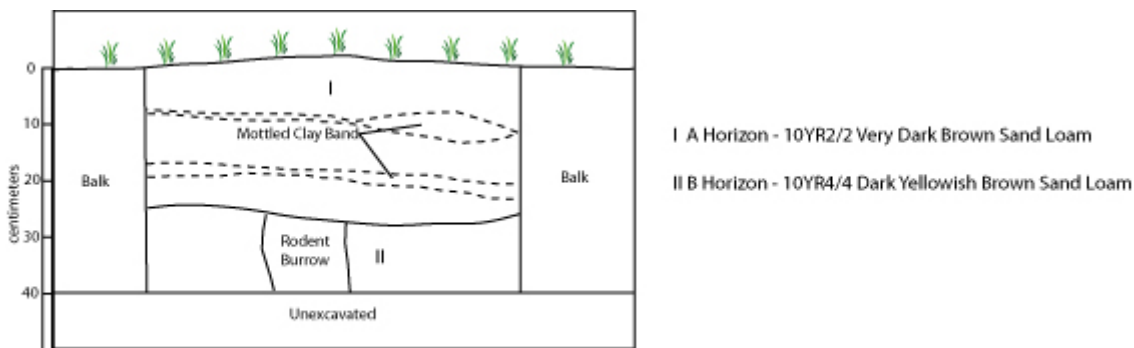


Figure 3.63: 47DA124 TU 7 South Wall Profile

Test Unit 8

Test Unit 8 was a one meter by one meter excavation placed between Test Units 6 and 2/3 along the relict beach ridge top. Excavations reached a depth of 60 centimeters below ground surface. Native American materials were found in each of the 10-centimeter levels with only a single piece of slag being found in level 5 (40-50 centimeters below ground surface). The north wall profile indicates that the “A” horizon is between 25 and 30 centimeters in thickness and was a 10YR2/1 (black) sand loam with granular structure. The underlying “B” horizon was dark yellowish brown (10YR4/6) sandy clay loam (Figure 3.64). There were no features noted in the profile or planview of this unit, but it is clear that this area has not been disturbed by plowing.

The artifacts from Test Unit 8 include a Native American lithics and ceramics. Two biface fragments were recovered, one of them the tip and blade of a projectile point. Three utilized flakes were also found including a denticulate form. The largest artifact category recovered was lithic waste with a total of 147 pieces being recorded. The waste included 15 complete flakes, 33 broken flakes, 86 flake fragments and 13 pieces of debris. Four Native American ceramic sherds were found including three smooth surface body sherds and one exfoliated body sherd. The total inventory for Test Unit 8 was 171 artifacts.

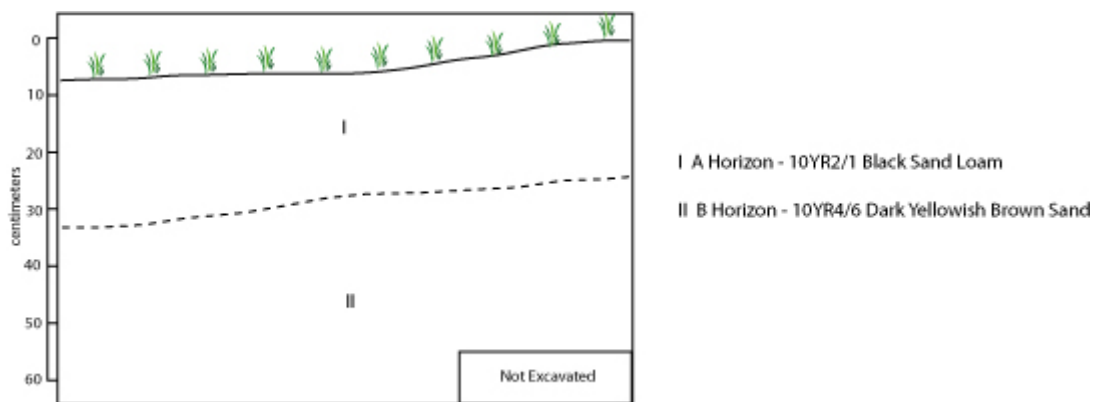


Figure 3.64: 47DA124 TU 8 North Wall Profile

47DA124 Artifact Analysis

Lithics

Raw Materials

All lithic raw material descriptions provided below are taken from Morrow (1994) with PDC and Galena being the most commonly represented in the 47DA124 assemblage. Hixton Silicified Sandstone and Burlington White Mottled Chert appear as single artifact exotic materials.

Prairie du Chien cherts (PDC) are derived from the Ordovician age dolomites of the Prairie du Chien Group that outcrop across southern Wisconsin, the Mississippi Valley trench and the Fox River/Lake Winnebago/Green Bay waterways. The chert occurs in nodules and nodular beds that can be up to 30 centimeters thick. PDC cherts are typically oolitic and variable in color ranging from light to dark gray with diffuse streaking and irregular mottling of white,

light gray and grayish tan. Oneota chert (from the lower part of the formation has a swirled or marbled appearance that may be partially or completely oolitic. Chert from the Shakopee Formation is commonly completely oolitic.

Galena chert was also found on-site and comes from the Ordovician Galena and Platteville Groups which outcrop in southwestern Wisconsin, northwest Illinois and northeast Iowa. The chert is formed in nodules and nodular beds that can be up to 15 centimeters thick. In terms of color, Galena chert is typically light gray to pale grayish brown, is often mottled, and sometimes faintly banded. Very small fossil bits are distributed throughout the chert along with fossil worm borings that appear as dark lines, dark spots or dark circles with lighter cores.

Hixton Silicified Sandstone is a Cambrian aged quartzite that is derived from a localized occurrence of silicified sandstone related to the St. Croixan series. The best known quarry for this material is Silver Mound located in Jackson County, Wisconsin. At Silver Mound the silicified sandstone occurs in bedding planes up to and exceeding 50 centimeters in thickness. Typically, Hixton Silicified Sandstone ranges in color from white, cream and tan but pieces that are yellow, orange, lavender and red are also found.

Burlington white mottled chert is one of three varieties originating from the Burlington Formation common in southern Louisiana and Des Moines Counties in southeast Iowa. It occurs in nodules and nodular beds up to 50 centimeters thick. Typically Burlington white mottled chert is white to very light grey and may contain mottled bands of light gray or light grayish brown. Fossil inclusions include crinoid columnals, fenestrate bryozoa, branching bryozoa, brachiopods, and solitary corals that appear as white “ghosts” in an off-white matrix.

Waste Flakes

A total of 481 pieces of lithic waste were recovered from the eight square meters that were excavated at 47DA124 (70.8% of all artifacts recovered). Of those 481 pieces there were 68 complete flakes, 122 broken flakes, 247 flake fragments, 40 pieces of debris, and four multidirectional cores. Five different raw materials were represented in the waste flake assemblage including 130 pieces of Galena chert (27% of all raw materials), 326 pieces of PDC chert (68% of all raw materials), one piece of Hixton Silicified Sediment (0.2% of all raw materials), one piece of Gabbro/Diorite (0.2% of all raw materials) and 23 pieces whose raw materials could not be identified (4.8% of all raw materials). All of the PDC and Galena chert pieces had been heat treated. PDC chert was the most commonly used chert at 47DA124 with Galena chert being second. This pattern is not surprising given that PDC outcrops locally in the Four Lakes area while Galena chert is more commonly found west of Madison and south of the Wisconsin River. There was some localized variation within 47DA124 where Galena chert was more commonly found than PDC such as in Test Units 2 and 5. These two units did not possess diagnostic artifacts that might suggest that they represented similar components, in fact, the opposite is true with Test Unit 2 being within a portion of the site that contains Early Woodland debris and Test Unit 5 ceramics indicate a Late Woodland component. A more parsimonious explanation is that these units represent normal variation in lithic procurement and reduction.

The high percentage of broken flakes (25.4%) and flake fragments (51.4%) recovered from 47DA124 suggests that tool production was the primary orientation of the flint workers on-site. The possibility that different components may have had different orientations was investigated by plotting waste morphology by test unit and almost universally the results indicated that tool production was the primary orientation. Bifaces were not particularly plentiful at the site so, unfortunately, there is no supporting evidence for the tool production

inference. Additional lithic analysis with an orientation toward measuring the size of debris may shed supplementary light on lithic reduction strategies and tool manufacture.

Non-Formal Tools

A single utilized flake made of Burlington white mottled chert was recovered from the first level of Test Unit 8 (Figure 3.65). The piece is a flake fragment that is 31.8 millimeters long by 15.1 millimeters wide by 2.8 millimeters thick. Evidence for utilization is present on the dorsal surface of the flake on the distal end and on the left mesial edge. At both locations, fractures have removed portions of the working edge leaving only a portion of the original working edge. Additional use-wear analysis could reveal how the tool was used and what types of materials the tool was used on.

Formal Tools

One denticulate flake was recovered from Test Unit 8, level 4 (30-40 centimeters below ground surface) (Figure 3.65). This tool was created on an elongated broken flake struck from heat treated Prairie du Chien chert. The piece is 64.1 millimeters long, 20.6 millimeters wide, and 10.9 millimeters thick. Intermittent marginal retouch is present along the right mesial edge for nearly the entire length of the right side on the dorsal surface of the flake. No retouch was observed on the ventral surface.

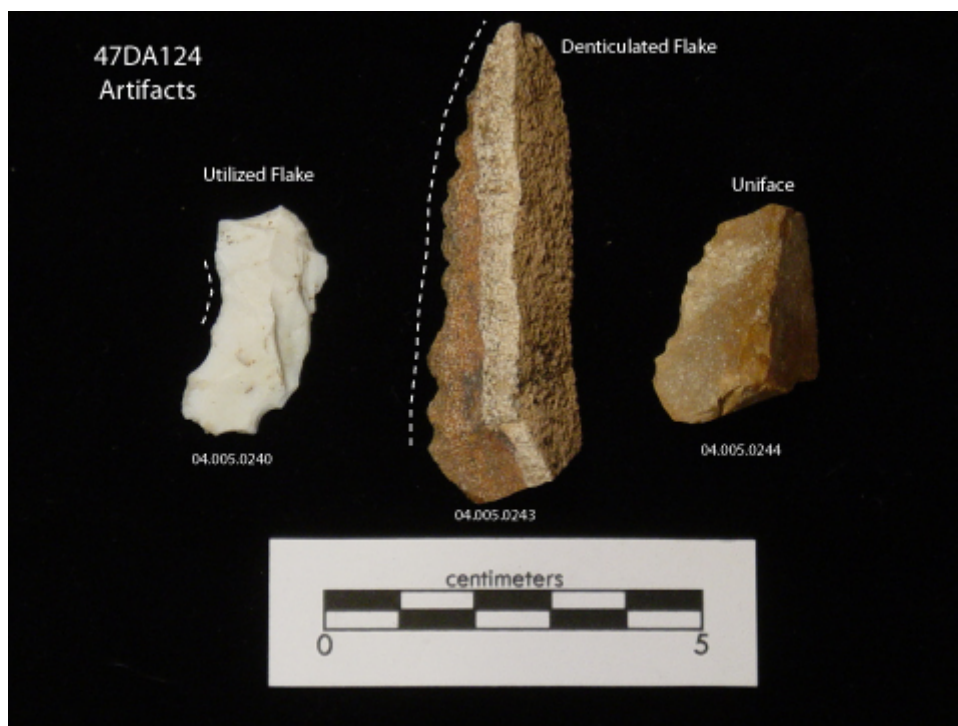


Figure 3.65: Artifacts from 47DA124.

Bifaces/Unifaces

A total of four biface fragments (0.59% of all artifacts found) and one uniface fragment (0.15% of all artifacts found) were recovered from the 2004 excavations at 47DA124.

Unifaces

The uniface fragment was found in level 5 of Test Unit 8 (Figure 3.65). This piece is made from Prairie du Chien chert and exhibits invasive retouch on the ventral surface. There also appears to be some marginal retouch on the dorsal surface. The uniface is broken, but is 31.4 millimeters long, 22.4 millimeters in width, and 11.8 millimeters thick.

Type 1 Bifaces

Two Type 1 bifaces were recovered from Test Units 3 and 8 at 47DA124 (Figure 3.66). The biface from Test Unit 3 was recovered between 20 and 30 centimeters below ground surface in level 3. This biface is made from Prairie du Chien chert and has a transverse fracture that appears to have been created during manufacture. It is 31.1 millimeters long, 33.4 millimeters wide, and 12.5 millimeters thick. The second Type 1 biface comes from level 4 of Test Unit 8 and is made from Hixton Silicified Sandstone. Like the biface from Test Unit 3, this piece was also broken in manufacture. The transverse fracture that broke the piece occurred as a result of an impurity in the material and an attempt by the knapper to thin a thick edge. The remaining fragment is difficult to orient as the typical landmarks (tip, base, bulb of percussion, striking end) are missing from this piece, but it has a maximum length of 35.0 millimeters, a maximum width of 24.3 millimeters, and a maximum thickness of 7.6 millimeters.



Figure 3.66: Biface fragments from 47DA124.

Type 2 Bifaces

Test Unit 2 produced a single heat treated Prairie du Chien biface fragment with a transverse fracture undoubtedly created in manufacture. The piece appears to be the distal end of a biface with a maximum length of 21.6 millimeters, a maximum width of 25.9 millimeters and a maximum thickness of 5.8 millimeters. This biface appears to have broken while the knapper was in the process of trying to thin a thickened area along the edge.

Type 3 Bifaces

A single Type 3 biface was recovered from Test Unit 8 in level 5 (40-50 centimeters below ground surface). This biface is made of Blanding chert from Iowa and has all the appearance of having been a side-notched projectile point, probably of the Raddatz or Madison Side-notched varieties. This biface is a proximal fragment that is broken at the location where notches were with one partial notch still being present. It is unclear if this point was broken in manufacture or in use. The biface fragment is 41.7 millimeters long, 23.5 millimeters wide and 6.8 millimeters thick.

Projectile Points

Two projectile points were recovered in the 2004 excavations (0.29% of all artifacts recovered from 47DA124) (Figure 3.67). The first is a corner-notched variety found in level 3 of Test Unit 3. This point is complete and made from heat treated Galena chert. Projectile points with this morphology are difficult to ascribe to a type and are therefore difficult to assign a temporal range or cultural affiliation. This point was recovered in the level immediately below a handful of Dane Incised sherds. This suggests that this point type predates the Early Woodland Lake Farms phase material, but there is no recognized Wisconsin typological precedent for it. Corner notched points appear in western Wisconsin as early as the Early Archaic (Boszhardt 2003:45) and continue sporadically through the Middle Woodland. This particular point may have typological correlates to the east in the Brewerton Corner Notched Cluster that is distributed through the upper northeastern portions of the Eastern Woodlands (Justice 1987:115). Brewerton Corner Notched points belong to the Late Archaic Laurentian and appear to date from between 2980 and 1723 BC in the east. Another similar morphological correlate is the Pelican Lake Point named for the Pelican Lake Culture in Saskatchewan (Morrow 1984:76). Morrow states that they are fairly common throughout Iowa where they probably represent an Early to Middle Woodland type dating from between 500 BC to AD 500. Based on the current evidence, there is not enough research in Wisconsin to place this point into a type although the technology and the form of the point seem to place it in the Late Archaic in Wisconsin. For comparative purposes, the point is 43.8 millimeters in length, 24.9 millimeters in width, and 6.3 millimeters in thickness. The length and width compare favorably with both Brewerton Corner Notched and the Pelican Lake Point types, but it is on the diminutive side for thickness for the Brewerton Corner Notched type.

The second projectile point is the basal portion of a Madison Triangular point made from Galena chert. The point has a longitudinal macrofracture that separated the distal end from the proximal end. The recovered fragment is 18.9 millimeters in maximum width, 3.8 millimeters thick and weighs 1.2 millimeters. Madison Triangular points are almost certainly arrow points and are common in Wisconsin archaeological sites that date to after AD 700. This particular projectile point is likely to be related to the Late Woodland Horicon Phase (AD 700 – 1200).

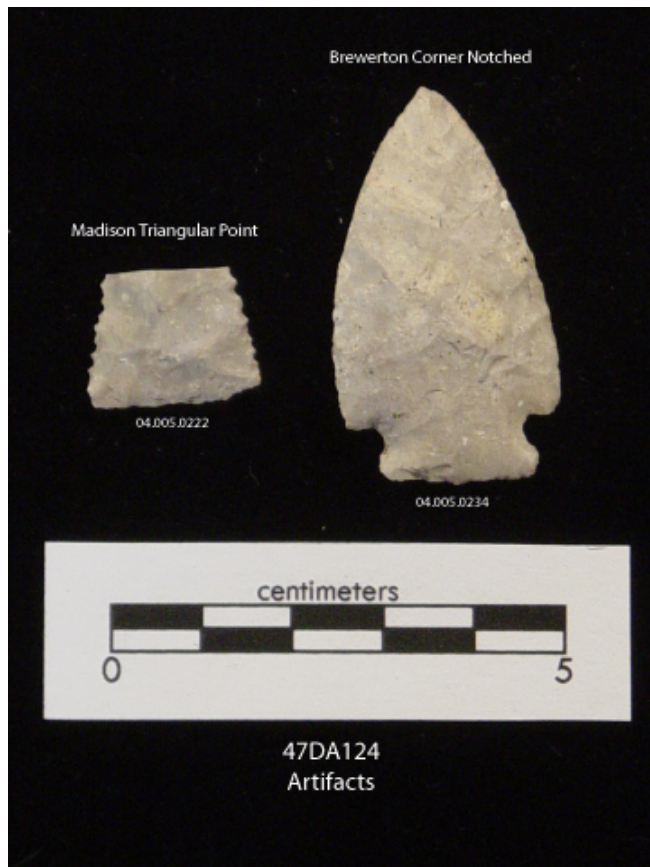


Figure 3.67: Projectile points from 47DA124.

Native American Ceramics

The ceramic assemblage from 47DA124 was larger than that collected from any of the other sites examined in 2004, but was limited to 75 sherds (11.05% of all artifacts recovered from 47DA124) of which five were decorated body sherds, 39 were body sherds with a recognizable surface treatment, and 31 were exfoliated (Figure 3.68). All of the sherds were tempered with grit. Unfortunately, no diagnostic rim sherds were recovered. Based on the decoration and thickness of the sherds it is reasonable to divide them into two groups. The first group consists of thicker sherds with incised decoration (13 sherds, 4 of which were incised). This group is associated with Dane Incised pottery, a type that is attributed to the Lake Farms phase of the Early Woodland stage. In the Four Lakes area this material is dated to between 250 BC – AD 100. Early Woodland ceramics were found in Test Units 2, 3, and 7 suggesting that there may be spatially segregated components or activity areas present at the site.

The second group of sherds is thinner and has corded knot punctates. This set of sherds is far more plentiful at the site (62 sherds of which one had a corded knot punctate) and are associated with the Horicon phase of the Late Woodland stage. This pottery is probably related to one of the varieties of Madison ware that are commonly found at sites that date to between AD 700 and 1200 in the Four Lakes area.

It should be noted that the lack of diagnostic rim sherds limits the depth of analysis that can be conducted and hampers cultural interpretation. The use of thickness



Figure 3.68: Ceramics from 47DA124.

as a criterion to establish chronological and cultural affiliation is dubious in the Four Lakes area as seriation efforts have not been made to establish a baseline for comparison. However, based on other artifact classes and features at the site, the attribution of the ceramics found on site to the Lake Farms and Horicon phases seems a reasonable supposition.

Post-European Contact Materials

Post-European contact artifacts represent 9.57 percent of all artifacts recovered (n= 65).

Metal

The Post-European contact metal that was found at 47DA124 consisted of one piece of wire, two bottle caps and a single coin. The wire and bottle caps are clearly recent in their origin, and could date to any time after the turn of the twentieth century. The coin is a single 1941 Mercury head dime that was recovered in the area that is used as a putting green.

Glass

Thirty-nine pieces of broken glass representing 5.7 percent of all artifacts recovered were found in the 2004 excavations at 47DA124. The most frequently found type was clear bottle glass (n = 33) followed by equal amounts of blue, brown and green types (n = 2 each). All of the glass recovered was modern in appearance.

Post-European Contact Debris

Post-European contact debris from 47DA124 made up 1.9 percent of all artifacts recovered and includes slag, plastic fragments, coal, asphalt, rubber and aluminum foil. Slag and coal were frequently used for paths, roads and parking areas in the past and the presence of the

old Willow Drive (now the Howard Temin Lakeshore Path) in close proximity to the site suggests a source for the five pieces of slag and the two pieces of coal. A single piece of asphalt present on the site is also not surprising given the extensive use of the paving material on the university campus. The remaining three pieces of plastic and single piece of aluminum foil are undoubtedly materials that were deposited through aeolian processes or the carelessness of passing pedestrians. None of the objects were diagnostic and all appear to be modern in origin.

Summary/Conclusions

47DA124 has been a recognized archaeological site since at least the turn of the twentieth century. In that time, archaeological research has included surface observation/collection by C.E. Brown, Phase I reconnaissance by Karstens and Rusch and this year we have included more intensive excavations. A total of eight one meter by one meter tests were excavated and 679 artifacts were recovered. Based on the collections that Brown made from the excavations of the mounds of 47DA119 – Willow Drive Mounds (these are mounds that are on top of and surrounded by 47DA124), the Karstens and Rusch data and the artifacts collected in 2004, it is now possible to make some statements about 47DA124.

1. 47DA124 is a multi-component site with Middle Archaic stage (6000 – 1500 BC), Late Archaic (1000 – 500 BC), Early Woodland (250 BC – AD 100) and Late Woodland (AD 700 – 1200) components. Based on the 2004 data it seems that the Early Woodland and Late Woodland components are the most substantial.
2. There is some evidence to suggest that the components may be segregated by horizontal and/or vertical provenience.
3. The soil profiles at the locations that were tested in 2004 indicate that the site is largely if not entirely intact.
4. The location of the site immediately adjacent to Lake Mendota in a region that is one of the fastest developing in Wisconsin, the presence of intact archaeological deposits, the lack of information on the cultural components present at the site in the region make this site eligible for the National Register of Historic Places.

47DA124 Management Issues:

1. This site is located in an area whose jurisdiction for maintenance and protection is clouded.
2. There is a gravel driveway, two storage sheds and piles of rubbish and debris that are located on the site. Damage caused by maintenance vehicles and activities associated with maintenance pose a threat to the deposits at the site.
3. Burial mounds (47DA119 – Willow Drive Mounds) are present within the site limits.

47DA124 Treatment Recommendations:

1. Jurisdiction of the 47DA124 parcel should be clarified. The parcel should be placed under the Lakeshore Nature Preserve jurisdiction because of the intact archaeological remains and the presence of flora that has been present since the time of the founding of the campus.
2. The driveway, maintenance sheds and debris piles should be removed from the site.
3. The burial mounds of 47DA119 – Willow Drive Mounds should continue to be maintained in short grass, small brush and non-native species should be removed from the site altogether. A 25 foot “no-disturb” buffer zone should be maintained around the mounds. Any lawn cutting on the mounds should be conducted using push mowers.
4. No further archaeological testing is recommended at this time.
5. 47DA124 should be preserved in place and should not be considered as a building or development site.
6. A National Register of Historic Places Nomination Form should be prepared and submitted for the site after appropriate additional Phase I archaeological survey is conducted to verify the resource boundaries.
7. No earthmoving activities should be conducted on or near 47DA124 without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as fire pits, park benches, paved or unpaved paths or the construction of buildings

47DA124 Future Research Recommendations:

1. The location of this site on campus makes 47DA124 an ideal outdoor laboratory and classroom for the anthropology, geology, geography, and botany departments. Portions of this site should be carefully excavated using a multi-disciplinary team that addresses critical questions within each field.
2. Geology and geography research questions should address the origin of the landform upon which the site is situated, the types of soils present, and the geomorphology of the site.
3. Archaeological questions should address the relationship between the mounds of 47DA119 and the cultural remains of 47DA124, a refinement of the chronology of the cultural components of the site, Native American diet through time, Native American activities conducted on-site and broader issues regarding the transition from the Late

Archaic to the Early Woodland, the nature of open-air Late Woodland sites in the Four Lakes Area and the role of the site in the context of the region.

Part IV: Summary and Recommendations

Summary

The archaeological investigations conducted in 2004 were the result of the award of a Getty Grant Program Campus Heritage Initiative grant to the University of Wisconsin – Madison (UW-Madison) to create a Cultural Landscape Report. Great Lakes Archaeological Research Center was charged with the task of investigating approximately 100 acres of the main campus of the University of Wisconsin – Madison located along the south shore of Lake Mendota in the City of Madison, Dane County, Wisconsin.

The archaeological field reconnaissance was preceded by an in-depth literature and archives review which revealed the presence of 20 previously identified archaeological sites located within the University of Wisconsin – Madison campus. Nine of those sites were Native American mound groups/cemeteries. Ten sites were attributed to Native American habitation/campsites. One site was a known Euro-American cemetery located on Bascom Hill. Thorough review of the documentation for the campus revealed six additional habitation/campsites that had been identified in the early part of the twentieth century, but had not been recorded prior to 2004 (Figure 4.1). These sites included 47DA1236, 47DA1237, 47DA1238, 47DA1239, 47DA1244, and 47DA1245. As a group, the status of these sites is relatively unknown. The documentation was adequate to suggest a location on the landscape and in some cases a cultural or temporal affiliation, but not sufficient enough to provide exact locations. These sites will require additional fieldwork to verify their exact locations and conditions.

The archaeological fieldwork conducted in 2004 revealed the presence of 13 previously unknown Native American habitation/campsites located throughout the Lakeshore Nature Preserve and other portions of the main campus.

Newly identified sites include: 47DA1232, 47DA1233, 47DA1225, 47DA1226, 47DA1227, 47DA1228, 47DA1230, 47DA1231, 47DA1229, 47DA1240, 47DA1242, 47DA1243, and 47DA1234.

In addition, three previously identified archaeological sites were re-visited including 47DA413 – Eagle Heights Field, 47DA571 – Observatory Hill Mound Group and 47DA1207 – Observatory Hill Village.

Of these sites, eight sites remain unevaluated, but may be eligible for inclusion on the NRHP (47DA1225, 47DA1226, 47DA1227, 47DA1228, 47DA1207, 47DA1229, 47DA1242, and 47DA1243), six sites are not eligible for the NRHP (47DA1232, 47DA1233, 47DA1230, 47DA1231, 47DA1240, and 47DA1241), two sites conditions could not be determined (47DA1239 and 47DA1234) and one site is already listed on the NRHP (47DA571 – Observatory Hill Mound Group).

In addition to the Phase I archaeological reconnaissance, two sites underwent archaeological testing to determine their eligibility for inclusion on the National Register of Historic Places (47DA413 – Eagle Heights Field and 47DA124). Both sites are eligible for inclusion on the NRHP.

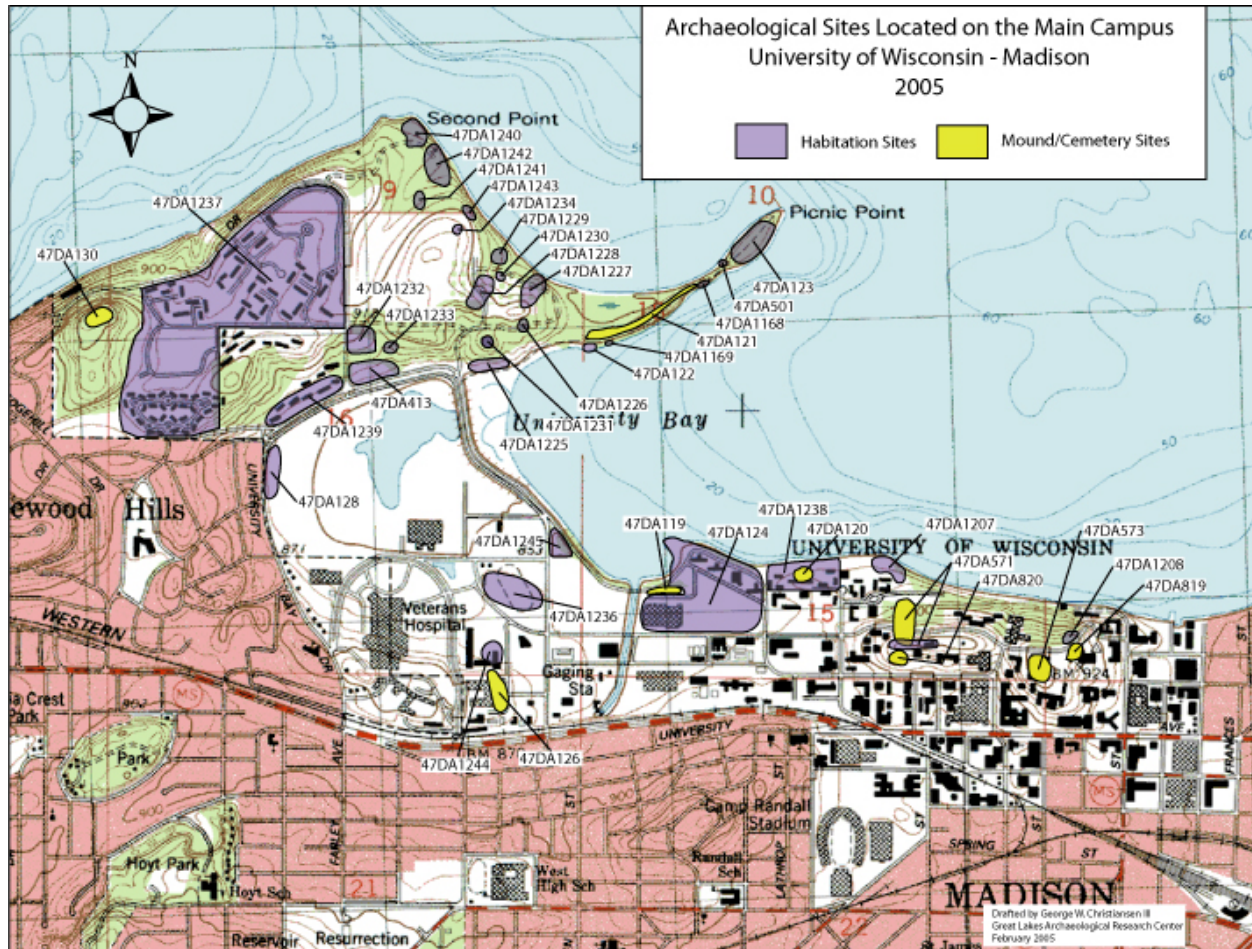


Figure 4.1 Archaeological Sites Located on the Main Campus.

Recommendations

The archaeological investigations reported in this document were conceived of as part of a larger project, namely the UW-Madison Cultural Landscape Report. Although this report was written to stand alone, it was also designed to integrate with the larger document by addressing

archaeological resources that are present within the Cultural Landscape Inventories but were not directly part of the archaeological reconnaissance conducted in 2004. To that end, two sets of recommendations are made in this section. One set refers the reader directly to the detailed discussions of archaeological investigations conducted by Great Lakes Archaeological Research Center and the other refers to the previously documented resources within the Cultural Landscape Inventories generated by Quinn Evans Architects. It is also important at this point to make several points regarding the recommendations made.

First, this report is written from a cultural resource management perspective meaning that from the point of view of the archaeologist and the resource, it is not desirable for any archaeological resources to be destroyed. Second, the campus resources can be divided into two groups, burial sites, and non-burial sites. Burial sites are protected by Wisconsin State Statutes Section 157.70 Subsection 5 which states that “No person may intentionally cause or permit the disturbance of a catalogued burial site or the cataloged land contiguous to a catalogued burial site

without a permit from the director (of the Wisconsin Historical Society)...” This means that while burial sites are considered cemeteries and sacred sites by many different peoples, it is possible to disturb those sites with the permission of the Director of the Wisconsin Historical Society. Non-burial sites are not afforded the same measure of protection and their fate is subject to the evaluation of those on campus that make planning decisions in accordance with Wisconsin State Statutes § 44.40 which states that “Each state agency shall consider whether any proposed action of the state agency will affect any historic property that is a listed property, on the inventory or on the list of locally designated historic places under s. 44.45.” Finally, the recommendations provided with each resource are framed within the context of their potential significance as determined by the application of criteria for inclusion on the National Register of Historic Places. This is a standard by which most cultural resource management is conducted in the United States.

Recommendations for Sites Identified in 2004

Detailed discussions of management issues and recommendations for each of the sites investigated in 2004 are presented in the discussion of the individual site in the section of this report entitled “Results of the Phase I Archaeological Fieldwork for the 2004 Archaeological Reconnaissance of the University of Wisconsin – Madison Campus.” These issues and recommendations should be consulted on a site by site basis. A synthesis of all of the known archaeological sites discovered on the University of Wisconsin – Madison campus through June of 2005 is provided in Table 2 for quick reference purposes.

CLI Site Recommendations

The following recommendations are made for the archaeological resources located within the Cultural Landscape Inventory Sites not investigated in 2004. For recommendations for significant historic landscapes please refer to the University of Wisconsin-Madison, Cultural Landscape and Archaeological Report.

Bascom Mall

Three archaeological sites have been identified in the Bascom Mall Cultural Landscape Inventory site. The Archaeological Site Inventory indicates that 47DA573 – Bascom Hill Mound Group consisted of at least one linear and one panther mound which were destroyed in 1859 with the construction of Bascom Hall. A newspaper article in the Madison Democrat from December 30, 1874 indicates that there was at least one other large conical mound that was also destroyed in the construction of the building. The second site is 47DA819 – North Hall Mounds which consisted of two linear burial mounds located between North Hall and the Lake Mendota shore. Both linear mounds were reported as being destroyed in 1851 by the grading for North Hall although according to Brown (1914:384) “Some traces of one long, narrow mound could still recently be seen.” The third site is the Bascom Hall Burial Ground (47BDA125) which contained two historic Euro-American burials – Samuel Warren and William Nelson. These burials were disturbed in 1918, but not removed. The Bascom Mall Cultural Landscape

Inventory site appears to have very little potential for intact archaeological sites based on the extensive construction and utility excavation that has occurred on site.

Management Issues:

1. The hilltop on which Bascom and North Hall is located was once the location for an unknown number of burial mounds.
2. Two Euro-American burials were once present to the east of Bascom Hall.

Management Recommendations:

1. Based on the potential presence of intact burial pits, it is recommended that future modifications to the landscape around Bascom and North Halls that involve the movement of earth be monitored by a professional archaeologist.

John Muir Park

John Muir Park consists of a forested area and an overlook. The overlook was tested for the presence of archaeological sites in 2003 and a single site, 47DA1208 – Muir Knoll was identified (Rosebrough 2003). Rosebrough concluded that the deposits at the site had been at least partially mixed and that the “A” horizon in the southern portion of the site had been truncated (presumably by grading). Based on the results of the Office of the State Archaeologist testing (Rosebrough 2003:6-8), there seems to be at least a portion of the site that remains intact towards the center and in the northern portions of the site where Native American materials were recovered in unmixed contexts with relatively intact soil profiles. Although Rosebrough does not recommend additional testing for the southern portion of the site, the presence of intact soils and Native American debris in at least a portion of the site suggests additional testing may be in order for the northern and central portions of the site.

Management Issues:

1. Re-development of the overlook area of John Muir Park is being considered which may affect the archaeological deposits at the site.
2. No cultural affiliation was determined for 47DA1208 – Muir Knoll.
3. Linear mounds were reported as existing between North Hall and the Lake Mendota Lakeshore (Brown 1914:384). The potential path of these mounds lies within the overlook portion of John Muir Park.

Management Recommendations:

1. Additional archaeological testing should be conducted at shorter intervals in the central and northern portion of the overlook area to further define the site boundaries. This testing should include the excavation of at least two one meter by one meter test excavations to ascertain the significance of the site.
2. Any construction activities that involve earth movement should be monitored by a professional archaeologist that is qualified to excavate human remains.

Observatory Hill

The Observatory Hill Cultural Landscape Inventory site includes the hill and the area sloping down to the Lake Mendota shore. There is at least one archaeological site (47DA571 – Observatory Hill Mound Group), and perhaps another (47DA1207 – Observatory Hill Village) present within this inventory site. The Observatory Hill Mound Group contained at least four burial mounds, of which only two are now remaining. Somewhere to the north of the extant mounds were a linear mound and a panther-shaped effigy mound. The surface remains of those mounds are now obscured and/or destroyed, but the fate of the subsurface features of the mounds (i.e. burials) is unknown. Throughout the late nineteenth and into the first half of the twentieth century there were a series of reports regarding quantities of archaeological materials being recovered from the top of Observatory Hill, through the orchard (the open area to the west of Elizabeth Waters Hall) and to the base of the hill along the Lake Mendota shore. These collective reports were assigned the site number 47DA1207 – Observatory Hill Village, but this site has never been tested archaeologically to determine its presence, its dimensions, its cultural/temporal affiliation or condition.

Management Issues:

1. The Observatory Hill area (including Lot 34) may be under pressure for development by the University of Wisconsin – Madison.
2. There are at least two mounds present in the Observatory Hill area whose surface component has been destroyed, but may have intact subsurface burials.
3. There are reports of a large archaeological site in the vicinity of Observatory Hill with at least a Late Paleo-Indian component.
4. There are sidewalks within five feet of the extant burial mounds at the top of Observatory Hill which has led to damage of the mounds on a regular basis.

Management Recommendations:

1. The bottom portion of the Observatory Hill Cultural Landscape Inventory site should be surveyed for archaeological materials.
2. The two burial mounds that have had their surface components destroyed should be re-located using a combination of archival sources, non-invasive geophysical remote sensing methods (ground penetrating radar, electrical resistivity, magnetometry), and ground truthing.
3. There are a series of sidewalks that are currently within five feet of the extant mounds on the top of Observatory Hill. These sidewalks have provided a means by which the mounds have been damaged by snow plowing and it is in the best interest of the resource to have the sidewalks closed, re-designed, or maintained in a different manner. It is recommended that a combination of these alternatives be utilized. The sidewalk that divides the two mounds should be closed. Pedestrian traffic should be routed to the south of the mounds along the former road bed whose grade is still present. Snow removal should be conducted using snow shovels or snow blowers that fit on the sidewalk. The use of large snow plow trucks should be discontinued.

Agricultural Campus

A single archaeological site is associated with the Agricultural Campus Cultural Landscape Inventory site and that is 47DA820 – Agricultural Hall Mounds. This site was defined on the basis of a report that several conical mounds were destroyed when Agricultural Hall was built on Observatory Hill in 1902. There is no description of the mounds nor is there a map of the mounds indicating their exact location.

Management Issues:

1. The details of 47DA820 – Agricultural Hall Mounds are unknown and there is some possibility that mound remnants are still intact in the vicinity of Agriculture Hall.

Management Recommendations:

1. Additional archival and literature work should be conducted for the purposes of reconstructing what is known of the mound group.
2. No earthmoving activities should be conducted on or near 47DA820 without additional testing and monitoring by a professional archaeologist. This includes tree and brush stump removal, tree and plant transplants, installation of utilities, road maintenance, and the installation of facilities such as park benches, paved or unpaved paths or the construction of buildings.

References Cited

- Anderson, D. G. and J. C. Gillam
2000 Paleoindian Colonization of the Americas: Implications from an Examination of Physiography, Demography, and Artifact Distribution. *American Antiquity* 65(1):43-66.
- Arzigian, C.
1987 The Emergence of Horticultural Economies in Southwestern Wisconsin. In *Emergent Horticultural Economies of the Eastern Woodlands*, edited by W. F. Keegan. Occasional Paper No. 7. Southern Illinois University at Carbondale, Center for Archaeological Investigations, Carbondale, Illinois.
- Baerreis, D. A.
1953a The Airport Village Site, Dane County. *The Wisconsin Archeologist* 34(3):149-164.

1953b The Blackhawk Village Site, Dane County (Da5), Wisconsin. *Journal of the Iowa Archeological Society* 2(4):5-20.

1966 Early Salvage Excavations in the Madison Area, Dane County, Wisconsin. *The Wisconsin Archeologist* 47(3):101-131.
- Baerreis, D. A. and M. M. Bender
1984 The Outlet Site (47 DA 3): Some Dating Problems and a Reevaluation of the Presence of Corn in the Diet of Middle and Late Woodland Peoples in Wisconsin. *Midcontinental Journal of Archaeology* 9(2):143-154.
- Bakken, C. T.
1950 Preliminary Investigations at the Outlet Site. *The Wisconsin Archeologist* 31(2):43-66.
- Baum, J. M.
2001 *Determining Wetland Management Alternatives: The Natural History of Picnic Point Marsh*. Masters Thesis, University of Wisconsin - Madison.
- Benn, D. W.
1980 *Hadfield Cave: A Perspective on Late Woodland Culture in Northeast Iowa*. Report 13, Office of the State Archaeologist. The University of Iowa, Iowa City, IA.
- Berwick, D. E.
1975 *Analysis of the Vertebrate Fauna of the Lawrence I Rockshelter (VE154), Vernon County, Wisconsin*. M.A. Thesis, University of Wisconsin, Madison.
- Birmingham, R. A. and L. E. Eisenberg
2000 *Indian Mounds of Wisconsin*. University of Wisconsin Press, Madison.

- Birmingham, R. A., C. I. Mason and J. B. Stoltzman (editors)
1997 *Wisconsin Archaeology*. The Wisconsin Archaeologist 78(1-2).
- Boszhardt, R. F.
2003 *A Projectile Point Guide for the Upper Mississippi River Valley*. University of Iowa Press, Iowa City, Iowa.
- Brown, C. E.
1909 Additions to the Record of Wisconsin Antiquities, III. *The Wisconsin Archeologist* OS 8(4):113-138.

1912 Undescribed Groups of Lake Mendota Mounds. *The Wisconsin Archeologist* Old Series 11(1):7-32.

1914 Prehistoric Indian Monuments on the University Grounds. *The Wisconsin Alumni Magazine* 15(9):383-389.

1927 Dane County Eagle Heights Farm Site. In *Charles E. Brown Manuscripts, Dane County File*, Wisconsin Historical Society, Madison, Wisconsin.

1929a Camp or Village Site Indications. In *Charles E. Brown Manuscripts, Dane County Folder*, Wisconsin Historical Society Division of Archives, Madison, Wisconsin.

1929b Picnic Point Bay Site Dane County, State Historical Museum Records. In *Charles E. Brown Manuscripts, Dane County File*. Wisconsin Historical Society Division of Archives, Madison, Wisconsin.

1938 *Destruction of the University Picnic Grove Mounds, Oct 25-27, 1938*. Charles E. Brown Manuscripts Wisconsin Historical Society, Archives Division.

1941 Killing Muskrats. In *Charles E. Brown Manuscripts, Dane County File*, Wisconsin Historical Society Division of Archives, Madison, Wisconsin.

1943a Mexican Terra Cotta Figurines. In *Charles E. Brown Manuscripts, Dane County Folder*, Wisconsin Historical Society Archives Division, Madison, Wisconsin.

1943b Terra Cotta. In *Charles E. Brown Manuscripts, Dane County File*, Wisconsin Historical Society Archives Division, Madison, Wisconsin.
- Brown, C. E. and T. T. Brown
1928a Dane County University Grounds. In *Charles E. Brown Manuscripts, Dane County Folder*, Wisconsin Historical Society Division of Archives, Madison, Wisconsin.

1928b Dane County, Lake Mendota. In *Charles E. Brown Manuscripts, Dane County Folder*, Wisconsin Historical Society Archives, Madison, Wisconsin.

- Butler, J. D.
1876 Pre-Historic Wisconsin. In *Wisconsin Historical Collections*, pp. 80-101. vol. 7. State Historical Society of Wisconsin, Madison, Wisconsin.
- Cain, D. A.
2001 *A Phase I Archaeological Survey of the Howard Temin Lakeshore Path on the University of Wisconsin - Madison Campus in Dane County, Wisconsin*. Archaeological Research Incorporated Reports of Investigations No. 75, Middleton, Wisconsin.
- Chamberlin, T. C.
1877 *Geology of Wisconsin--Survey of 1873-1877*. volumes I-V. Published under the direction of the Chief Geologist by the Commissioners of Public Printing, Madison.
- Christiansen III, G. W.
2001a *A Phase I Archaeological Survey of 16 Acres Within the University of Wisconsin-Madison's Picnic point, City of Madison, Dane County, Wisconsin*. Archaeological Research Incorporated Reports of Investigations Number 64, Middleton, Wisconsin.

2001b *Results of a Phase I Archaeological Survey of a Portion of Eagle Heights Woods, University of Wisconsin - Madison, Dane County, Wisconsin*. Archaeological Research Incorporated Reports of Investigations No. 78, Middleton, Wisconsin.
- Christiansen III, G. W., A. L. Rosebrough and D. A. Cain
1999 *The Pine River Site (47Ri318): Results of a Phase III Data Recovery at a Prehistoric Multi-Component Site on the Pine River, Richland County, Wisconsin*. Archaeological Research, Inc. Submitted to Reports of Investigations. Copies available from 1.
- Crabtree, D.
1972 *An Introduction to Flintworking*. Occasional Papers of the Idaho State University Museum No. 28, Pocatello.
- Curtis, J. T.
1959 *The Vegetation of Wisconsin-An Ordination of Plant Communities*. The University of Wisconsin Press, Madison.
- Dirst, V.
1988 *Research in Pursuit of the Past at Governor Nelson State Park, Dane County, Wisconsin*. Bureau of Parks and Recreation, Department of Natural Resources, State of Wisconsin Publication No. PR502, Madison.

1995 *Stockbridge Harbor: A Late Woodland Village on Lake Winnebago*. Bureau of Property Management, Wisconsin Department of Natural Resources, Madison.

- Dockall, J. E.
1997 Wear Traces and Projectile Impact: A Review of the Experimental and Archaeological Evidence. *Journal of Field Archaeology* 24(3):321-331.
- Egan, K. C.
1995 Floral Analysis at the River Quarry (47DA768) and Murphy/S. Ziegler II (47Da-739/965) Sites. In *Archaeological Investigations of the Alternate Corridor Alignments for the Proposed Reconstruction of U.S.H. 12 Between Middleton and Sauk City, Dane County, Wisconsin*, edited by K. Hamilton, D. Tennessen, S. Slessman and M. Baumann. Museum Archaeology Program Research Report in Archaeology Number 46, Madison.
- Emerson, T. E.
1979 Prehistoric Seasonal Exploitation of the White-Tailed Deer in the Driftless Area of Wisconsin: An Example from Brogley Rockshelter (47-Gt-156). *The Wisconsin Archeologist* 60(3):278-292.
- Esarey, D.
1986 Red Ochre Mound Building and Marion Phase Associations: A Fulton County, Illinois Perspective. In *Early Woodland Archaeology*, edited by K. B. Farnsworth and T. E. Emerson, pp. 231-243. Center for American Archaeology Press, Kampsville.
- Finley, R. W.
1976 *Original Vegetation Cover of Wisconsin from U.S. General Land Office Notes (1:500,000 map)*. North Central Forest Experiment Station. Forest Service U.S.D.A., St. Paul, MN.
- Fladmark, K. R.
1979 Routes: Alternate Migration Corridors for Early Man in North America. *American Antiquity* 44(1):55-69.
- Fowler, M. L. and R. L. Hall
1978 Late Prehistory of the Illinois Area. In *Northeast*, edited by B. G. Trigger, pp. 560-568. Handbook of North American Indians. vol. 15. Smithsonian Institute, Washington.
- Fox, G. R.
n.d Wisconsin Dane County Madison Quadrangle. In *Charles E. Brown Manuscripts, Oversize Collection*, Division of Archives Wisconsin Historical Society Madison, Wisconsin.
- Goldstein, L. G.
1992 *Study Unit: Middle Woodland in Southeastern Wisconsin*. University of Wisconsin-Milwaukee, Archaeological Laboratories. Copies available from 112.

- Green, W. and S. Schermer
1988 The Turkey River Mound Group (13CT1). In *Archaeological and Paleoenviromental Studies in the Turkey River Valley, Northeastern Iowa*, edited by W. Green. Office of the State Archaeologist University of Iowa Press, Iowa City.
- Greenberg, J. H., C. G. I. Turner and S. L. Zegura
1986 The Settlement of the Americas. A Comparison of the Linguistic, Dental and Genetic Evidence. *Current Anthropology* 27:477-497.
- Griffin, J. B.
1964 The Northeast Woodlands Area. In *Prehistoric Man in the New World.*, edited by J. D. Jennings and E. Norbeck, pp. 223-258. University of Chicago Press,, Chicago.

1967 Eastern North American Archaeology: A Summary. *Science* 156:175-191.
- Hall, R. L.
1962 *The Archaeology of Carcajou Point*. 2 vols. 2 vols. University of Wisconsin Press, Madison.

1993 Red Banks, Oneota, and the Winnebago: Views From a Distant Rock. *The Wisconsin Archeologist* 74(1-4):10-79.

1997 *An Archaeology of the Soul: North American Indian Belief and Ritual*. University of Illinois Press, Urbana and Chicago.
- Hamilton, K., D. Tennessen, S. Slessman and M. Baumann
1995 *Archaeological Investigations of the Alternate Corridor Alignments for the Proposed Reconstruction of U.S.H. 12 between Middleton and Sauk City, Dane County, Wisconsin*. Research Report in Archaeology 46. Museum Archaeology Program, Madison.
- Haynes, C. V., Jr.
1964 Fluted Projectile Point: Their Age and Dispersion. *American Antiquity* 145:1408-1413.

1969 The Earliest Americans. *Science* 166:709-715.
- Hoffecker, J. F., W. R. Powers and T. Goebel
1993 Colonization of Beringia and the Peopling of the New World. *Science* 259:46-53.
- Hudson, C.
1976 *The Southeastern Indians*. The University of Tennessee Press, Knoxville.
- Hurley, W. M.
1975 *An Analysis of Effigy Mound Complexes in Wisconsin*. Anthropological Papers No. 59, Museum of Anthropology, University of Michigan, Ann Arbor.

Justice, N. D.

1987 *Stone Age Spear and Arrow Points of the Mid continental and Eastern United States*. Indiana University Press, Bloomington.

Karstens, K. and L. A. Rusch

1995 *Results of Archaeological Reconnaissance Survey for the University of Wisconsin Crew House, Madison, WI*. Midwest Archaeological Consulting Research Report Number 28. Midwest Archaeological Consulting, Madison, Wisconsin.

Kay, J.

1977 *The Land of LaBaye: The Ecological Impact of the Green Bay Fur Trade, 1634-1836*. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Wisconsin-Madison.

Kellogg, L. P.

1925 *The French Régime in Wisconsin and the Northwest*. State Historical Society of Wisconsin, Madison.

1935 *The British Regime in Wisconsin and the Northwest*. State Historical Society of Wisconsin, Madison.

Keyes, J. E. W.

1906 *History of Dane County*. Western Historical Association, Madison.

Kuehn, S. R.

1998 New Evidence for Late Paleoindian - Early Archaic Subsistence Behavior in the Western Great Lakes. *American Antiquity* 63(3):457-476.

Lapham, I. A.

1855 *The Antiquities of Wisconsin as Surveyed and Described*. Smithsonian Contributions to Knowledge 4. Smithsonian Institution, Washington, D.C.

Lawson, P. V.

1907 *Habitat of the Winnebago, 1632-1832*. Proceedings of the State Historical Society of Wisconsin, 1906, Madison.

Lippold, L. K.

1973 Animal Resource Utilization at Wisconsin Effigy Mound Sites. *The Wisconsin Archeologist* 54(3):135-152.

Lurie, N. O.

1960 Winnebago Prehistory. In *Culture in History: Essays in Honor of Paul Radin*, edited by D. Jenness, pp. 790-808. Columbia University Press, New York.

1978 Winnebago. In *Handbook of North American Indians*, edited by B. Trigger, pp. 690-709. vol. 15. 20 vols. Smithsonian Institution.

MacKinnon, J. J.

1985 *Report of the University of Wisconsin-Madison Campus Prehistoric Mound Assessment Project*. Office of the State Archaeologist, Wisconsin Historical Society.

Maher, R. F.

1959 Six Mile Creek: A Non-Pottery Site on Lake Mendota. *The Wisconsin Archeologist* 40(1):19-25.

Mallam, R. C.

1976 The Iowa Mound Builders: An American Myth 23:145-175.

Martin, L.

1965 *The Physical Geography of Wisconsin*. Third Edition. University of Wisconsin Press, Madison.

Martin, P. S.

1973 The Discovery of America. *Science* 179:969-974.

Martin, S. R.

1999 *Wonderful Power: The Story of Ancient Copper Working in the Lake Superior Basin*. Wayne State University Press, Detroit, Michigan.

Martin, S. R. and T. C. Pleger

1999 The Complex Formerly Known as Culture: The Taxonomic Puzzle of "Old Copper". In *Taming the Taxonomy: Toward a New Understanding of Great Lakes Archaeology*, edited by R. F. Williamson and C. M. Watts, pp. 61-70. Eastend Books and the Ontario Archaeological Society, Toronto.

Mason, C. I.

1986 The Historic Period in Wisconsin Archaeology. In *Introduction to Wisconsin Archaeology*, edited by J. S. W. Green, and A. Kehoe, pp. 181-206. *The Wisconsin Archeologist*. vol. 67(3-4).

1988 *Introduction to Wisconsin Indians: Prehistory to Statehood*. Sheffield Publishing Company, Salem.

Mason, R. J.

1981 *Great Lakes Archaeology*. Academic Press, New York.

1986 The Paleo-Indian Tradition. *The Wisconsin Archeologist* 67(3-4):181-206.

1997 The Paleo-Indian Tradition. *The Wisconsin Archeologist* 78(1-2):78-111.

McKern, W. C.

1928 *The Neal and McClaughry Mound Group*. Bulletin of the Public Museum of the City of Milwaukee, Vol. 3, No. 2.

1929 Archaeological Fieldwork in La Crosse, Vernon, and Crawford Counties. *Year Book of the Public Museum of the City of Milwaukee* 9:7-26.

1930 *The Kletzien and Nitschke Mound Groups*. Bulletin of the Public Museum of the City of Milwaukee, Vol. 3, No. 4.

1931 A Wisconsin Variant of the Hopewell Culture. *Bulletin of the Public Museum of the City of Milwaukee* No. 10(2):189-329.

McKern, W. C. and R. Ritzenthaler

1949 A Trait List of the Effigy Mound Aspect 30(2):39-48.

Meinholz, N. a. J. K.

1997 *The Statz Site: A Late Woodland and Archaic Workshop in Dane County, Wisconsin*. Archaeology Research Series Number 5, Museum Archaeology Program, State Historical Society of Wisconsin, Madison.

Meltzer, D. J.

1995 Clocking the First Americans. *Annual Review of Anthropology* 24:21-45.

1997 Monte Verde and the Pleistocene Peopling of the Americas. *Science* 276(5313):754-755.

Morrow, T.

1984 *Iowa Projectile Points*. A Special Publication of the Office of the State Archaeologist, University of Iowa, Iowa City.

1994 A Key to the Identification of Chipped-Stone Raw Materials Found on Archaeological Sites In Iowa. *Journal of the Iowa Archeological Society* 41:108-129.

Munson, P. J.

1982 Marion, Black Sand, Morton, Havana Relationships: An Illinois Valley Perspective. *The Wisconsin Archeologist* 63(1):1-17.

Nero, R.

1955 Surface Indications of a Possible Early Archaic Camp-Site in Wisconsin. *The Wisconsin Archeologist* 36(4):128-146.

Overstreet, D. F.

1991 Paleoindian Study Unit: Region 9, Southeastern Wisconsin. *The Wisconsin Archeologist* 72(3-4): 265-366.

1993 *Chesrow: A Paleoindian Complex in the Southern Lake Michigan Basin*. Great Lakes Archaeological Press, Milwaukee.

1994 *FY 1995 S & P, Ice Age Landscapes of Racine and Kenosha Counties, Wisconsin*. Great Lakes Archaeological Research Center, Inc. Copies available from 366.

1997 Oneota Prehistory and History. *The Wisconsin Archeologist* 78(1-2):250-297.

2000 Cultural Dynamics of the Late Prehistoric Period in Southern Wisconsin. In *Mounds, Modoc, and Mesoamerica: Papers in Honor of Melvin L. Fowler.*, edited by S. R. Ahler. Illinois State Museum Scientific Papers No. 28, Springfield.

Parmalee, P. A.

1959 Animal Remains from the Raddatz Rockshelter, SK5, Wisconsin. *The Wisconsin Archeologist* 40(2):83-90.

Paull, R. K. and R. A. Paull

1977 *Geology of Wisconsin and Upper Michigan--Including Parts of Adjacent States*. Kendal/Hunt Publishing Company, Dubuque, IA.

Peet, S. D.

1890 *Prehistoric America--Vol. 2, Emblematic Mounds and Animal Effigies*. American Antiquarian Office, Chicago.

Phillips, P.

1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955*. Papers of the Peabody Museum of Archaeology and Ethnology No. 60. Peabody Museum.

Phillips, P., J. A. Ford and J. B. Griffin

1951 *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947*. Peabody Museum Papers, Vol. 25, Harvard University, Cambridge.

Pleger, T. C.

2000 Old Copper and Red Ocher Social Complexity. *Midcontinental Journal of Archaeology* 25(2):169 - 190.

Prufer, O. H.

1964 *Ohio Hopewell Ceramics: An Analysis of Extant Collections*. Museum of Anthropology, University of Michigan Anthropological Papers No. 34. University of Michigan, Ann Arbor, Michigan.

Richards, J. D.

1992 *Ceramics and Culture at Aztalan, A Late Prehistoric Village in Southeast Wisconsin*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Wisconsin-Milwaukee.

Ritzenthaler, R.

1967a A Cache of Paleo-Indian Gravers from the Kouba Site. *The Wisconsin Archeologist* 48(3):261-262.

1967b A Probable Paleo-Indian Site in Wisconsin. *American Antiquity* 32(2):227-229.

1970 Clovis and Sandia-Like Points From Dane County, Wisconsin. *The Wisconsin Archeologist* 51(1):35-36.

Roberge, R.

1938 Letter to Charles E. Brown. In *Unpublished Charles E. Brown Manuscripts, Dane County Box*, Archives Division, Wisconsin Historical Society, Madison, Wisconsin.

Rosebrough, A. L.

2003 *A Phase I Archaeological Survey of Muir Knoll, University of Wisconsin - Madison, Dane County, Wisconsin*. Wisconsin Historical Society OSA Technical Report Series 03-001, Madison, Wisconsin.

Rowe, C.

1956 *The Effigy Mound Culture in Wisconsin*. Milwaukee Public Museum Publications in Anthropology No. 3., Milwaukee, Wisconsin.

Salkin, P. H.

1986 The Lake Farms Phase: The Early Woodland Stage As Seen From The Lake Farms Archaeological District. In *Early Woodland Archeology*, edited by K. B. Farnsworth and T. E. Emerson, pp. 92-120. Center for American Archaeology Press, Kampsville, IL.

1987 A Reevaluation Of The Late Woodland Stage In Southeastern Wisconsin. *Wisconsin Academy Review* 33(2):75-79.

1993 *Mitigation Excavations in the Kekoskee Archeological District in Dodge County*. Archaeological Consulting and Services Report of Investigations No. 700, Verona.

2003a *An Archaeological Survey of the Proposed Domestic Water Main Corridor on the Campus of the University of Wisconsin - Madison in Madison, Dane County, Wisconsin*. Archaeological Consulting and Services Reports of Investigations No. 1496, Verona, Wisconsin.

2003b *An Archaeological Survey of the Proposed Madison Gas and Electric Lake Water Force Main of the Campus of the University of Wisconsin-Madison, Madison, Dane County, Wisconsin*. Archaeological Consulting and Services, Inc Report of Investigation No. 1486. Archaeological Consulting and Services, Inc., Verona, Wisconsin.

Salzer, R. J.

1974 The Wisconsin North Lakes Project: A Preliminary Report. In *Aspects of Upper Great Lakes Anthropology-Essays in Honor of Lloyd A. Wilford*, edited by E. Johnson, pp. 40-54. Publications of the Minnesota Historical Society, St. Paul.

n.d *The Waukesha Focus: Hopewell In Southeastern Wisconsin*. Unpublished Manuscript, The Logan Museum, Beloit College, Beloit.

Sanborn, M. P. and S. J. Eaton

1980 Surface Collections at Horseshoe Ridge. *The Wisconsin Archeologist* 61(4):330-346.

Smith, A. E.

1973 *The History of Wisconsin, Volume 1: From Exploration to Statehood*. State Historical Society of Wisconsin, Madison.

Spector, J.

1977 Winnebago Indians and Lead Mining: A Case Study of the Ethnohistoric Approach in Archaeology. *Midcontinental Journal of Archaeology* 2(1):131-137.

Stevenson, C., R. F. Boszhardt, M. C. R., P. H. Salkin, T. C. Pleger, J. L. Theler and C. Arzigian

1997 The Woodland Tradition. In *The Wisconsin Archaeologist* 78(1-2). edited by R. A. Birmingham, Carol I. Mason and James B. Stoltman, pp. 140-201.

Stoltman, J. B.

1986 The Archaic Tradition. *The Wisconsin Archaeologist* 67(3-4):207-238.

1990 The Woodland Tradition in the Prairie Du Chien Locality. In *The Woodland Tradition in the Western Great Lakes: Papers Presented to Elden Johnson.*, edited by G. Gibbon. vol. Publications in Anthropology No. 4. University of Minnesota, Minneapolis.

1991 A Reconsideration of Fluted Point Diversity in Wisconsin. *The Wisconsin Archeologist* 72(3-4):245-264.

1997 The Archaic Tradition. *The Wisconsin Archeologist* 78(1-2):112-139.

Storck, P. L.

1974 Some Aspects of Effigy Mound Subsistence and Settlement Patterns During the Late Woodland Period in Wisconsin. *Arctic Anthropology* 11(Supplement):272-279.

Sullivan III, A. P. and K. C. Rozen

1985 Debitage Analysis and Archaeological Interpretation. *American Antiquity* 50(4):755-779.

Tanner, H. H. (editor)

1987 *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman, OK.

Theler, J. L.

1987 *Woodland Tradition Economic Strategies*. Report, Office of the State Archaeologist, University of Iowa, Iowa City. Copies available from 117.

Thwaites, R. G.

1904 Our Prehistoric Earthworks - A Suggestion to the Regents. *The Wisconsin Engineer* 8(4):180-186.

Titmus, G. L. and J. C. Woods

1986 An Experimental Study of Projectile Point Fracture Patterns. *Journal of California and Great Basin Anthropology* 8(1):37-49.

Viereg and Dobrunz

1934 University Farms: University of Wisconsin. University of Wisconsin - Madison, Madison, Wisconsin.

Wendt, D.

1985 Paleo-Indian Site Distribution in the Yahara River Basin of Wisconsin. *The Wisconsin Archeologist* 66(3):243-264.

Whiteford, A. H.

1949 A Report on the Outlet Site on Lake Monona. *The Wisconsin Archeologist* 30(1):22-35.

Williams, S.

1963 The Eastern United States. In *Early Indian Farmers and Villages and Communities*, edited by W. Haag, pp. 267-325. National Park Service, Washington D.C.

Winters, H. D.

1969 *The Riverton Culture*. Illinois State Museum Report of Investigations No. 13. Illinois State Museum, Springfield.

Wittry, W. L.

1958 *Archaeological Studies of Five Wisconsin Rockshelters*. Ph.D. dissertation, University of Wisconsin, Madison.

1963 The Bell Site, Wn 9: An Early Historic Fox Village. *The Wisconsin Archeologist* 44(1):1-58.

Wyatt, B.

1986 *Cultural Resource Management in Wisconsin: Volume 2, A Manual for Historic Properties*. Historic Preservation Division, State Historical Society of Wisconsin.

