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Distribution, Function, And Value Of Parowan Valley Projectile Points

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DISTRIBUTION, FUNCTION, AND VALUE OF PAROWAN VALLEY PROJECTILE POINTS

by

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of a thesis submitted by

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This thesis has been read by each member of the following graduate committee and by majority vote had been found satisfactory.

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BRIGHAM YOUNG UNIVERSITY

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ABSTRACT

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This thesis primarily addresses the quantities and distributions of Fremont projectile points in the Parowan Valley. First, I review previous research performed in Parowan Valley and outline currently accepted projectile point analysis and typology methods. I also review ethnographic data surrounding the function and value of projectile points. Then, I provide the results of an analysis of all projectile points in the Parowan Valley Archaeological Project collection. I note the large amount of projectile points in this collection and compare it to projectile point counts from other large Fremont sites. I also note chronological patterns in Parowan Valley using projectile points as relative temporal markers. With this data and the data provided by other theses on Parowan Valley, I argue that sites in Parowan Valley served as centers for aggregation and other socio-economic practices in the Late Formative Period.

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1 INTRODUCTION

During the Formative Period, a hunter-gatherer and farming culture inhabited the Great Basin and Colorado Plateau of Western North America (Talbot 2000). Called the Fremont by archaeologists, this culture is defined in the archaeological record by several unique items of material culture (Adovasio 1980; Geib 1996; Janetski and Talbot 2000a; Madsen 1989). The emphasis on hunting in Fremont subsistence strategies has led to consistent recovery of chipped stone artifacts (especially projectile points) at Fremont sites.

Due to their imperishable nature, chipped stone artifacts are often the most prevalent and informative artifacts recovered from archaeological sites. Chipped stone assemblages provide valuable insights into technological, socio-economic, and subsistence strategies of many ancient cultures. Throughout the world, chipped stone artifacts are analyzed to enrich knowledge of past life-ways. Particular types of stone tools like projectile points provide archaeologists with perspectives regarding subsistence, tool composition, raw material acquisition, and site chronology.

Projectile points play a particularly important part in the archaeology of the American Great Basin. Due to variations of projectile point size, knapping technology, and toolstone preference, inferences have been made regarding the subsistence and mobility of the inhabitants in and around the Great Basin (Holmer 1980; Holmer and Weder 1986).

PURPOSE

In this thesis, I present the results of an analysis of all projectile points collected by the University of California, Los Angeles and Southern Utah University during excavations at Parowan Valley in Utah. I provide descriptive and distributional data on the projectile points from three large Fremont sites in Parowan Valley: Paragonah (42In43), Parowan (42In100), and Summit/Evans Mound/Median Village (42In40/42In44/42In124). In addition to provision of this data, I interpret it in an attempt to make inferences regarding the socio-economics and chipped-stone technologies of the Parowan Valley Fremont. These interpretations may also contribute to discussions regarding the chronology of sites in Parowan Valley, specifically due to the temporal diagnostic nature of projectile points. I will also include data gathered by the University of Utah during its excavations in Parowan Valley (Berry 1972a; Dodd 1982; Marwitt 1971, 1972b and 1974).

The remainder of this chapter provides a history of the research on and interpretations of Fremont culture. I also discuss past and present archaeological work associated with Parowan Valley. Finally, I present the research questions posed and discussed by this thesis. In chapter 2, I discuss the general research of chipped stone technologies and how this research will be implemented and applied to the research of this thesis. I also outline projectile point typologies established and accepted in the Great Basin, specifically those common among the Fremont. This chapter also includes a discussion of the potential role that projectile points may have played in socio-economic practices of gambling and trade in small-scale societies. In chapter 3, I discuss sampling and analysis methods of the chipped stone assemblage acquired by UCLA and SUU. I will also discuss the general results of my analysis including total quantities and provenience.

In chapter 4, I discuss and interpret my data. I also consider the provenience of the projectile points, and correlate this data with theories regarding craft production and trade. Lastly, I will revisit my research questions, and provide final discussions and interpretations.

DEFINING THE FREMONT

Definitions of the Fremont are often muddled and contradictory. David Madsen states that the Fremont are "characterized by variation and diversity and are neither readily defined nor easily encapsulated within a single description" (Madsen 1989:2-3). Despite this statement, Madsen attempts to define the Fremont with the simplistic application of a formula based on artifacts: if a site contains distinctive grayware ceramics it is most likely a Fremont site (Madsen 1989:3-4). This contradiction is not limited to Madsen; it prevails throughout most of the literature on the Fremont. Researchers apply variant models to Fremont subsistence, settlement, and technology and then use specific styles of artifacts to define "Fremont". For an extensive discussion on debates surrounding definitions of the Fremont, see Watkins (2006: 14-27). For the purposes of this thesis, my definition of the Fremont will consist of a hybrid of the aforementioned variations.

"Fremont" is a term describing a relatively sedentary foraging and farming lifeway located in the eastern Great Basin and northern Colorado Plateau (see Figure 1.1) between AD 1 and AD 1400 (Talbot 2000). The Fremont possessed a unique material culture that includes ceramic styles, unfired clay figurines, dew-claw moccasins, rock art, and basketry (Adovasio 1980; Madsen 1989). The Fremont also invested in complex residential and storage structure architecture (Marwitt 1986; Talbot et al. 1998).

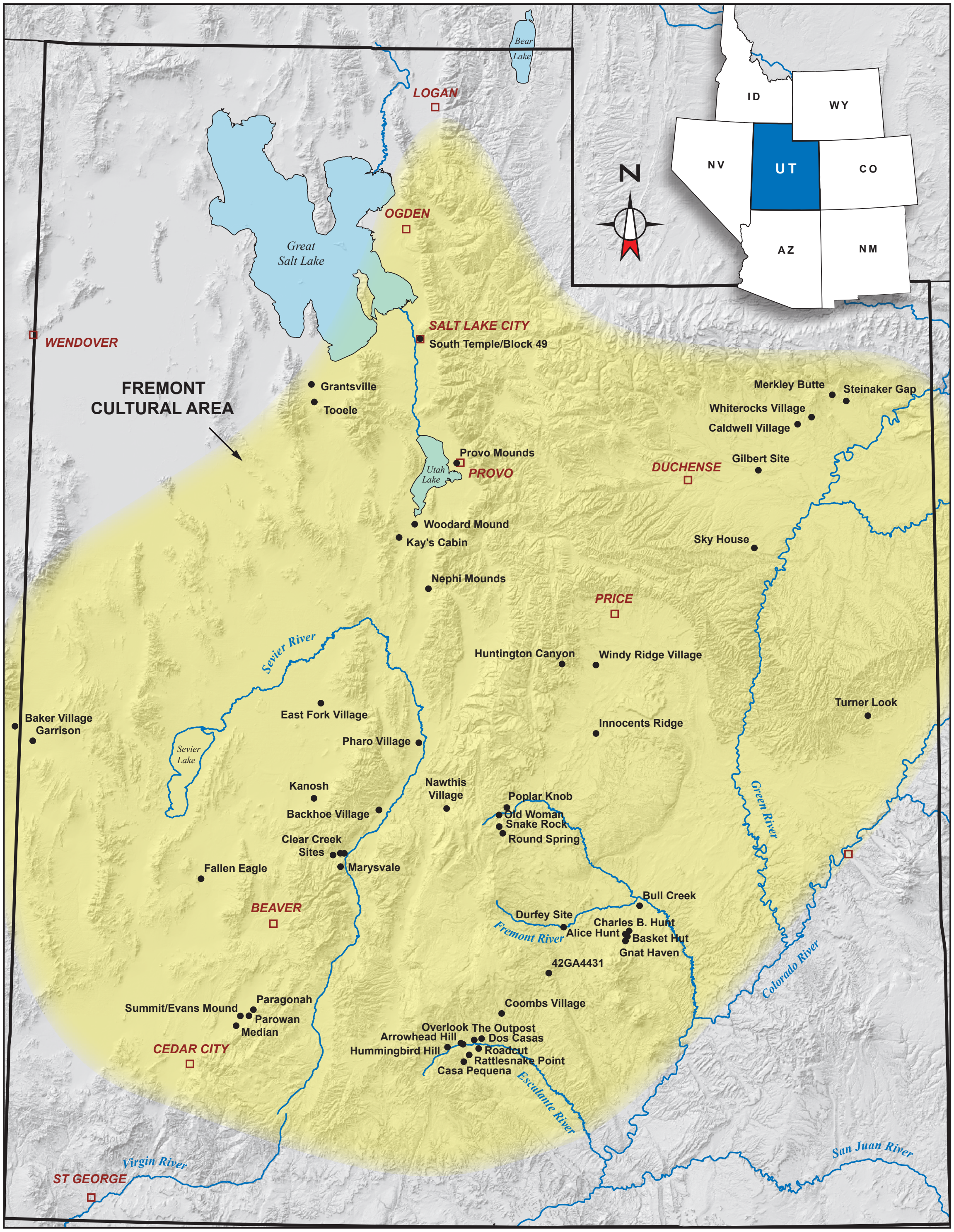


Figure 1.1. Fremont culture area.

During Fremont occupation of the eastern Great Basin and the northern Colorado Plateau, the Fremont life-way underwent many changes. Through time, the Archaic forager roots of the Fremont branched into a strategy based on the combination of horticulture and foraging. These changes occurred in "a differential rate depending on localized environmental and cultural factors" (Talbot et al. 1998:34).

Some transformations of the Fremont life-way are nicely highlighted by Janetski (1993), in which he describes some of the catalysts for change; specifically the arrival of maize from the south (200 BC), the introduction of bow and arrow technology (AD 200), and the development of ceramic technology (AD 500).

Due to regional variation in strategies within the Fremont area, discussions are often limited to strict geographical boundaries. Throughout the Fremont area, differences in subsistence, architecture, and technology are compared and contrasted with one another. This thesis is no exception. Between AD 1100-AD 1300, Parowan Valley was occupied by the Fremont. Archaeology performed in Parowan Valley suggests that the Parowan Valley Fremont flourished during the Late Formative Period and utilized horticulture, high investment architecture, and part-time craft production.
For the balance of this thesis, I will discuss the Fremont of Parowan Valley and their chipped stone technologies.

Fremont Research and Debates

For the past 30 years, the majority of Fremont research has focused on subsistence. Subsistence has been the driving force behind reconstructing and interpreting Fremont life-ways. David Madsen and Steven Simms define the Fremont as a mixed group of sedentary farmers, forager-farmers, and full-time foragers (Madsen 1979, Madsen and Simms 1998). Critics of the variable subsistence perspective suggest that the

Fremont were a more a sedentary group dependant on farming for subsistence (Janetski and Talbot 2000b; Talbot 1996).

Subsistence research has provided an important foundation for understanding the Fremont. Prior to the subsistence studies of Madsen and others, no systematic collection of data on the Fremont existed. These studies prepared a way for research in numerous areas like community organization, socio-economics, and technology studies (Janetski et al. 2000b)

Due to the small scale of Fremont culture, applying Service's (1962) social classifications of band, tribe, or chiefdom is difficult, but the large size of many Fremont villages, raises questions concerning craft production, inter and intra-group distribution of goods, kinship relations, and raw material acquisition. Fremont studies continue to provide insights into the life-ways of small-scale societies in the Great Basin. Questions regarding subsistence, technology, and social organization remain largely up for debate and there is a need, if possible, for more definitive answers.

PAROWAN VALLEY

Parowan Valley is located approximately 20 miles northeast of Cedar City in Southwestern Utah (Figure 1.2). Vegetation in the valley includes sagebrush and plants of the shadscale community. Parowan Valley is bordered south and east by the Hurricane Cliffs and north and west by the Black Mountains. Vegetation in the Hurricane Cliffs and Black Mountains shifts consistently with elevation from sagebrush and shadscale to pinyon pine and juniper, and conifer and aspen communities (Berry 1972). The Hurricane Cliffs and the Black Mountains once provided water into Parowan Valley and probably the Little Salt Lake via drainages and creeks now diverted for agricultural purposes.

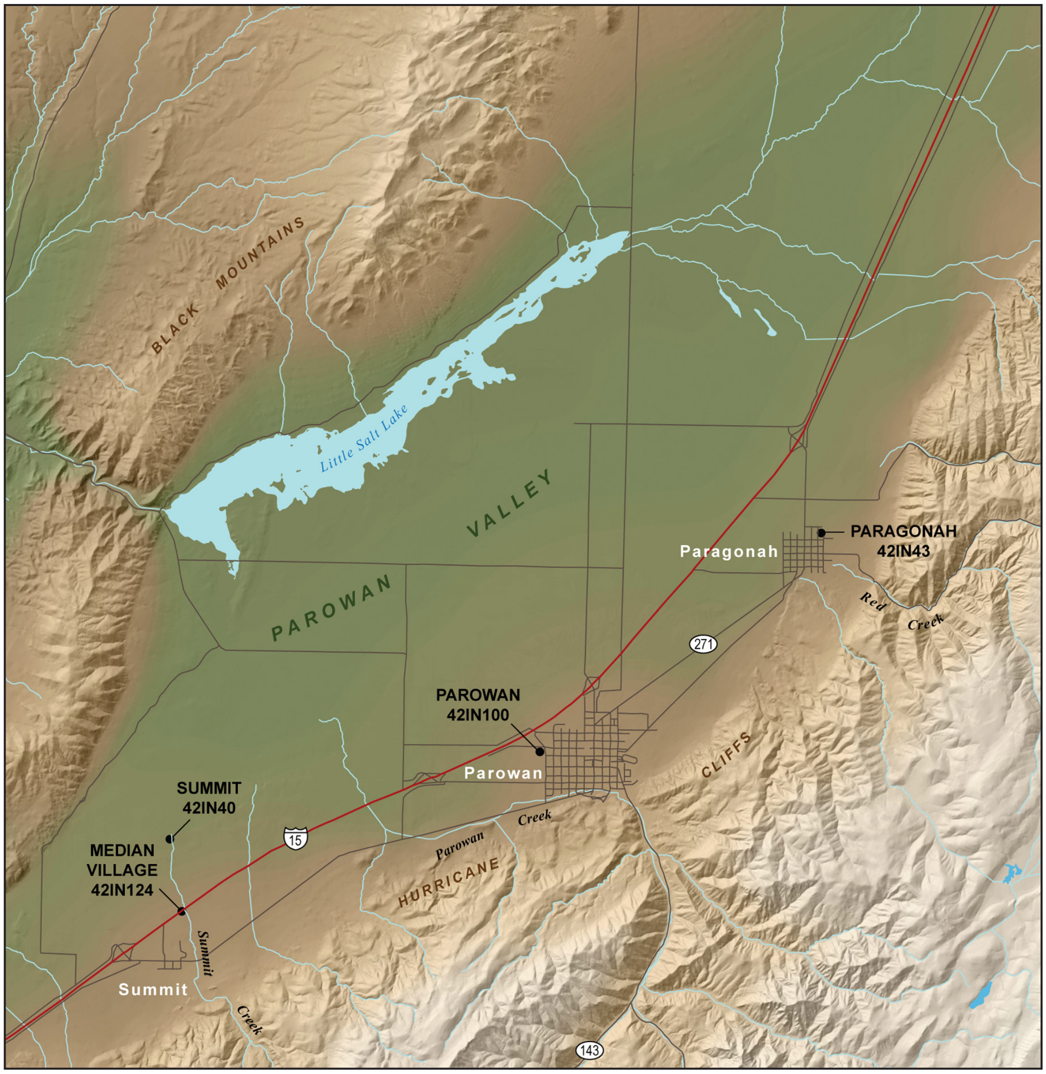


Figure 1.2. Map of Parowan Valley

The sites discussed in this thesis, Paragonah, Parowan, and Summit/Evans Mound/ Median Village are situated near or in the current towns of Paragonah, Parowan, and Summit. These sites are separated by approximately 15 km and are in close proximity to creeks in the Hurricane Cliffs, specifically Red, Parowan, and Summit Creeks.

European-Americans in Parowan Valley

With the influx of European-Americans into Utah in the mid to late 1800s, Parowan Valley became a source of intrigue and fascination to settlers, historians, and scientists. Early observations of Parowan Valley alluded to the size and complexity of cultural deposits found therein. In a letter dated 1851, LDS Church President Brigham Young wrote:

> We visited the ruins of an ancient Indian village on Red Creek, where we found quantities of broken, burnt, painted earthenware, arrow points, adobes, burnt brick, a crucible, some corn grains, charred cobs, animal bones, and flint stones of various colors. The ruins were scattered over a space about two miles long and one wide. The buildings were about 120 in number, and were composed apparently of dirt lodges, the earthen roofs having been supported by timbers, which had decayed or been burned, and had fallen in, the remains thus forming mounds of an oval shape and sunken at the tip. One of the structures appeared to have been a temple or council hall, and covered about an acre of ground. (Quoted in Janetski 1997:102).

This description, albeit detailed, is most likely biased by Young's cultural and religious perceptions, specifically in regards to his appellation of one of the mounds as a temple or council hall. Young's approximations of site size and notations of artifact content however, do shed light on the scale and complexity of sites in Parowan Valley prior to their destruction by agriculture, looting, and archaeological excavations.

First Archaeology in Parowan Valley

Early archaeological work in Parowan Valley was, for the most part, linked to United States Geological Surveys. (for an in-depth discussion on the work in Parowan Valley, see Hall 2008) In 1872 and 1874, a USGS was organized in Parowan Valley, its principle intent to acquire Native American human remains. Survey leader Lt. George Wheeler and crew observed "400 to 500 mounds" near the current town of Paragonah (Janetski 1997:103). Surveys and expeditions into Parowan valley increased in the late 1800s and early 1900s as interest grew in amassing ancient artifacts. Some of the first excavation and artifact collection in Parowan Valley was performed by Edward Palmer.

Palmer provided artifact collections to numerous institutions like Harvard's Peabody Museum and the Smithsonian (Janetski 1997).

In 1893, Don Maguire of the Smithsonian Institution and Henry Montgomery of the University of Utah performed concurrent and independent excavations in Parowan Valley. Maguire's motivation was to provide artifacts for the 1893 World's Columbian Exposition while Montgomery's was to investigate and test the idea that the sites in Parowan Valley were connected to a large Southwest network of Mesoamerican Aztec outliers (Montgomery 1894:305).

Maguire and Montgomery's excavation methods were as different as their motivations. Montgomery criticized Maguire's "plow and scraper" techniques and contrasted them with his more meticulous use of "shovel, trowel, and brush" (Montgomery 1894: 303). Montgomery's careful methods represent one of the first scientific excavations in Parowan Valley.

In the early 1900s Neil Judd, a professionally trained archaeologist, worked in Paragonah. His field reports of 1915, 1916, and 1917 were invaluable in shaping future research performed in Parowan Valley. In 1915, Judd and his crew exposed four of fifty or so observed mounds, two of which contained coursed adobe architecture. In 1916, Judd excavated one additional mound, revealing 14 more adobe structures. The excavation of Judd's "Big Mound" at Paragonah in 1917 revealed 43 adobe structures, three pithouses, and "numerous court shelters" (Judd 1926:69). In a synthesis of his work, Judd explained that "the culture represented by the major dwellings, whose walls were constructed entirely of adobe, is certainly Puebloan, yet it differs from that of recognized Pueblo areas" (Judd 1926:22). This designation of the Fremont culture as Puebloan or some branch thereof, continued well into the 1950s.

University of California, Los Angeles

In 1954, Clement W. Meighan of UCLA supervised research and excavations in Parowan Valley for 10 field seasons. The focus of these excavations were the sites of Paragonah, Parowan, and Summit. For the most part, the results of Meighan's work remains largely unpublished. In 1956 however, Meighan summarized the 1954 excavations in a report published by the University of Utah. During the 10 field seasons Meighan and UCLA worked in Parowan Valley, a sizable amount of artifacts, site reports, excavation notes, and photographs were collected.

College of Southern Utah

In the 1960's, Richard Thompson of the College of Southern Utah (now Southern Utah University or SUU) began excavations at the site of Summit. Many of the details of his excavations are unknown due to the loss of the excavation notes, but an artifact catalog providing information concerning the artifacts and their provenience does exist (Hall 2008). This catalog is an invaluable aid in helping reconstruct Thompson's work at Summit. Thompson worked primarily at the site of Median Village, a site so close in proximity to Summit that this research and analysis considers Median Village a part of Summit. Thompson's work in Parowan Valley yielded few publications, but his knowledge and expertise facilitated the University of Utah Field School's later excavations in Parowan Valley.

The University of Utah

The University of Utah spent four field seasons excavating at Summit, primarily at Evans Mound and Median Village, considered part of the Summit site. These field seasons were reported primarily in the graduate work by Michael S. Berry (Berry 1972a, 1972b, and 1974), (Dodd 1982; Marwitt 1970). These excavations were well reported and provide in-depth insights into the work preformed by the University of Utah.

Brigham Young University and the Parowan Valley Archaeological Project

In 1999, Joel C. Janetski and Richard K. Talbot of the Department of Anthropology and Office of Public Archaeology at BYU evaluated the archaeological work performed by UCLA in Parowan Valley. This evaluation gave rise to the Parowan Valley Archaeological Project (PVAP). The PVAP involves professionals and students from BYU, the Fowler Museum of Cultural History at UCLA, and the Archaeology Repository at SUU. The goals of the PVAP are to research sociopolitical, economic, and subsistence issues related to the Fremont through the examination of the Parowan Valley collections amassed by UCLA and SUU during their aforementioned field work (Janetski et al. 2001). The majority of the data from these collections, including excavation notes, artifacts, photographs, maps, and artifact catalogs remain unpublished. It is also another goal of the PVAP to provide access to the aforementioned data to contribute to the greater body of literature regarding the Fremont culture.

BYU obtained the collection of artifacts and field notes used by the PVAP from the Fowler Museum of UCLA in 2001. Joan Meighan, widow of the late Clement W. Meighan, also provided information and photographs from her husband's personal records. Students involved with the PVAP spent more that four years extracting and digitizing data from excavation notes, maps, and artifact catalogs. The goal of extracting this information was to incorporate it into a system based on defining archaeological features currently in use at BYU. This process of extraction and translation has been laborious and at times confusing, but it has provided useful information concerning the provenience of artifacts, the number of structures at each site in Parowan Valley, and the excavation strategies used by UCLA and SUU. The ultimate goal of the project is to publish the results of all of the previously described work so that the data from these archaeologically rich sites can be easily accessed by researchers (Hall 2008).

Chronology in Parowan Valley

The multiple excavations in Parowan Valley have contributed several radiocarbon dates. These dates have established a chronology for the sites in Parowan Valley. Radiocarbon dates were acquired by the University of Utah (Berry 1972; Dodd 1983; Marwitt 1972) and more recently, by Brigham Young University and The Office of Public Archaeology. Numerous wood and charcoal samples were also sent to laboratories by BYU and OPA in order to gain tree-ring dates.

The combined efforts of the University of Utah, BYU, and OPA yielded a total of 37 radiocarbon dates and seven tree-ring dates in Parowan Valley. After calibration using 2 sigma values, dates from Parowan Valley range between AD 615 and AD 1629 (Appendix A). This is a broad range, and it is likely that the early dates are outliers or were affected by old wood issues and or sampling techniques. The late date of AD 1629 is possible due to the presence of some Late Prehistoric artifacts, but its provenience within a Fremont pithouse casts some doubts regarding its accuracy. It must also be noted that these dates are radiometric and were reported by Berry (1972) and Marwitt (1970).

When the outliers are disregarded, the majority of dates from Parowan Valley range from AD 900 to AD 1350. At the Paragonah site, nine AMS dates and seven tree-ring dates were acquires. These dates show a temporal range from the late 900s through the late 1200s. Four AMS dates from Parowan range from the late AD 900s through the mid AD 1100s. These dates were acquired from charred corn cobs recovered from residential structures, and suggest that the excavated portions of the Parowan site were occupied during this temporal range. Finally, four AMS dates from the Summit site demonstrate a temporal range from the early 1000s to the mid 1100s. The remaining dates from Summit are radiometric (Berry 1972; Marwitt 1970) and indicate a much broader chronological range between the late 800s and the mid 1300s. A portion of radiometric dates from Summit have been disregarded due to their inconsistencies with provenience.

RESEARCH QUESTIONS

Can quantities and distributions of projectile points from Parowan Valley provide clues concerning site function and chronology?

A cursory examination of the chipped stone assemblages recovered by UCLA, and SUU suggests that they are very large. These assemblages consist of 17 boxes full of hammerstones, drills, flake tools, and projectile points. Projectile points are numerous in all of the chipped stone assemblage boxes. In order to answer questions about projectile point quantities and site function, other Fremont sites must be compared to the sites in Parowan Valley. This cross-site comparison strategy poses some issues that must be considered.

The first issue to consider is sampling strategy. Differences in excavation methods may prove problematic when comparing several sites. The excavation strategies implemented through time in Parowan Valley by UCLA, SUU, and the University of Utah vary through time. Placing other large Fremont sites into the mix will further demonstrate variant sample strategies. Despite these differences, however, a cross-site comparison is necessary.

The second issue to consider with cross-site comparison is the variations in site size and temporal occupation. The obvious conclusion with this issue is that if a large site were occupied for a long period of time, it would be expected to contain a larger material record that a small site occupied for a short period of time.

These issues must be addressed and resolved. The issue regarding sample strategies will be difficult to resolve due to the amount of time lapsed between Parowan Valley excavations, the analysis of the PVAP collection, and the overall destructive nature of excavation. However, through the efforts of several involved in the PVAP at BYU, some semblance of uniformity with accepted excavation methods and strategies has been applied to the provenience of artifacts recovered from Parowan Valley.

Resolution of varying Fremont site size and temporal occupation may also prove difficult, but if sites of similar size and temporal occupation are considered, some in-roads could be made to facilitate cross-site comparisons. If the data from each site are standardized in a consistent method, differences in site size and chronology may not be obstacles.

Spatial distributions of projectile points from Parowan Valley will be considered in an attempt to understand the function of the Paragonah, Parowan, and Summit sites. These distributions will be scrutinized for areas of projectile point concentration. In addition, the locations of specific projectile point types will be considered and used as relative temporal markers in association with radiocarbon dates in order to discuss the chronology of sites in Parowan Valley.

Were projectile points in Parowan Valley being produced for a function beyond arrow use?

Previous research on the subject of production and distribution of goods in Parowan Valley have yielded important information. Hall (2008) demonstrated that Parowan Valley had a significant number of gaming pieces, indicating a popularity of gambling, or at least in-situ production of gaming pieces. Watkins (2006) and Jardine (2007) demonstrated that production of ceramics and the production and trade of exotics were common practices in

Parowan Valley. I propose that a large number of projectile points, in association with the amount of gaming pieces, ceramic production, and trade of exotics suggests Parowan Valley may have served as a small scale production area. I also propose that some of the projectile points recovered from Parowan Valley may have been used as currency in gambling. In order to answer this question, literature regarding production among small-scale societies must be incorporated and discussed. Ethnographic data regarding alternative uses of projectile points and arrows must also be considered. The use of projectile points and arrows beyond their most basic function as missiles will be discussed by using comparative data. These data demonstrate that projectiles may have been employed in extra-missile functions such as non-projectile cutting and digging tools in forager toolkits, currency in gambling, and markers of prestige.

2 THEORY AND METHOD

Regional distribution of projectile point types and point chronologies in the Great Basin were also incorporated into the organization of analysis methods. These issues are discussed below with a discussion regarding the socio-economics of projectile point production and use.

In addition to a general and regional discussion of research and theory about chipped stone tools, issues regarding projectile point analysis and classification in the Great Basin are discussed. A detailed outline of methods used in the analysis of the Parowan Valley chipped stone assemblage is provided near the end of this chapter.

Theories and Research Concerning Projectile Points

At the basic functional level, projectile points were utilized to increase missile penetration providing higher potential for game procurement. Regional preference, raw material variability, and prey all influenced the type and style of projectile points. Projectile point technology is vital to the subsistence strategies of foragers. Fundamentally, projectile points were used in the acquisition of game to enhance diets and provide valuable raw materials harvested from the animal.

The basic formula that projectile points equal hunting is easy to understand and quantify. Is it possible that points can serve as more than mere index fossils elaborating issues of subsistence and chronology? A foray into the possible social issues surrounding projectile points and their multiple functions may prove useful.

Beyond Projectiles: Multi-Functional Toolkits

Unlike ceramics and other artifacts associated with small-scale societies, it is difficult to attach additional value, beyond their role as hunting tools, to projectile points. It is possible, however, that projectile points were used for other purposes. Ethnographies serve as one of the best sources on the subject of hunter-gatherer toolkit functions. Russell Greaves observed the hunting and foraging practices of the Pumé, a small foraging group in Venezuela (Greaves 1997:287-320). An interesting observation made by Greaves is that bows, arrows, and projectile points all had multiple functions beyond propelling missiles and killing game (Greaves 1997:290). Greaves' study documents the relationship between the temporal and geographic length of hunting expeditions and the level of multifunction applied to bows and arrows. Greaves determined that with long hunting trips, the multiple uses of bows and arrows increased (Greaves 1997:312). At the inception of the hunt, bows and arrows are considered to be singular in their function. As distance and different resources were encountered, the Pumé would modify bows by using them as clubs and digging sticks. Arrows were also used as small thrusting spears to catch rodents and fish or used as butchering tools when large game was acquired (Greaves 1997: 301-310). These uses, while limited to subsistence strategies illustrate the possibility that certain elements of small-scale society toolkits, particularly the projectile technologies of bows, arrows, and arrowheads, could have multiple functions.

Socio-Economics of Projectile Points

The examples provided by Greaves (1997) demonstrate that in the confines of a hunting tool kit, certain tools have multiple uses. Is it possible, therefore that projectile points could value beyond hunting implements assigned to them.

In his ethnographies of the Zuni, Frank Cushing (1883) demonstrated that projectile points carried symbolic meaning with functions beyond that of utilitarian tools of hunting or warfare. Cushing discusses several Zuni fetishes associated with the Bow Priesthood and also considers the fetishes of prey gods onto which projectile points were fastened.

In a discussion of Hohokam funerary ritual, Watkins and Rice (2009) discuss the presence of projectile points in Hohokam inhumations. Using Cushing's (1883) observations of the treatment of projectile points by the Zuni, Watkins and Rice propose that the quantity of projectile points in a burial could illustrate the differences between mere hunting utilitarianism and more symbolic ornamental or fetishistic behavior. In other words, three or more projectile points might a represent the remains of a quiver related to hunting activities, while a single point could represent the remains of a Zuni-type fetish or other forms of sympathetic magic.

Other ethnographies have illustrated the spectrum of socio-economic roles played by arrows and projectile points among some groups. It is often the case that projectile points represent cultural contexts and regionally bound social groups (Weissner 1983; Knecht 1997:6). Wilmsen and Roberts make a case for the socio-economic function of projectile points stating: "Projectile points may serve as diagnostic items not because they perform esoteric or especially significant extractive functions…but because they are products of manufacturing processes that inherently amplify morphological differences" (Wilmsen and Roberts 1978:26-27). These ideas are particularly evident in the work of

Polly Wiessner who has demonstrated that certain styles of projectile points transmit information regarding social identity and cultural boundaries among hunter-gatherer groups in the Kalahari (Wiessner 1983).

Wiessner examined the general morphology of projectile points and the regional variance of points used by different linguistic groups. She determined that projectile point manufacture was a high investment process and therefore held high social value (Wiessner 1983:19). In addition, after interviewing and observing the Kalahari San, Wiessner discovered that certain point styles were exclusive to specific regions and linguistic groups. Wiessner's studies are important because they show part of the spectrum of multiple functions projectile points may have. Not only can projectile points facilitate hunting and game procurement, they also could serve as tools for the transmission of information.

Another ethnography of hunter-gatherer groups demonstrates that arrows and specific types of projectile points have an actual monetary value in at least one economic system. James Woodburn's ethnographic observations of the Hadza in Tanzanian demonstrate that arrows were used as currency in gambling (Woodburn 1968:53). Woodburn explains that metal-tipped arrows were used as the main currency or "stake" when men gathered to gamble. Arrows with wooden or bone tips were not accepted as gambling currency. A gambler unfortunate enough to lose his metal-tipped arrows would be unable to hunt in subsequent socialized big game hunting and would have difficulty providing for himself and the group (Woodburn 1968:54).

Both of these ethnographies examine the socio-economic value of projectile points and arrows, specifically the values beyond their role as hunting tools. These ideas serve as fodder for speculation regarding the multiple functions and values that may have been applied to projectile points by the Fremont in Parowan Valley

Possibilities in Parowan Valley: Function, Chronology, and Value

The previous discussions regarding the multiple uses of projectile points and arrows among other hunter-gatherer groups are thought provoking and illustrate the complexities of many mobile hunter-gatherer groups. Ideas regarding the social and economic value of projectile points have been outlined along with a discussion of their function as hunting tools. Theoretical discussions aside, the fact that projectile points served as basic hunting tools cannot be forgotten. The basic functionality of a projectile point is still a factor when any attempts are made to reconstruct past life-ways and determine site function.

If points recovered from Parowan Valley were merely used for hunting, could the number of projectile points and faunal bone reflect feasting activities? In the Great Basin, trade festivals and gambling were very common among historic indigenous groups (Steward 1938; Culin 1907; Janetski 2002). These festivals were large events organized around harvest or hunting times to provide food for those in attendance (Steward 1938: 237). It is possible that these ethnographically observed festivals and gatherings are similar to festivals and gatherings among Formative groups in the Great Basin. If the Fremont held festivals or other gatherings in Parowan Valley, the need to provide food for attendants could explain the high number of projectile points reported in the excavations performed by the University of Utah and the large amount of points visually observed in the UCLA/SUU artifact assemblage.

The idea of feasting, gambling and trade festivals occurring in Parowan Valley is not unprecedented. It has been proposed that the Parowan Valley Fremont produced Snake Valley Series ceramics for trade to surrounding areas (Watkins 2006) and large amounts of gaming pieces in all stages of manufacture were recovered suggesting that gambling or at least the production of gambling paraphernalia occurred in Parowan

Valley (Hall 2008). If the ethnographic observations of Cushing (1893), Greaves (1997), Wiessner (1983), and Woodburn (1968) are used as a basis to fuel a different perspective surrounding the production, function, and value of projectile points in Parowan Valley, several new and interesting socio-economic insights on the Fremont are possible. Due to the tyranny of the ethnographic record and the transcontinental nature of the comparisons between modern forager and farming groups and Formative Period North American hunter-gatherers, perspectives into the socio-economics of the Parowan Valley Fremont may not be revolutionary or significant, but they could serve as a foundation for research into the multiple functions of projectile technology.

Fremont Chipped Stone Research

As discussed in chapter 1, Fremont research has generally focused on subsistence, regional variations, and socio-economic interaction with external groups. These issues have been researched and tested by application of models formulated around the archaeological record and ethnographic data of Late Prehistoric groups.

One of the key methods in defining and researching the Fremont is the use of culturally diagnostic artifacts. A case could be made that one of the main artifacts types used in defining the Fremont is ceramics (Madsen 1989:3; Watkins 2006). This is primarily due to their distinct designs, manufacture methods, regional distribution, and non-perishable nature. Another non-perishable diagnostic in the Fremont artifact assemblage are chipped stone tools, specifically projectile points. Projectile points can serve as temporal and regional diagnostics in a way similar to ceramics. Richard Holmer and Dennis Weder (1980) suggest that projectile points should be used in concert with ceramics and other artifacts to shed light on Fremont regional variability, subsistence strategies, and technology.

The most commonly discussed issue associated with Fremont projectile points is that of subsistence (Holmer and Weder 1980:67). Projectile points are considered hunting tools vital to forager toolkits. Therefore, if a Fremont site contained numerous projectile points and large counts of faunal bone, an assumption could be made that hunting was a popular activity at or around that site.

Previous excavations in Parowan Valley by the University of Utah yielded large numbers of projectile points (Berry 1972b; Dodd 1982; Marwitt 1970). A visual estimation indicates that the projectile points in the UCLA and SUU assemblages are also numerous. Due to the large amount of projectile points recovered Parowan Valley, an inference could be made that much hunting occurred in and around the area. This could indeed be the case, as the unworked bone assemblage in the PVAP collection consists of 27 boxes. Unfortunately, until those bones are analyzed, inferences beyond cursory assumptions cannot be made. Despite the fact that the UCLA faunal assemblage has not been analyzed, data from other sites excavated in Parowan Valley, such as Evans Mound and Median Village are available (Marwitt 1970; Metcalf 1982). NISP and MNI data from those sites discuss the large numbers of faunal bone recovered from the excavations.

Analysis Methods

In this thesis, I use a combination of analysis methods used by Brigham Young University's Department of Anthropology and those outlined by Richard Holmer (1986), and William Andrefsky (2005). I also use Great Basin projectile point classification methods described by Richard Holmer and Dennis Weder (1980), Holmer (1986), and David Hurst Thomas (1981). The methods and insights provided by these authors serve as critical references for the organization and performance of my analysis.

The sample strategies and excavation methods used in Parowan Valley were also considered. The strategies and methods implemented by UCLA, Southern Utah University, and the University of Utah greatly influenced the collection and provenience of artifacts in the PVAP assemblage. The sampling methods applied in the analysis of other data sets from the PVAP collection by Watkins (2006), Jardine (2007), and Hall (2008) and suggestions by Richard Talbot and Joel Janetski also influenced my analysis.

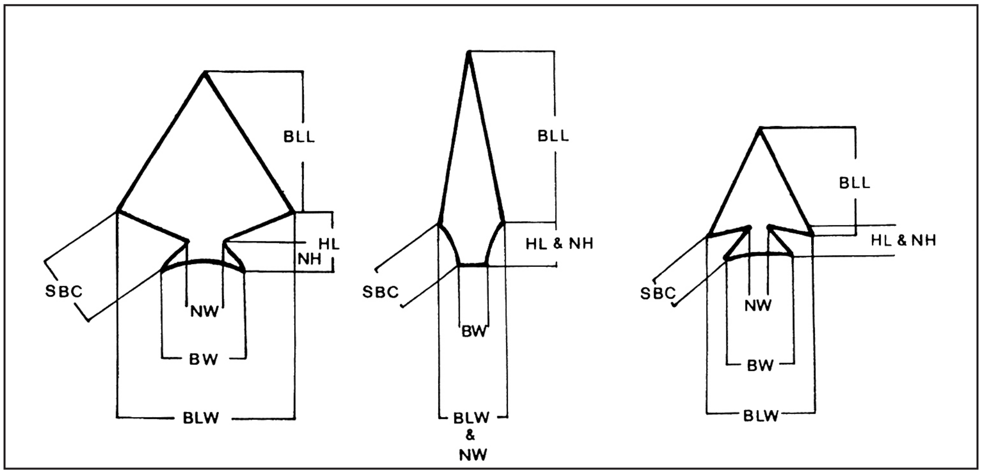
The Parowan Valley Chipped Stone Assemblage

For this analysis, I considered all the available chipped stone collections from excavations at the three main sites in Parowan Valley: Paragonah (42IN43), Parowan (42IN100), and Summit (42IN40). As summarized in the first chapter, sites in Parowan Valley were excavated by several individuals and institutions. This variance of institutions and individuals led to a curatorial scattering of artifacts collected from Parowan Valley. The chipped stone assemblage analyzed from Paragonah included artifacts from the 1954-1960 excavations performed exclusively by UCLA. The collections analyzed from Parowan were also exclusively from UCLA excavations. The chipped stone assemblage analyzed from the Summit site, however, was not entirely from UCLA excavations. Chipped stone assemblages recovered by both UCLA and SUU in the PVAP collection were analyzed, and those data were combined with data reported from the University of Utah's excavations at Summit (Berry 1972b; Dodd 1982) and Median Village (Marwitt 1970).

Due to the large nature of the PVAP chipped stone collection, a sample analysis of the collection was deemed necessary. All artifacts associated with or on the floor of structures were analyzed. This included expedient flake tools, projectile points, all other bifacially flaked tools, and some cores and hammerstones. In addition to the analysis of all floor-associated artifacts, the sample included all projectile points. Analysis focused primarily on tools from the PVAP chipped stone collection for two reasons: first, the research questions considered in this thesis are specifically centered on the projectile point assemblage and tool production, and second, UCLA and SUU did not collect debitage from their excavations.

Analysis of the General Chipped Stone Assemblage

After formulation of the research questions posed in chapter 1, the PVAP assemblage was sorted and organized into general patterns based on cursory visual observations. Tools were divided into objective classes including expedient flake tools, unifacially flaked tools, bifacially flaked tools, and projectile points. Since the lifetime and function of chipped stone tools is often mutable, complete confidence in assigning function to many of the tools in the PVAP assemblage was not possible. However, when elements like use-wear, retouch, fracture patterns, and hafting areas were considered, some inferences regarding tool function were made. This analysis determined that the portion of the PVAP collection sampled for this analysis was rich in all types of chipped stone artifacts with the exception of debitage. All tools were measured and cataloged in accordance with methods used by previously mentioned authors and institutions. Since accuracy in projectile point measurements is extremely important, detailed schematics were used to maintain a standardized analysis. Measurements for each projectile point were taken in accordance with methods outlined by Andrefsky (2005) seen in Figure 2.1.



Attribute name	Description	
	From	To
BLL; blade length	Tip of biface	Tip of shoulder
NH; neck height	Neck	Base
HL; haft length	Top of haft element	Base
BLW; blade width	Shoulder	Shoulder
NW; neck width	Neck edge	Neck edge
BW; base width	Base edge	Base edge
SBC; shoulder to corner	Shoulder	Basal corner

Figure 2.1. Measurements and descriptions of measurements (Andrefsky 2005:186)

Issues with Projectile Point Identification

Projectile points play vital role in the archaeology of the Great Basin. From the Paleo-Archaic to Late Prehistoric periods, chipped stone projectile points have contributed to knowledge regarding the life-ways of the ancient inhabitants of the Great Basin. Extensive excavations have taken place in the Great Basin for more than one hundred years (Fowler 1980, Janetski 1997). Despite this period of research, an in-depth classification of projectile points from the Great Basin was only established around fifty years ago and is still not completely standardized (Bettinger and Eerkens 1999; Holmer 1986; Thomas 1981).

This classification of Great Basin projectile points, while extensive, is still a subject of debate primarily because of variability in chronologies and point styles throughout the Great Basin. These debates have divided the eastern and western portions of the Great Basin into two chronological and typological areas (Heizer and Napton 1970; Hester and Heizer 1978; Holmer 1986; Thomas 1981). This chronological and typological division has caused some difficulty with projectile point analysis and research. According to Bettinger and Eerkens (1999: 232), two distinct but "good" projectile point typologies were developed for the Great Basin. Heizer and Baumhoff (1961), Hester and Heizer (1978), and others developed a typology based on weight and Thomas (1981) developed a typology based on basal width. Thomas (1981) argues that Heizer (1960) and Hester and Heizer (1978) do not take retouching of artifacts into consideration. The weight of a projectile point could be significantly altered if retouched or broken, whereas the basal width (mostly protected by the haft) would be less subject to alteration throughout the use-life of the point. Thus, Thomas argues that a typology based on point weight could be problematic. Interestingly enough, Thomas' typology was modeled after the typology created by Heizer and others (Bettinger and Eerkens 1999:232). The few revisions made by Thomas however, created difficulties for consistency in analyses performed on points recovered from the eastern portion of the Great Basin.

Those frustrated with the ambiguity of types and chronologies have often resorted to "home-grown" classification methods inconsistent with pre-existing classifications. These problems are well described by Holmer, "to avoid the problems of misapplying type definitions, some researchers attach new names or alphanumerical designators to styles even though they are already known by one or more names" (Holmer 1986:92). After 23 years, Holmer's observation on disgruntled analysts forging their own typologies may be slightly outdated with increased standardization and acceptance of projectile point types, but the confusion (albeit to a lesser extent, in my opinion) regarding regional variation of projectile points and chronologies still exists. In order to avoid these difficulties with classification, Holmer proposes two rules:

> 1) if identical shapes date to different periods at various locales they are considered separate types and are assigned different names, and 2) if multiple names have been used for identical shapes that date to similar (i.e., significantly overlapping) periods at various locales, they are considered to be a single type and the most commonly used name is adopted for all areas (Holmer 1986:92).

Holmer suggests that application of these methods improves standardization in projectile point classifications and encourages analysis based on point morphology and temporal and spatial factors (Holmer 1986:92). The application of the aforementioned, coupled with standardized measurements and a cross sample of Great Basin projectile point assemblages provided Holmer with quantifiable results and an improved standardization of projectile point types and their chronology.

Information from David Thomas' previously mentioned analysis methods were also used (Thomas 1981). In this article, Thomas provides metric standards for specific projectile point types. Through detailed measurements and cross-site comparisons, Thomas demonstrates that certain point types fall into certain metric standards (Thomas 1981: 14). Thomas' work is particularly useful in the classification of Late Formative and Late Prehistoric projectile points.

Finally, Noel Justice provided an important regional reference for projectile point types in the Great Basin. His book *Stone Age Spear and Arrow Points of California and the Great Basin* (Justice 2002), also provides metrics and visual representations of projectile points found in the Great Basin.

Parowan Valley Projectile Point Analysis

This analysis has relied heavily on Holmer and Weder (1980), Holmer (1986), Thomas (1981), and Justice (2002) to ensure accuracy and uniformity in its projectile point classifications. Since the analysis sample of the PVAP chipped stone collection included all projectile points in the collection, application of the methods outlined by Holmer and Thomas is especially appropriate due to projectile point variability.

In keeping with the general analysis of the other elements of the PVAP chipped stone assemblage, projectile points were also divided into visual groups based on size and similarities in hafting elements. After this preliminary division, points were grouped in accordance with accepted projectile point classifications. These visual classifications were tested by taking measurements of blade length, neck height, haft length, blade width, neck width, base width, and weight and comparing them to those outlined by Thomas (1981). While all measurements will be considered, some may be more useful than others when establishing patterns. Due to wear and tear, the metrics of the distal and lateral ends of projectile points are highly variable. Basal width measurements, however, will be held in higher esteem under the assumption that they would not be subject to as much retouch or fracture.

It should be stated however, that despite suggestions of specific measurement guidelines for specific projectile point types (Holmer and Weder 1980; Holmer 1986; Justice 2002; Thomas 1981), there has been little success establishing a metric standard for each projectile point type in the literature. Therefore, visual comparisons and classifications based on morphological differences and similarities are still the most commonly used methods in projectile point classification.

In addition to chronological and morphological groupings and basic measurements, the projectile point assemblage was analyzed with a specific perspective in mind. In *Projectile Technology*, Heidi Knecht states that projectile points should be analyzed in a way that “allows them to be viewed not simply as isolated items, of material culture, but rather as one element of an integrated system of technology… implemented by a group of living people" (Knecht 1997:5).

Pin-Pointing Chronology in Projectile Points

The projectile points from Parowan Valley were also analyzed in an attempt to provide a good database to further the understanding of site chronology in Parowan Valley. The collection of projectile points in the Parowan Valley assemblage is large enough that sheer numbers may establish patterns of chronology at the three large sites. Spatial distributions of all projectile point types will be considered in an effort to construct a relative chronology of the sites. When this relative chronology is compared with the radiocarbon dates discussed in chapter 1, a more complete perspective into the temporal occupations of Parowan Valley may be possible.

Conclusion

The discussions of theory and method in this chapter were presented in order to demonstrate how the analysis of the Parowan Valley chipped stone assemblage was devised and applied and how the resultant data will be interpreted. The numerous theoretical perspectives outlined in the beginning of this chapter were provided to demonstrate the full spectrum of perspectives applied to the analysis and interpretation of the Parowan Valley chipped stone assemblages. Issues like craft specialization, standardized production, multiplicity of projectile function, and the place of projectiles in the economy of ancient societies have all been discussed and considered.

The analysis methods outlined in the latter part of this chapter are not revolutionary and are fairly standard in general chipped stone analysis. These methods were utilized to organize and classify the chipped stone assemblage from Parowan Valley and provide useful raw data for more advanced interpretation though the application of theory regarding chipped stone tools.

This chapter has served as a foundation of theory and method allowing me to present the resultant data from my analysis as it is discussed and interpreted in subsequent chapters. Chapter 3 will present numerical totals, interpret tool provenience and apply the theories outlined in this chapter in an attempt to understand another part of the material culture of the Parowan Valley.

3 PRESENTATION OF DATA

In this section, I will present the raw data gained from my analysis of projectile points for the UCLA and SUU PVAP collections which yielded 2,511 projectile points. I will also provide the projectile points totals from the excavations performed by the University of Utah at Evans Mound (Berry 1972b; Dodd 1982) and Median Village (Marwitt 1970) (both considered part of Summit), but those totals will only be considered as part of a raw total illustrating the sheer amount of projectile points recovered from Parowan Valley. Excavations by the University of Utah yielded 218 from Median Village and 356 from all years of excavation at Evans Mound. If the amounts of projectile points from the PVAP collection and the University of Utah's work at Median Village and Evans mound are combined, total amount of projectile points recovered from the three main sites in Parowan Valley is 3,085. It must be noted that of these 3,085, 6 projectile points were analyzed that had no provenience to any site. Thus, they are counted as part of the general total, but will not be discussed when individual site totals and distributions are considered. The provenience and quantities of points recovered by the University of Utah will be considered in concert with the provenience of the UCLA and SUU points. I will also discuss and compare the distributions of the projectile points from each individual site in Parowan Valley.

Projectile Point Types Identified in the PVAP Assemblage

From this analysis, it is apparent that the majority of the projectile points recovered from the excavations are temporally consistent with the Formative period. The Late Archaic and Late Prehistoric points are relatively few in number and their existence at the site may be, in the case of the Late Archaic points, curatorial. In the case of the Late Prehistoric points, they are likely part of a temporary Numic speaking occupation. A complete summary of the projectile point quantities and types is shown in Table 3.1. A visual range of projectile points is also provided for a reference as the projectile points are described (Figure 3.1).

Humboldt

One possible Humboldt Point was found at the Parowan site. This point is made of a grainy chert and is missing the distal end (Figure 3.1 *a)*. The lateral edges are slightly convex and the proximal end is slightly concave. Humboldt points are classified by a lanceolate blade and a concave base. Some Humboldt points also have a narrow stem and blade (Holmer 1978:44). According to Fowler et al (1973), Humboldt points occur in the Great Basin from 3500 to 1800 BC.

Pinto Series

Three Pinto Series points were identified in the PVAP collection. There are three specific forms of Pinto series: shouldered, single shouldered, and shoulderless (Figure 3.1 *b)*. Pinto points are generally characterized by large, triangular blades, a stemmed or corner-notched hafting element with sloping shoulders near the base, and a notched base forming rounded tangs on each side (Holmer 1978: 41). Pinto points are found in the Table

3.1. Projectile point quantities from UCLA/SUU excavations.

Projectile Point Types	Paragonah	Parowan	Summit	No Prov.	Total
Elko Series	6	6	48	1	**61**
Pinto Series		1	2		**3**
Humboldt		1			**1**
Gypsum Point			4		**4**
Unidentified Archaic		2	18		**20**
Rose Spring Corner	28	50	386		**464**
Eastgate Expanding Stem	17	26	66		**109**
Rosegate	8	14	48		**70**
Nawthis Side-notched	5	2	14		**21**
Parowan Basal Notched	106	179	998	4	**1287**
Bullcreek		6	11		**17**
Desert Side-notched	1	6		1	**8**
Unidentified Formative	150	97	199		**446**
Total	**321**	**390**	**1794**	**6**	**2511**

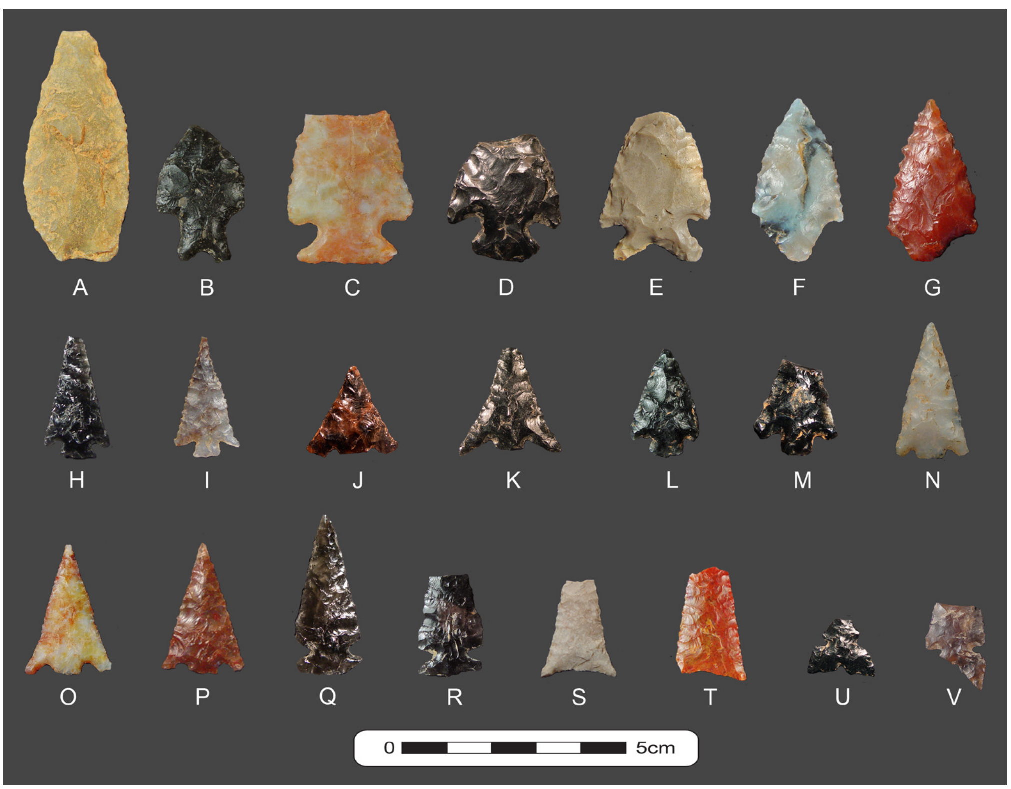


Figure 3.1. General sample of projectile point types from Parowan Valley: (*a*) Humboldt, (*b*) Pinto, (*c-e*) Elko Series, (*f-g*) Gypsum, (*h-i*) Rose Spring Corner-notched (*j-k*) possible Eastgate Expanding-stem, (*l-m*) Rosegate, (*n-p*) Parowan Basal-notched, (*q-r*) Nawthis Side-notched, (*s-t*) BullCreek, (*u-v*) Desert Side-notched

Great Basin and have been dated between 8300 and 6200 BP at Sudden Shelter and Cowboy Cave (Holmer 1978:66). The Pinto points in this assemblage are shouldered with a bifurcated base.

Elko Series

A total of 61 Elko Series points were identified in the UCLA/SUU projectile point assemblage (Figure 3.1 *c-e)*. Elko Series points are characterized by large, triangular blades with straight or slightly convex edges. Elko Corner-notched points have straight or slightly convex bases and Elko Eared-points have deeply notched concave bases. Elko Side-notched points generally have straight bases. Some the larger Elko series points may in fact have been hafted knives, but they are still included in this analysis total. The chronology of Elko Series points is often difficult to determine due to disputes in eastern and western Great Basin chronologies (See Chapter 2 for a discussion of this issue). In addition, the ambiguity of function, i.e. projectile point or hafted biface also causes some problems discerning chronology. Elko Series points first appear around 6000 BC (Holmer 1986:101) and are poor temporal diagnostics due to their presence in both Archaic and Formative Period contexts. Elko Eared points, however, may serve as temporal diagnostics for the eastern Great Basin, especially in the contexts of Hogup and Cowboy Cave (Holmer 1986:102). According to Janetski et al. (1999), there is some evidence that Elko Eared points are diagnostic to the Late Archaic.

Gypsum

Four Gypsum points were identified in this assemblage (Figure 3.1 *f-g)*. Gypsum points are characterized by triangular blades with convex edges with a tapering stem and a convex or squared base (Holmer 1978:49). Gypsum points date to between 2500 and 1000 BC throughout the Great Basin and Colorado Plateau (Geib et al. 2001:202).

Unidentified Archaic

Twenty projectile points in this assemblage were designated as unidentifiable Archaic. These unidentified points were too fragmented to classify or too aberrant in form to fit into accepted Great Basin types. Due to their size, they were designated as Archaic.

Rose Spring Corner-notched

464 projectile points were identified as Rose Spring Corner-notched (Figure 3.1 *h-i)*. Rose Spring Corner-notched points are small, and are defined by their narrow, triangular blades and corner notches. The blades of some Rose Spring points are serrated. The corner notches of the Rose Spring point create squared shoulders and barbed tangs that do not extend as long as the stem. (Heizer and Hester 1978:32-33). The occurrence of these points in the Great Basin correlates with the appearance of bow and arrow technology (Bettinger and Eerkens 1999:235-236; Jennings 1986:116). Rose Spring points have been dated between AD 300 and 950 on the northern Colorado Plateau but evidence demonstrate that they are associated with later Fremont occupations (Marwitt 1968).

Eastgate Expanding-stem

109 Eastgate Expanding-stem points were identified in this assemblage (Figure 3.1 *j-k)*. Eastgate Expanding-stem points have a wide triangular shape with straight edges, deep corner-notches, and outward expanding basal tangs and stem. Many times, the basal

tangs and stem are the same length. Eastgate Expanding-stem points are generally almost as long as they are wide (Holmer and Weder 1980:60). For the most part, Eastgate points are contemporary with Rosespring Corner-notched points.

Rosegate

In this assemblage, 70 projectile points were designated as Rosegate points (Figure 3.1 *l-m)*. The term Rosegate comes from the combination of the names Rosespring Corner-notched and Eastgate Expanding-stem. The term Rosegate was first coined by Thomas (1981). Rosegate points tend to be slightly shorter that Rosespring points and the shoulders and stems are more squared off than Rosespring points. Rosegate points also lack the long tangs and expanding stems of Eastgate Expanding stem points. It is often difficult to identify Rosegate points due to their similarities to both Rosespring Corner-notched points and Eastgate Expanding-stem points. Thomas' (1981) discussions, however, provide some guidelines which were used in this analysis to make these designations.

Parowan Basal-notched

In the PVAP collection, Parowan Basal-notched points were the most commonly identified projectile point (Figure 3.1 *n-p)*. 1,287 Parowan Basal-notched points were recorded from the three main sites excavated by UCLA and SUU. Parowan Basal-notched points are characterized by an elongated triangular blade, two shallow basal notches, and a straight proximal end. Parowan Basal-notched points are commonly found at Fremont sites dating around AD 950-1200 (Holmer and Weder 1980:64).

Nawthis Side-notched

In this assemblage, 21 points were classified as Nawthis Side-notched points (Figure 3.1 *q-r*). Nawthis Side-notched points have long, thin triangular blades with deep lateral side-notches and straight to slightly convex proximal ends (Holmer and Weder 1980; Jones and O'Connel 1981). Nawthis Side-notched points date to approximately AD 950-1250 (Holmer and Weder 1980:61). Nawthis points are generally found in the central and eastern parts of the Fremont culture area (Holmer and Weder 1980:51).

Bull Creek

17 projectile points were classified as Bull Creek points (Figure 3.1 *s-t*). Bull Creek points resemble elongated triangles with concave or slightly square bases. The depth of concavity varies by point from deeply concave to only slightly concave. The Bull Creek points with deeply concave bases have thin, pointed proximal tangs. Bull Creek points with more square bases also exhibit some evidence of the squaring off of the proximal tangs providing a less pointed appearance. Bull Creek points are spatially distributed to the southeastern corner of the Fremont culture area. The temporal span of Bull Creek points is between AD 1050 and 1300 (Holmer and Weder 1980: 51, 61). According to Holmer and Weder, based on ceramic comparisons, it appears that Bull Creek points are heavily associated with Kayenta and Mesa Verde ceramics. This correlation led Holmer and Weder to argue that Bull Creek points are more commonly associated with Anasazi sites than Fremont sites (Holmer and Weder 1980:61)

Desert Side-notched

Eight points were defined as Desert Side-notched (Figure 3.1 *u-v*). Desert Side-notched points are small triangular forms with straight blades, deep side and often basal notches and expanding proximal ends (Baumhoff and Byrne 1959:37; Holmer and Weder 1980:60). Desert Side-notched points are often categorized by four sub-types: General, Sierra, Delta, and Redding (Thomas 1981:27). Thomas concedes that these sub-types do not need to be considered in-depth in order to validate each sub-type as part of the Greater Desert Side-notch type. The points identified in this collection are either part of the Sierra sub-type or General sub-type.

Unidentified Formative

A total of 446 projectile points were unidentified in this assemblage. These points were either too fragmented or too aberrant of generally accepted projectile point types to be classified. If a point did not fit into the metric standards established by Thomas (1981) and Justice (2002) or the visual and metric descriptions provided by Holmer and Weder (1980) or Holmer (1986), it was not forced. Approximations or possibilities of type were suggested in the analysis notes.

Ground Projectile Points

During this analysis, 4 flaked and subsequently ground projectile points were identified. Three of these points are from Summit, and one is from Parowan. These points are small and resemble Rose Spring Corner-notched points and Parowan Basal-notched points. Three of the points are made of obsidian and one is made of a type of siltstone. It appears that these points were flaked to the desired form and thickness and then heavily abraded to remove the flake scars and sharp edges (Figure 3.2). The function of these items is unknown, but their use as hafted arrow points is unlikely due to their blunted and polished nature. In Figure 3.2, projectile point B is the most thoroughly ground. Upon close inspection, multiple grinding planes can be observed. It should also be noted that

Figure 3.2. Ground projectile points from Summit and Parowan.

the distal end of point B has been intentionally dulled and polished, not broken and that when analyzed under a microscope, point B appears to have some hematite staining. Profile views of points A and B were shown as they demonstrated significantly more edge grinding that points C and D. The implications surrounding these ground points will be discussed in the next chapter.

Contracting and Expanding Stems

The four previously discussed projectile point types, Rose Spring Corner-notched, Eastgate Expanding-stem, Rosegate, and Parowan Basal-notched often share similar characteristics due to their closeness in age. To verify my visual classifications of these points in the PVAP assemblage, a test was preformed utilizing some basic measurements. The underlying assumption of this test is that projectile points with expanding stems like Rose Spring Corner-notched, Eastgate Expanding-stem, and Rosegate are more prevalent between AD 300 and AD 900 and contracting stem points like Parowan Basal-notched are more prevalent between AD 950 and AD 1200 (Holmer and Weder 1980). As outlined in chapter 2, detailed measurements of each point were taken. For this particular test, the maximum widths of the distal and proximal ends of each complete stem were measured and then divided. Previous visual classifications of projectile point types were not considered in an attempt to maintain a level of objectivity in this test. If the quotient of distal neck width divided by proximal neck width equaled 1 or more, the projectile point was determined to be an expanding stem. If the quotient was less that one, the projectile point was determined to be a contracting stem. This simple test provided a tool to aid in testing the relative chronology of the sites in Parowan Valley. The quantities and spatial distributions of expanding and contracting stem points will also be considered and mapped in an effort to determine if specific site areas possessed earlier or later points.

Only a fraction of the 2,511 projectile points could be tested. First, the points that were obviously Archaic due to size and morphology were not tested. Second, points that were side-notched or that did not have stems were not considered. Third, points missing parts of the distal or proximal stem widths were not included in the test. A total of 447 projectile points possessed complete stem widths and were able to be tested. Of these 447, 340 have contracting stems and 107 have expanding stems. If the basic assumption that expanding stem points date to earlier time periods and contracting stems date to later periods, the ratio of expanding stem points to contracting stem points (107 to 340) indicates that the sites in Parowan Valley have more points dating to later periods circa AD 950 to AD 1200. When radiocarbon dates (see Appendix A) are considered in conjunction with the relative projectile point dates, it appears that the chronology of Parowan Valley demonstrates a higher occupation during AD 950 to AD 1200.

Quantities and Distributions at Paragonah, Parowan, and Summit Paragonah

When compared with the other two main sites in Parowan Valley, Paragonah has slightly less projectile points that Parowan, and significantly less that Summit. The types of projectile points recovered from Paragonah range in time from Late Archaic to Late Prehistoric. A total of 321 projectile points were classified and typed from Paragonah. Of that 321, 163 points were made of obsidian, the other 158 are made of crypto-crystalline cherts of various colors and qualities. The projectile points from Paragonah were classified into 7 types including Elko Series, Rose Spring Corner-notched, Eastgate Expanding-stem, Rosegate, Nawthis Side-notched and Desert Side-notched (Figure 3.3). Of the 321 points, 150 were not identified. These unidentified projectile points shared some traits of identifiable projectile point types, but were heavily fragmented and either did not resemble generally accepted templates of projectile point types or they did not fall within the generally accepted metrics established by Thomas (1981).

Due to the methods of UCLA's excavations, it is difficult to identify the original locations of many of the projectile points from the Paragonah site. Of the 321 projectile points from Paragonah, only 173 were provenienced to structures (see Figure 3.4). The provenience of the remainder of points from Paragonah was either ambiguous or associated with extra-mural testing areas that were not consistently plotted on the site maps. In addition to plotting the quantities of projectile points, the distribution of various projectile points types was plotted (Figure 3.5).

In many cases, plan views of test trenches and extra-mural areas are provided but unlabeled, leading to some uncomfortable guess work when designations of provenience are considered. Thirty-seven of the projectile points were located on the floors of 17 structures. The balance of the 173 points was associated with interior fill or other features in the structures. Structure 17 contained the most projectile points associated with the

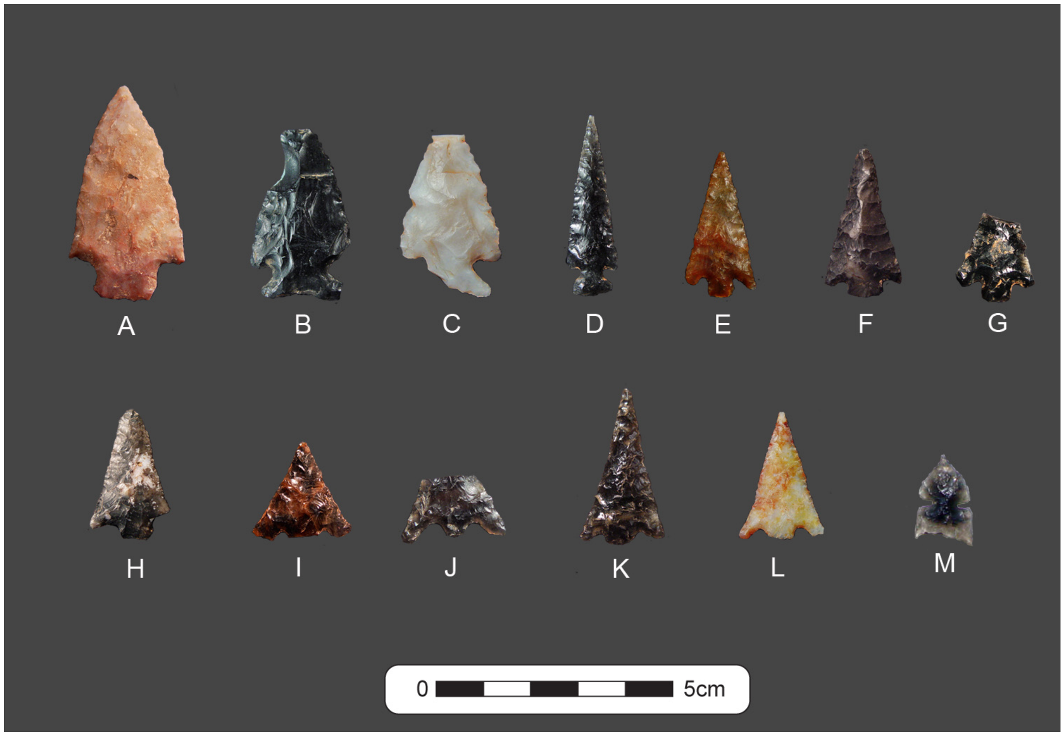


Figure 3.3. Temporal Range of Projectile Points at Paragonah: (*a-c*) Elko Series, (*d-f*) Rose Spring Corner-notched, (*g-h*) Rosegate, (*i-j*) Eastgate Expanding-stem, (*k-l*) Parowan Basal-notched, (*m*) Desert Side notched

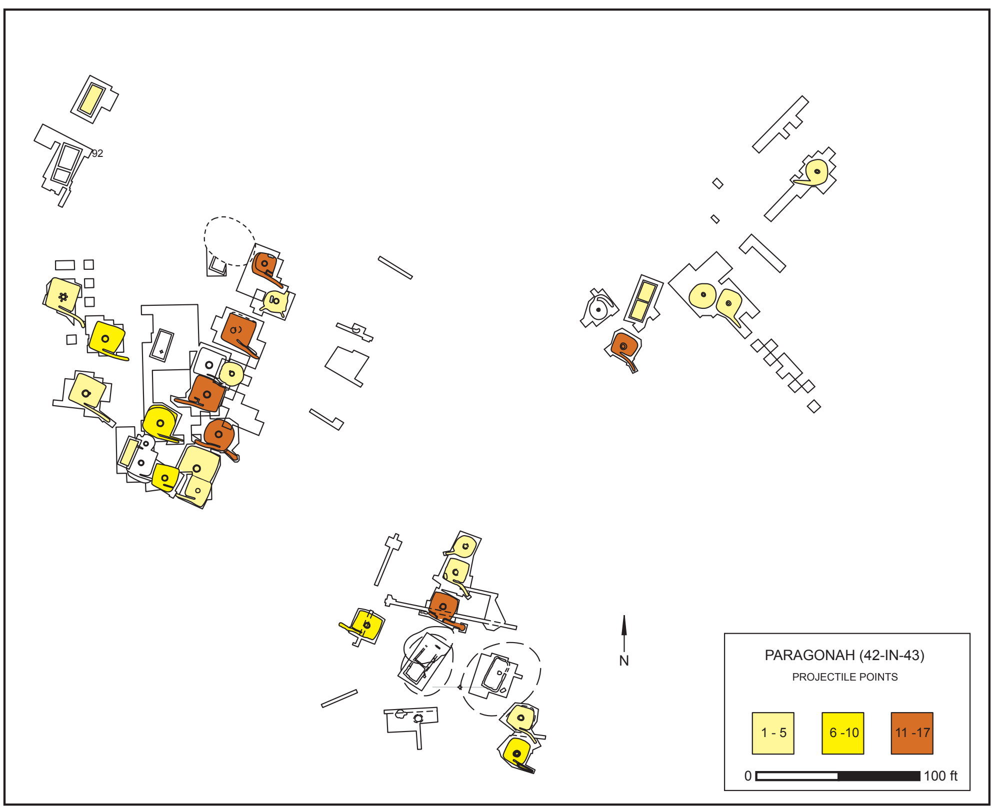


Figure 3.4. Distributions of projectile points from Paragonah

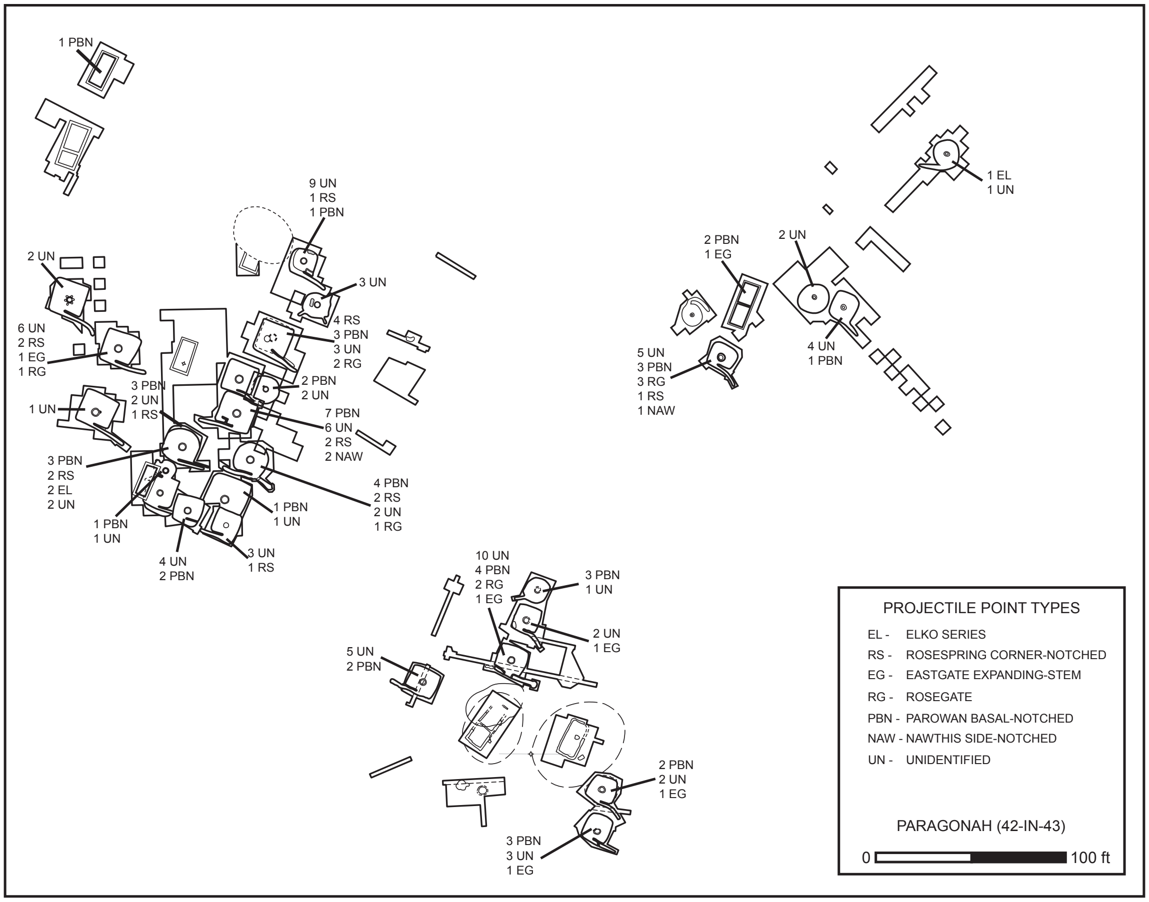


Figure 3.5. Spatial Distribution of Projectile Point Types at Paragonah

floor level. All projectile points associated with the floor level of structures at Paragonah are Formative Period projectile points, with the exception of 1 floor-contact Elko Series point from Structure 25 that may be curatorial or merely a hafted biface. Projectile points not associated with the floor of the structures were associated with various levels of fill in the structures. All of the 136 points associated with structure fill date to the Formative Period. In order to better understand the chronology of the Paragonah site, the distributions of specific projectile point types will be considered. In addition, the distributions of contracting and expanding stemmed points will also be considered.

Expanding and Contracting Stems from Paragonah

At Paragonah, 47 projectile points were classified into the categories of expanding or contracting stems. Of these, 39 points have contracting stems and 8 have expanding stems. The majority of these points were located in extra-mural areas and their exact provenience is unknown. Figure 3.6 illustrates the distributions and quantities of the expanding and contracting stem points.Both the total counts of expanding to contracting stem points and the spatial distributions highlighted in Figure 3.6, suggest that points with contracting stems are more common than expanding stem points.

Parowan

A total of 390 projectile points were recovered from UCLA excavations at Parowan. Projectile points recovered from Parowan range in time from Late Archaic to Late Prehistoric. Obsidian and crypto-crystalline cherts are the most common toolstone materials. Of the 390 points, 229 are obsidian, 157 are chert, 2 are quartzite, 1 is made of siltstone, and 1 is made of a material that resembles ignimbrite. Projectile points from Parowan were classified into 11 types including Elko Series, Pinto Series, Humboldt, Rose Spring Corner-notched, Eastgate Expanding-stem, Rosegate, Nawthis Side-notched, Parowan Basal-notched, Bull Creek, and Desert Side-notched (Figure 3.7). Of the 390 points, 95 were not identified. These projectile points were not classified due to their general lack of morphological attributes consistent with types established in the Great Basin. Of 390 projectile points, only 14 were associated with excavated structures. All other projectile points were recovered from extra-mural areas like the test trenches surrounding the structures. According to the provenience, no projectile points were found on the floors of structures excavated at Parowan (Figure 3.8 and Figure 3.9)

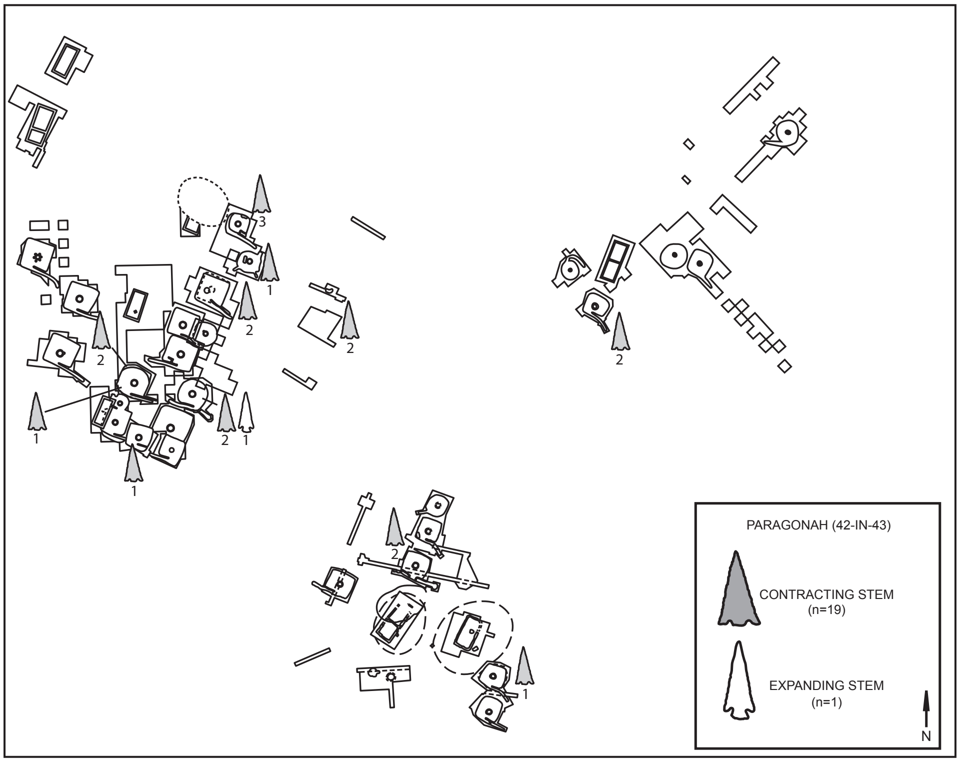


Figure 3.6. Spatial Distribution of Expanding and Contracting Stem Points at Paragonah

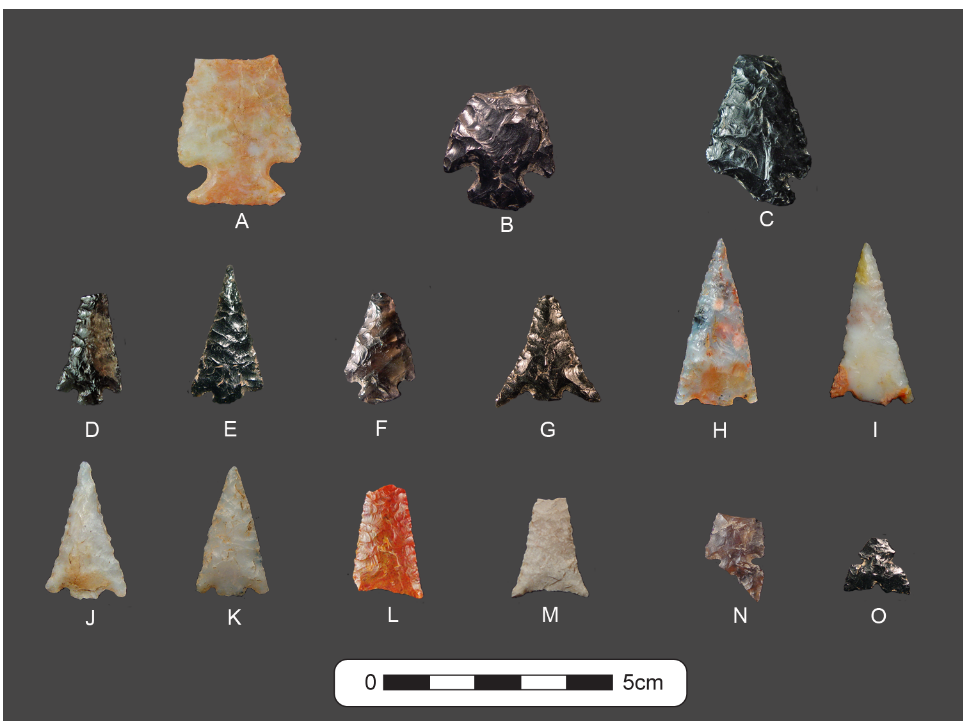


Figure 3.7. Chronological range of projectile points from Parowan: (*a-c*) Elko Series, (*d-f*) Rose Spring Corner-notched, (*e*) Possible Eastgate Expanding-stem, (*h-k*) Parowan Basal-notched, (*l-m*) Bullcreek, (*n-o)* Desert Side-notched.

Expaning and Contracting Stems from Parowan

Sixty-three projectile points from the Parowan assemblage were categorized as expanding or contracting stem points. Of these 63, 55 have contracting stems and 8 have expanding stems. The spatial distribution of these points was successfully plotted in Figure 3.10.The total counts of expanding and contracting stem points and the spatial distributions of these points suggest that contracting stem points were more common than contracting stem points. These totals and spatial distributions are important relative temporal diagnostics to consider in conjunction with radiocarbon dates in order to establish a chronology for the site of Parowan. The presence of many contracting stem points may indicate that Parowan is a later site in the general chronology of Parowan Valley.

Summit

The provenience and quantity of projectile points recovered from Summit will be discussed in three parts. First, data from the UCLA/SUU excavations will be presented and considered. Second, data from the excavations performed by the University of Utah at Evans Mound and Median village will be presented. Third, data and projectile point provenience from all excavations performed at Summit/Evans Mound/Median Village will be combined in order to provide a comprehensive discussion of projectile point quantities and distributions.

UCLA Excavations

The projectile point assemblage collected from Summit by UCLA has a diverse range of Archaic and Formative period types. No Late Prehistoric points were identified.

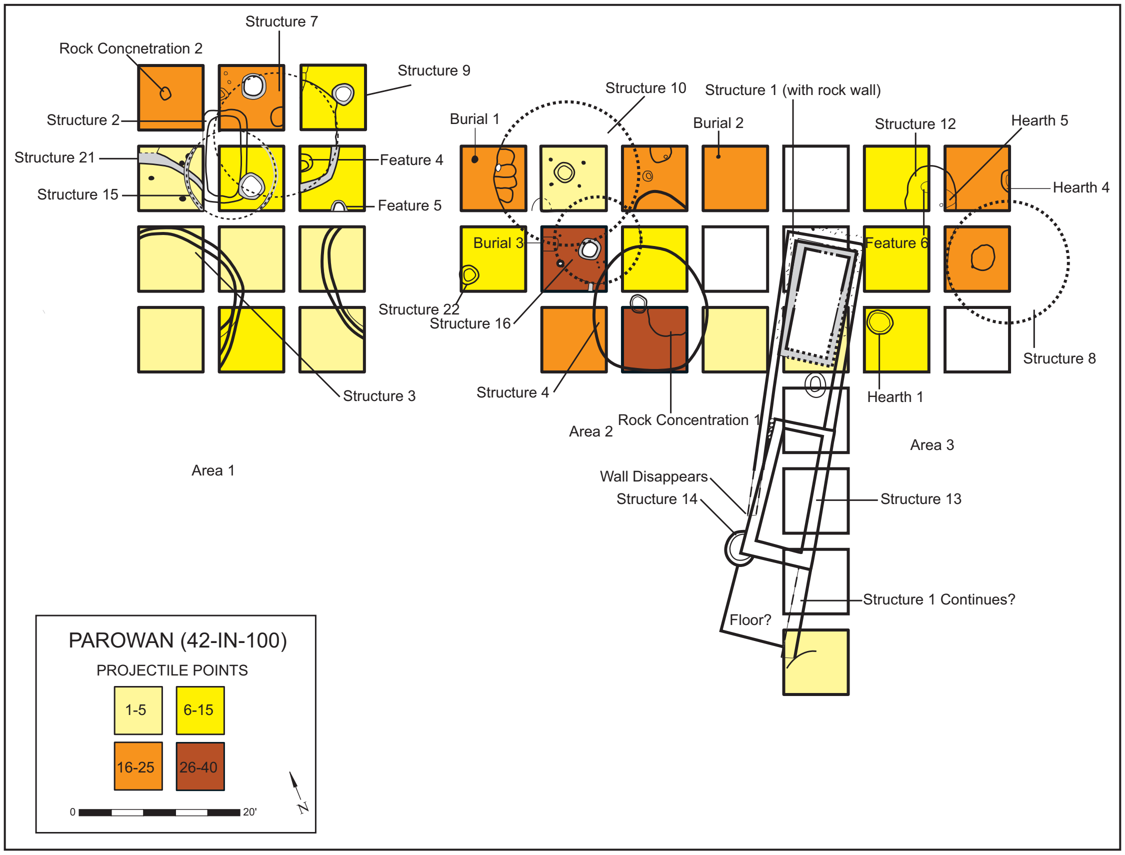


Figure 3.8. Distributions of projectile points at Parowan.

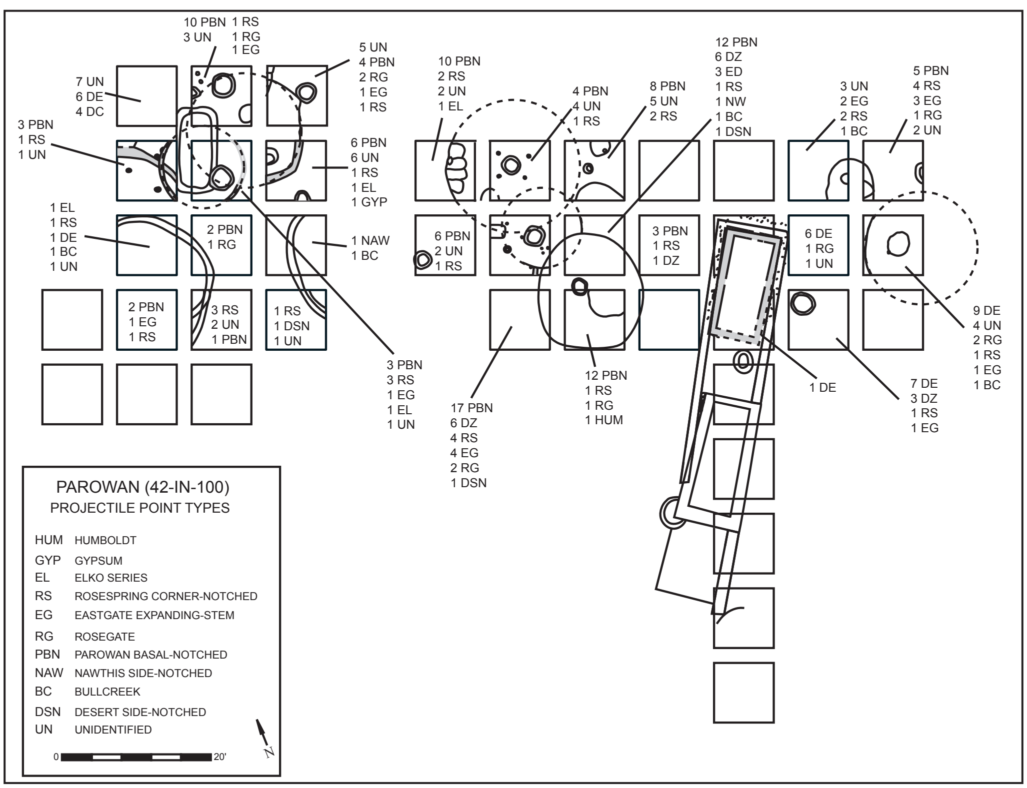


Figure 3.9. Distributions of projectile point types at Parowan

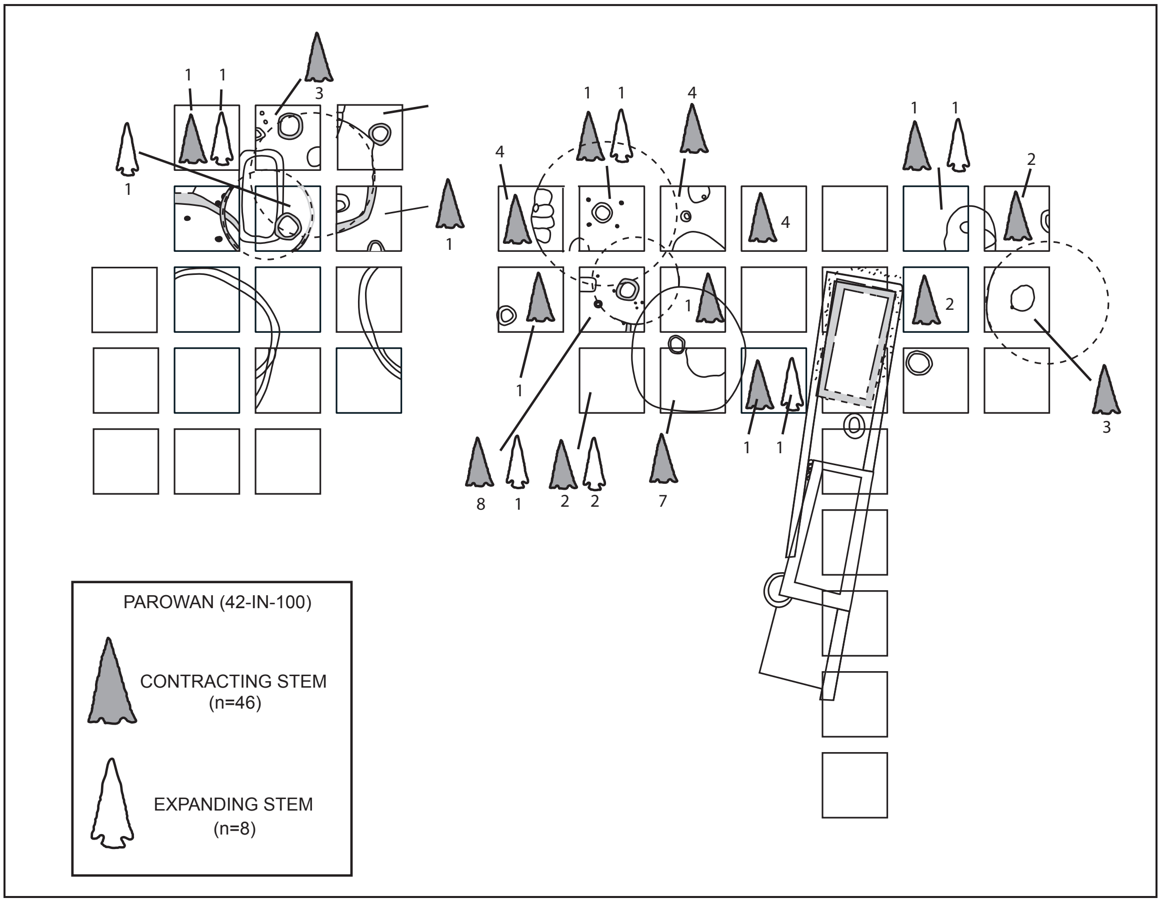


Figure 3.10. Spatial Distribution of Expanding and Contracting Stem Points at Parowan

Eight projectile point types were identified in the Summit assemblage. These types include Elko Series, Pinto Series, Gypsum, Rose Spring Corner-notched, Eastgate Expanding-stem, Rosegate, Parowan Basal-notched, and Bull Creek (Figure 3.11). In addition to these types, 134 points were unidentified due to morphological ambiguity or incompleteness. Obsidian is the dominant toolstone at the Summit site. Of the 1,030 projectile points analyzed in the UCLA Summit collection, 558 are obsidian, 471 are made of various colors and types of chert, and 1 is made of quartzite.

Precise provenience for artifacts from the Summit site was often difficult to determine. Little is known concerning excavation methods, specifically the grid systems

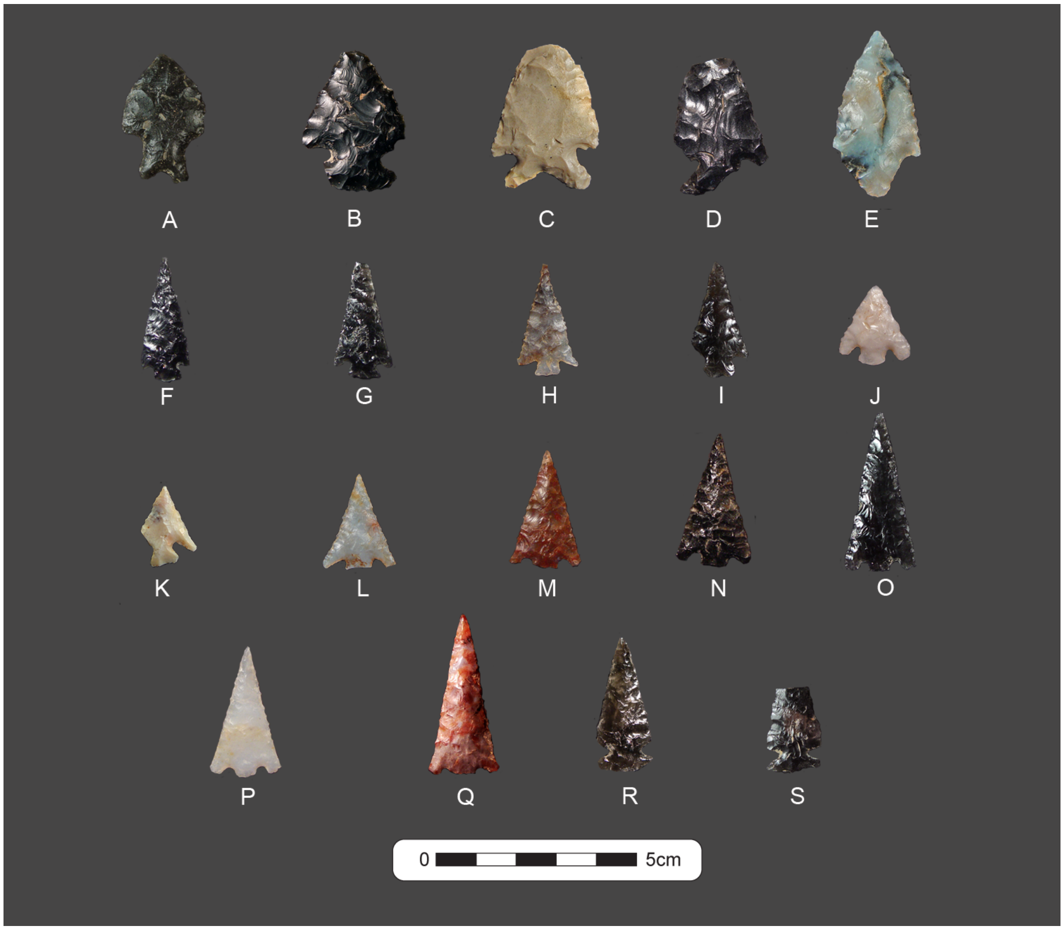


Figure 3.11. Chronological range of projectile points from Summit: (*a*) Pinto Series, (*b-d*) Elko Series, (*e*) Gypsum, (*f-i*) Rose Spring Corner-notched, (*j-l*) Eastgate Expanding-stem, (*m-q*) Parowan Basal-notched, (*r-s*) Nawthis Side-notched.

used in 1960-1961. Accurate maps and grid designations from the final three years of excavation are available, facilitating the provenience process.

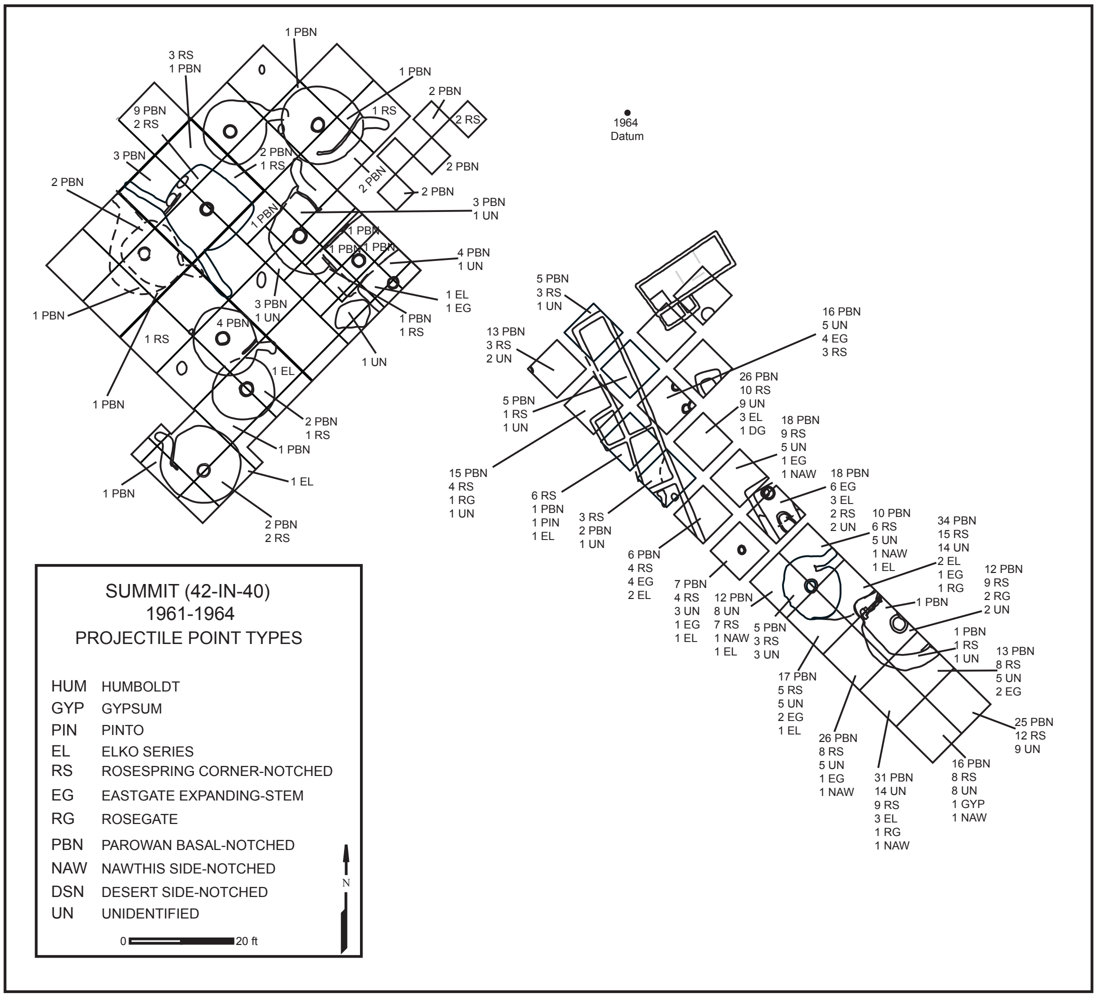
With this information, it is possible to locate the provenience of many projectile points excavated after 1961 (Figure 3.12 and Figure 3.13). Of the 1030 projectile points recovered by UCLA, the exact provenience of 686 points is known. Even with this limited knowledge of provenience, some patterns emerge. When examining the areas of projectile point concentrations, it is clear that the heaviest distribution of projectile points occurs in the south-eastern area of the Summit site. The excavation areas near structures 14, 27, and 28 had the highest concentration of projectile points. This concentration

Figure 3.12 Distribution of Projectile Points from UCLA excavations at Summit.

is similar to the concentration of gaming pieces noted by Hall (2008: 58).Only one projectile point is associated with a structure floor. One Rose Spring Corner-notched point was provenience to the floor of structure 26. All other points are associated with the fill of structures or were found in extra-mural areas. The majority of points were found in extra-mural areas.

Expanding and Contracting Stems from Summit (UCLA)

At the Summit site, a total of 162 points were classified as either expanding or contracting stem points. Of these, 113 have contracting stems and 49 have expanding stems. These points were plotted on a plan map in order to provide a stronger relative chronology for the Summit site (Figure 3.14). Since contracting stem points are more



3.13 Distribution of Projectile Point Types From UCLA Excavations at Summit

prevalent than expanding stem points at the Summit site, it is likely that the relative chronology of the Summit site is late in the Formative period.

If the radiocarbon dates and relative chronological dates from Summit are compared, it appears that a pattern of later occupation at Summit emerges.

SUU Excavations

The excavations performed by SUU at Summit yielded 764 projectile points. This analysis identified 11 projectile point types including Elko Series, Pinto Series, Gypsum, Rose Spring Corner-notched, Eastgate Expanding-stem, Rosegate, Parowan Basal-

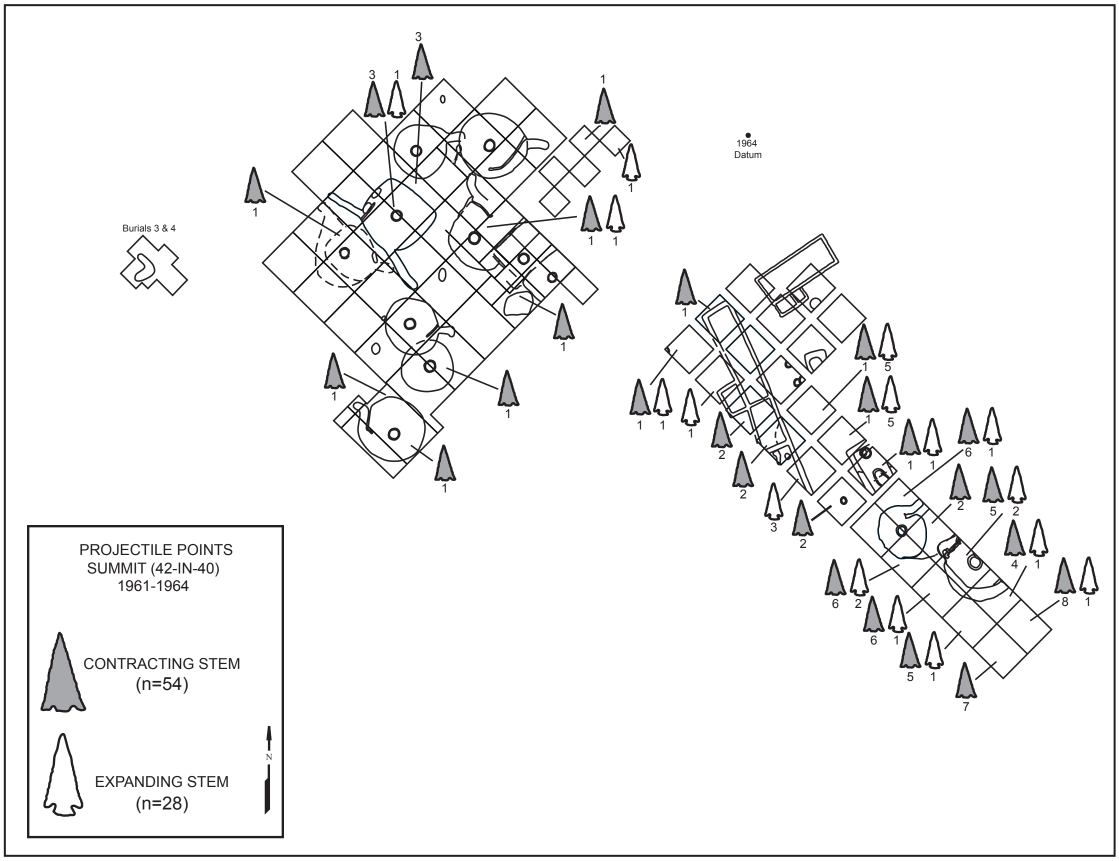


Figure 3.14. Expanding and Contracting Stem Projectile Points from UCLA Excavations of Summit

notched, Nawthis Side-notched, and Bull Creek. Seventy points were unidentified in this assemblage. In the SUU assemblage, 380 points are made of obsidian and 382 points are chert. Two points made of fine grained quartzite are also present in this assemblage.

The specific provenience of projectile points from the excavations by SUU is difficult, at best, to determine. This analysis however, has determined an approximation of provenience suggesting that 104 points are associated with structures, 650 are associated with extramural areas, and 10 have no provenience.

Expanding and Contracting Stems from SUU

Despite the fact that the projectile points from the excavations cannot be plotted, the total of expanding and contracting stemmed points was considered in order to bolster inferences made regarding the relative chronology of the Summit site. These inferences were based on data from the UCLA excavations. When the points from SUU are considered, 133 projectile points have contracting stems and 43 points have expanding stems. When the counts from UCLA and SUU are combined, 249 points have contracting stems and 92 have expanding stems. With the combination of the counts from both excavations, it is still clear that contracting stemmed points are the dominant style. The increase in expanding stemmed point counts suggests that the Summit site may have been occupied during both the early and late Formative Period.

University of Utah Excavations, Evans Mound

The excavations performed at Evans Mound by the University of Utah yielded 356 projectile points. Evans Mound was excavated between 1970 and 1974 and the projectile point designations made during the artifact analysis reflects the accepted projectile point types of that time period. Only six currently accepted projectile point types were discussed in the Evans Mound excavation reports: Pinto, Rose Spring Corner-notched, Eastgate Expanding-stem, Parowan Basal-notched, and Cottonwood Triangular. The other points discussed in the Evans Mound reports were divided into four descriptive types based on morphological characteristics: corner-notched, side-notched, single-shouldered, and stemmed. Points that were not identified by the analysts were listed as unidentified. For the purposes of this thesis and the artifact totals, the points given descriptive names were placed in the unidentified category due to the lack of discussion in the report regarding standardization of these types and the fact that I did not have access to sufficient visual representations of these "types".

The provenience of projectile points at Evans Mound appears to be fairly straightforward, but there are still some discrepancies. Points from Evans Mound are spatially distributed throughout structures and extra-mural areas. A total of 130 points are associated with structures, 102 were recovered from the fill of the structures, and 28 were directly associated with the floors of structures. In the extra-mural areas of the excavation (test pits, test trenches, etc), 126 points were recovered. Of the 356 points, 100 had ambiguous or non-existent provenience.

University of Utah Excavations, Median Village

Excavations at Median Village were shorter in duration and yielded fewer artifacts than those at Evans Mound. Excavations recovered 218 projectile points. The typology problems in the Median Village report are similar to those in the Evans Mound report. Only two currently accepted projectile point types were listed in the Median Village report: Parowan Basal-notched and Cottonwood triangular. The rest of the points fall into three descriptive morphological types: Triangular Unstemmed, Triangular side-notched, and Willow Leaf. Unidentified projectile points are also labeled. Since these three types are ambiguous and strictly related to projectile point morphology, it is difficult to determine what the analyst had in mind. Due to difficulties in reconciling these types with currently accepted projectile point types, they were labeled in the general category of unidentifiable.

Projectile points gathered from Median Village were all provenienced to structures or extra mural testing areas. Of the projectile points associated with structures, 93 were recovered from the fill of the structures, and 16 were recovered from the floor. Projectile points associated with test pits, trenches, and other extra-mural areas numbered 109. No projectile points from Median Village had problems with provenience.

When the projectile point totals from the multiple excavations at Summit are combined, the total quantities are impressive. The numbers indicate that the majority of

Table 3.2. Totals and provenience of projectile points from all Summit excavations.

Projectile Point Types	Structures	Structure Floors	Extramural Areas	No Prov.	Total
Elko Series	5		36	7	**48**
Pinto Series	1	1	2		**4**
Gypsum Point			2	2	**4**
Unidentified Archaic	2		8	8	**18**
Rose Spring Corner	40	2	325	39	**406**
Eastgate Expanding Stem	13		48	9	**70**
Rosegate	2		33	13	**48**
Nawthis Side-notched			12	2	**14**
Parowan Basal Notched	250	37	903	210	**1400**
Bullcreek			11		**11**
Cottonwood Triangular	15	3	39	9	**66**
Unidentified Formative	47	3	180	49	**279**
Total	**375**	**46**	**1599**	**348**	**2368**

projectile points were recovered from extra-mural areas, but they also demonstrate that a sizeable amount of projectile points were recovered from structures. Table 3.2 illustrates the provenience of all projectile points recovered from the Summit site.

Parowan Valley

As mentioned at the beginning of this chapter, the total number of projectile points recovered from Parowan Valley throughout all excavation periods is 3,085. This number, while impressive, is problematic if inter-site and intra-site comparisons are performed. Each site in Parowan Valley varies in size and total area excavated. Finally, no formal site boundaries were established by any of the excavating institutions, therefore it is unknown if the areas excavated are accurate representations of the actual sites of Paragonah, Parowan, and Summit.

To unify the data from all three sites, and enable cross-site comparisons, the quantities of projectile points from each site were standardized. This analysis utilized similar methods of standardization used by Jardine (2007) and Hall (2008) by comparing

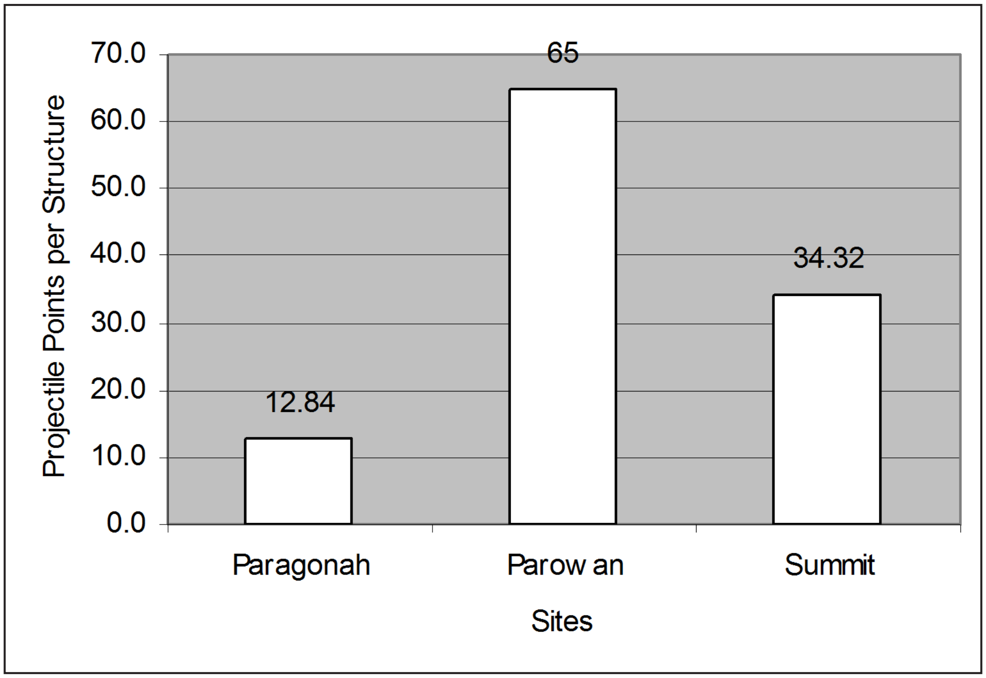


Figure 3.15. Total projectile points per residential structure in Parowan Valley.

the total amount of projectile points to the amounts of residential structures excavated. In previous tables, no distinction was made between residential and storage structures such as granaries. In normalization of data however, this distinction is necessary. Parowan had the highest number of points per residential structure with 65 points, Summit had 34.32, and Paragonah had 12.84 projectile points per residential structure (See Figure 3.15).

Despite the fact that Parowan leads the sites in most points per residential structure, it must be pointed out that only six residential structures were excavated at the Parowan site. When the number of residential structures at Parowan are compared with the residential structures at Paragonah and Summit, 25 and 69 respectively, it is clear that Paragonah and Summit had many more structures excavated. In light of problems with provenience however, the calculation of projectile points per structure seems to be the best method of standardizing this data. In the following chapter, the quantities and distributions of projectile points will be interpreted. The data will be compared to other large Fremont sites in order to determine the validity of the perception that projectile point quantities from Parowan Valley are significantly high. In addition, the data will be used to re-visit and if possible, answer the research questions posted in the introductory chapter of this thesis.

4 DISCUSSION AND CONCLUSIONS

In chapter 3, data regarding the quantities and distributions of points in Parowan Valley was presented and discussed. The data were standardized in order to facilitate cross-site comparisons with other large Fremont sites. In this chapter, the data previously presented in chapter 3 and the ethnographic information presented in chapter 2 will be considered in an attempt to answer the research questions posed in chapter 1.

Research Questions Revisited

Can quantities and distributions of projectile points from Parowan Valley provide clues concerning site function and chronology?

Few sites in the Fremont culture area rival the size and density of those in Parowan Valley. Size and density aside, very few sites outside of Parowan Valley have comparable quantities of projectile points. As discussed in chapter 3, a total of 3,085 projectile points were recovered from Parowan Valley. This is obviously a large amount of projectile points, but excavations in Parowan Valley were quiet extensive. At the end of chapter 3, the projectile point data were standardized by comparing the number of residential structures excavated with the number of projectile points excavated from each site. This standardization was performed to facilitate cross-site comparisons. As previously discussed in chapter 1 and chapter 3, these comparisons are imperfect due to differences in excavation strategies, sample size, and differing chronologies of site occupation.

In order to answer questions about projectile point quantities, site function, and chronology in Parowan Valley, other Fremont sites will be used for their comparative data. Two large sites outside of the Parowan Valley were used for comparison to test the assumptions that the large quantity of projectile points from Parowan Valley is unique. These sites are Baker Village and Five Finger Ridge. These sites were chosen due to the high counts of projectile points discussed in the site reports. In chapter 3, the projectile point quantities and distributions from Parowan Valley were discussed. It was determined that Parowan contained the most projectile points per structure at 65, followed by Summit at 34.32, and Paragonah at 12.84.

Baker Village

Baker Village was excavated between 1991 and 1994 by Brigham Young University. The site report (Wilde and Soper 1999) is incomplete and still in draft form. The projectile point assemblage recovered from Baker Village was originally analyzed in 1999 during the compilation of site report draft. The accuracy of methods and total numbers of that analysis are questionable. Recently, I performed a revised analysis of the Baker Village projectile point assemblage for the Office of Public Archaeology to determine the accuracy of the previous analysis. At the time this thesis was written, data from the new analysis has not been published and is being reviewed.

In the provenience table provided in the Baker Village report (Wilde and Soper 1999: 128-131), 615 projectile points are listed and provenienced to structures, test trenches, and other areas throughout the site. In the general discussion of chipped stone tools, however, only 546 projectile points are discussed causing a discrepancy of 69 points. Finally, in my comprehensive re-analysis of projectile points, only 450 objects were classified as projectile points. The previous analysis of the Baker Village collection erroneously identified several distal fragments of bifaces as projectile points. Since these fragments possess no notches or other hafting elements, these chipped stone tools cannot be defined as projectile points.

These projectile point count discrepancies cause some difficulties in determining the exact number of projectile points per household. Since the most recent analysis identified 450 points, that number will be used to standardize the data at Baker Village. Nine residential structures were excavated at Baker Village. If the number of projectile points is standardized with the number of residential structures, Baker Village has 50 projectile points per structure.

Five Finger Ridge

Five Finger Ridge was excavated as part of the research performed in Clear Creek Canyon in central Utah. According to Talbot, "Five Finger Ridge, at the time of reporting, was the largest Fremont site excavated and perhaps the most completely excavated, although not all of the site was dug" (Talbot et al 2000: xiii). The total number of projectile points recovered from Five Finger Ridge is 223.

The discussion of structure types in the Five Finger Ridge report is thorough and designates 37 of the 81 excavated structures as pithouses. Other structures were classified into categories including secondary pit houses. Secondary pithouses were not designated as residential structures due to their lack of features commonly associated with pithouses (Talbot et al 2000:201-202). When the number of excavated residential pithouses at Five Finger Ridge is standardized with the number of reported projectile points, Five Finger Ridge has approximately 6 projectile points per structure. Figure 4.1 illustrates the comparison between Baker Village, Five Finger Ridge, and the three main sites in Parowan Valley. With the standardization of data from these five sites, it appears that

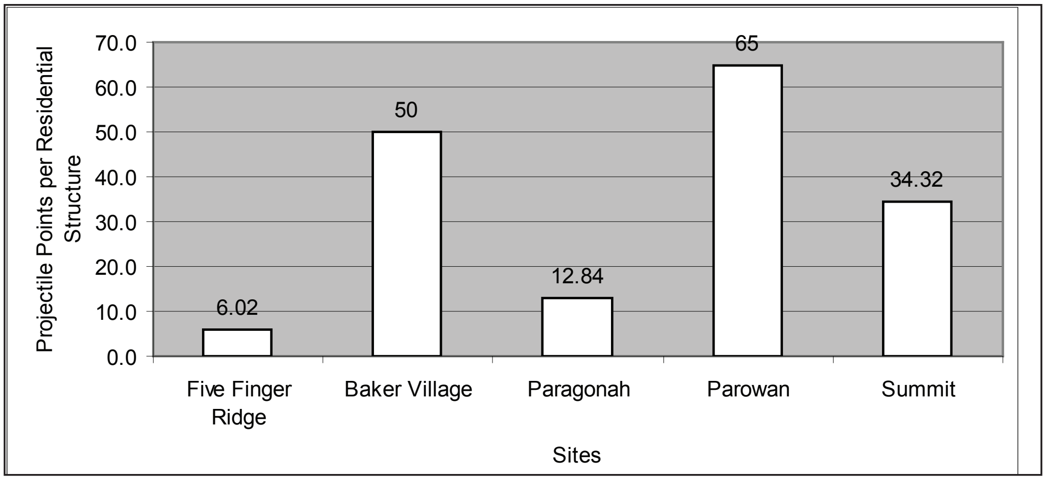


Figure 4.1. Projectile points per residential structure at selected Fremont sites.

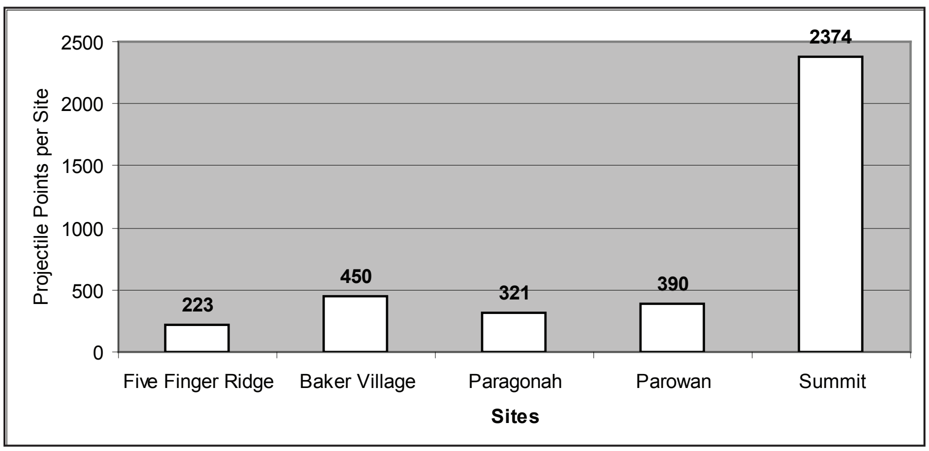


Figure 4.2. Total number of projectile points from selected Fremont sites.

when measured against residential structures, the quantity of projectile points recovered from sites in Parowan Valley is still relatively high.

When the non-standardized raw numbers are compared, it is easy to see the distinction between sites (Figure 4.2). Inferences regarding site function are often difficult to make especially when only one type of data is considered. It is obvious that the sites in Parowan Valley were residential and enjoyed some type of permanent aggregation due to the labor investments in architecture. This is also the case when Baker Village and Five Finger Ridge are considered.

Determining Site Function

The initial reason for posing a research question concerning site function was to understand why Parowan Valley assemblage contained so many projectile points, and if the presence of these projectile points provided some insights into the lifeway of the Parowan Valley Fremont. Initially, the basic answer to the question regarding the large amount of projectile points was that if a large quantity of projectile points are present in a site's artifact assemblage, (when compared with other large sites) much hunting occurred at that site. Due to the geographical location of Parowan Valley (a valley surrounded by foot hills and numerous water sources) and the copious amount of faunal bone in the PVAP assemblage, a case for hunting is easily made. Game procurement in Parowan Valley was likely a common subsistence strategy.

I propose that sites in Parowan Valley were densely populated and that activities like hunting, gambling, and trade occurred there. Hall (2008), Jardine (2007), and Watkins (2006) have argued that gambling and trade occurred in Parowan Valley. These activities and others would have encouraged aggregation during certain times of the year (Steward 1938:237). As mentioned in chapter 1, trade festivals and gambling were common among historic Native American groups in the Great Basin and elsewhere (Culin 1907; Janetski 2002; Steward 1938). If festivals were occurring in Parowan Valley, the high number of projectile points recovered from excavations should not be surprising. One of the fundamental elements of festivals and gatherings is feeding those in attendance (Steward 1938:237-239). If large-scale gatherings occurred in Parowan Valley, a need for the production of many projectile points would arise. Therefore, I propose that the sites in Parowan Valley functioned as more than mere residential areas and served as central gathering places during specific seasonal periods or social occasions.

In chapter three, spatial distributions of projectile points were discussed and placed on maps to determine if any patterns could be observed. The quantities and distributions of each projectile point type were also plotted in order to facilitate inferences regarding site chronology. Due to the ever-present difficulties with provenience from the excavations in Parowan Valley, comparisons of inter-site projectile point distributions were often problematic. In the next pages, I will discuss the provenience of the projectile points and compare them to the provenience of exotics and gaming pieces outlined by Jardine (2007) and Hall (2008). I also compare projectile point proveniences to other artifact types in the PVAP assemblage. These comparisons are discussed to determine if inferences regarding site function can be made based on artifact provenience.

Site Function at Paragonah

The aforementioned difficulties with provenience are particularly problematic at Paragonah. Throughout Paragonah's excavation, structures are clearly labeled and designated. This is not the case however, when extra-mural areas like test pits or test trenches are concerned. Many of these features are designated on the site plan maps, but they are not labeled with specific numbers to facilitate provenience. Of the 321 projectile points analyzed in this assemblage, I was only able to plot 173. These were all located in structures. Points are evenly distributed throughout the site in both residential storage structures. It should be noted however, that projectile points occurring in concentrations higher than 1 or 2 occur exclusively in residential structures (see Figure 3.4). To determine if the quantities of projectile points from Paragonah were indeed in high concentrations, the projectile point total was compared to the total number of artifacts from Paragonah and listed in the general aggregate catalog. In Figure 4.3, each dot in the scatter plot graph represents a structure from Paragonah. In the lower left had part of the

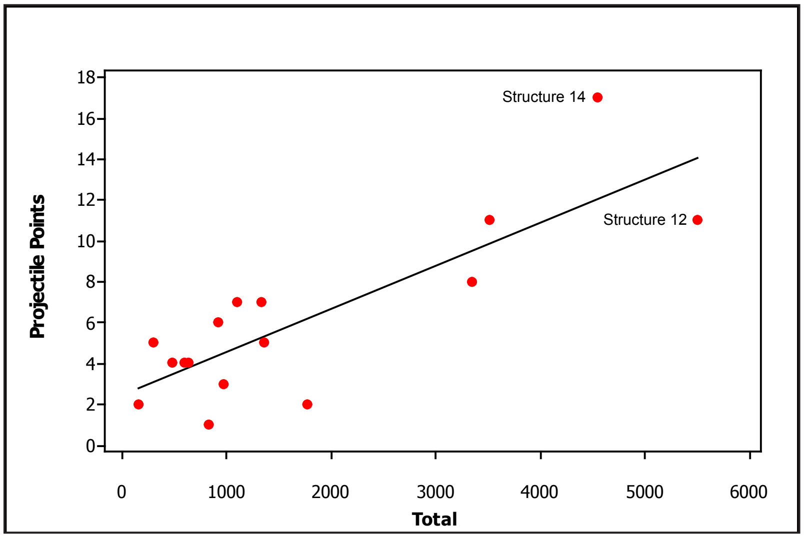


Figure 4.3 Scatterplot of projectile points vs total artifacts from Paragonah.

scatter plot, structures with low counts of projectile points and all other artifact types are clustered. In the upper right hand corner of the graph, however, some outliers should be noted. These outliers indicate that at Paragonah, areas with a higher concentration of total artifacts are more likely to have high counts or concentrations of projectile points. In order to test this assumption, simple correspondence tests were performed. In these tests, the total amount of projectile points was compared to the total numbers of various artifact types.

A cursory examination of the distributional data of exotics, gaming pieces, and projectile points at Paragonah, based on the site maps produced by Hall and Jardine, suggests that these artifact types are clustered in similar areas (Hall 2008:40; Jardine 2007:65). Twenty five structures in Paragonah had projectile points provenienced to them. Of these 25, 18 contained gaming pieces and projectile points and only 5 contained Olivella or turquoise ornaments, gaming pieces, and projectile points. As Hall observed in her thesis, every structure containing gaming pieces also contained Olivella and turquoise artifacts (Hall 2008:76). This is not the case for structures containing projectile points All exotics and gaming pieces from Paragonah were found in residential structures, and with

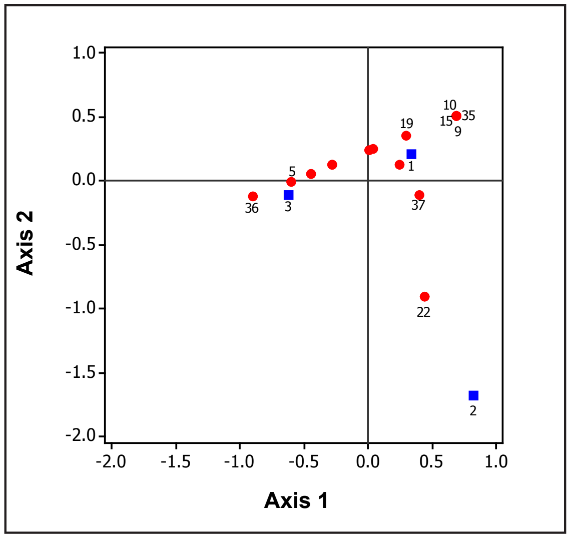


Figure 4.4. Correspondence analysis of projectile points, gaming pieces, and exotics; plots represent structures.

the exception of 3 storage structures, the majority of projectile points were also found in residential structures. When the total counts of projectile points, exotics, and gaming pieces from each structure are compared and plotted on an axis, it appears that the cursory assumption that points, exotics, and gaming pieces share similar concentrations and distributions is correct (See Figure 4.4).

This is particularly true in the case of Structure 22. It should be noted that while projectile points were recovered from every structure in Paragonah, some structures lacked gaming pieces, exotics, or both. Therefore, some aspects of this correspondence analysis are attenuated by the absence said artifacts in certain structures. Two other correspondence analyses were run in order to look for patterns in artifact distribution at Paragonah. A correspondence analysis between projectile points, lithic tools, and unworked bone was performed as well as a correspondence analysis between points, ceramics, and unworked bone. Projectile points, lithic tools, and unworked bone were compared to test the possible association with hunting, butchering, and discard of animal remains. In Figure 4.5, two clusters of structures appear, the cluster in the upper left

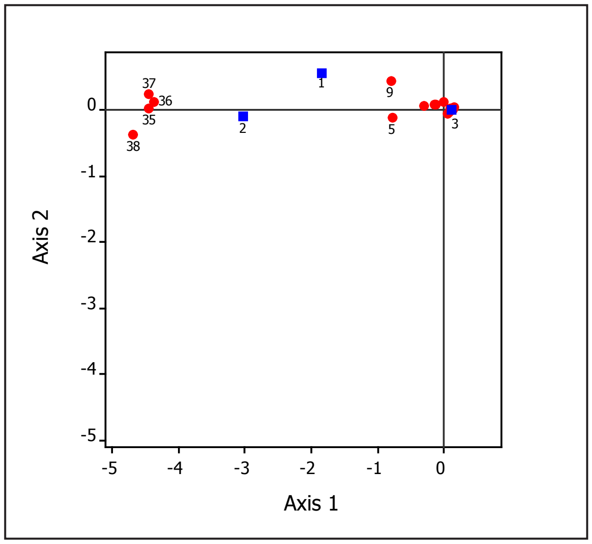


Figure 4.5. Correspondence analysis of projectile points, other lithic tools, and worked bone at Paragonah.

corner indicates structures with low counts of projectile points, other stone tools, and unworked bone.

The cluster in the upper right corner of the graph shows structures with high counts of projectile points, other stone tools, and unworked bone. The correlation between high counts of projectile points, other stone tools, and unworked bone is clear suggesting certain structures in Paragonah may have been involved with game procurement and processing.

Finally, when the correspondence between projectile points, ceramics, and worked sherds is considered, similar patterns emerge. In Figure 4.6, the cluster in the lower left hand corner indicates the correspondence strength between counts of ceramics, projectile points, and worked sherds. Since the ceramic amounts are in the thousands, the data is most likely skewed due to the fact that projectile points and worked sherds occur at Paragonah in much small amounts. It is unlikely that there is any real connection to the number of projectile points and ceramic artifacts at Paragonah. In must be noted, however, that in structures 22, 14, and 12 where the highest counts of ceramics occur, the highest amount of projectile points are also present.

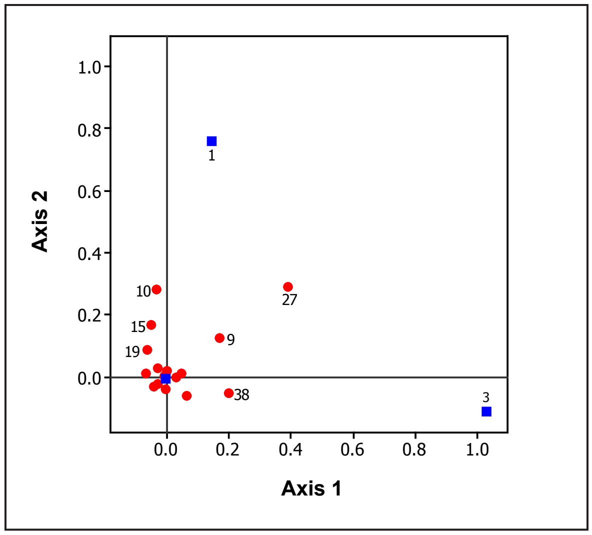


Figure 4.6. Correspondence analysis of projectile points, ceramics, and worked sherds from Paragonah.

In addition to inferences of site function based on artifact type and distribution, the presence of specific projectile points may bolster the argument for aggregation. In the Paragonah assemblage, three Nawthis Side-notched points were identified (see Figure 3.5). The presence of Nawthis Side-notched points at Paragonah suggests a possibility of interaction (trade, gambling, other aggregation) with Fremont groups to the northeast of Parowan Valley. The combination of exotics, gaming pieces, and Nawthis Side-notched points suggest that Paragonah functioned as a residential site where some trade and other aggregation occurred.

Determining specific site function at Paragonah, however, is difficult. Since much of the information regarding extramural excavation provenience has been lost, little can be said regarding activity areas or gathering places. The mere presence of exotics, gaming pieces, and specific projectile point types, however, may suggest that aggregation, trade, and hunting occurred at Paragonah. The exotics and gaming pieces present in the Paragonah artifact assemblage indicate that some form of socio-economic activities occurred at Paragonah.

Chronology of Paragonah

The radiocarbon dates obtained from Paragonah range from the late AD 900s to the late 1200s (see Appendix A). Due to the time-sensitive nature of projectile point types, these dates can be compared with the relative ages of certain point styles. At Paragonah, Parowan Basal-notched points are the most common projectile point type. Rose Spring-corner notched points are also common . Rosespring corner-notched and Parowan Basal-notched points have relative dates around AD 300-900 and AD 950-1200 (Holmer and Weder 1980). When these relative dates are compared to the radio carbon dates, it appears that the chronology of Paragonah is fairly accurate.

In chapter 3, a simplified typology was devised based on contracting and expanding stemmed points. As mentioned in chapter 3, the idea is that expanding stem points are older in age (approximately AD 300 to 900) than contracting stem points (approximately AD 900 to AD 1200). At Paragonah (see Figure 3.6), 39 contracting stem points and 8 expanding stems were identified in the assemblage. A higher quantity of contracting stem point suggests that Paragonah may have been more densely occupied between AD 950 and AD 1200. When these relative dates are considered with the radiocarbon dates, the chronology of Paragonah becomes clearer, indicating that this site was most densely occupied in the Formative Period.

Parowan Site Function

At Parowan, 337 of the total 390 projectile points were plotted to the grid demonstrated in chapter 3, Figure 3.8. Of these 337, only 14 were provenienced to structures. The rest of these points were provenienced to extra-mural areas such as test pits, excavation areas, and test trenches. There are some concentrations of projectile points at Parowan, specifically in the eastern area of the site. These concentrations, while

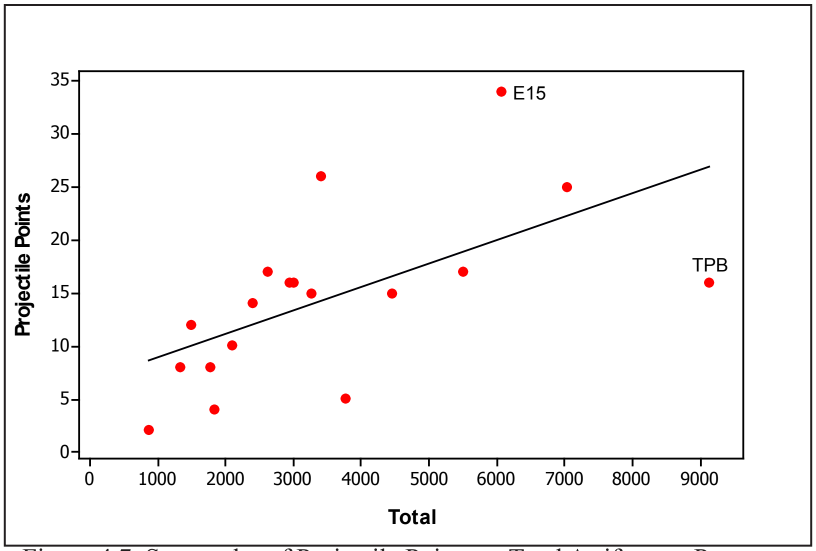


Figure 4.7. Scatterplot of Projectile Points vs Total Artifacts at Parowan.

not directly in the structures, are in very close proximity to them. Figure 4.7 is a scatter plot of the total amount of projectile points compared to the total amount of artifacts listed in the PVAP artifact catalog. This scatter plot indicates that specific excavation areas at Parowan had higher concentrations of projectile points. The excavation areas of E15, F16, and F15 have the highest amount of projectile points when compared to the total number of artifacts. The area of highest projectile point concentrations is excavation area E15. Excavation area E15 is next to five other excavation areas in the eastern portion of Parowan that have high concentrations of projectile points. These areas are D16, E15, E16, F15, and F16. All of these excavation areas each contain more than 10 projectile points and are directly associated with structures 4, 10, and 16 (See Figure 3.8). These areas of projectile point concentrations are, unlike Paragonah, similar to concentrations of exotics and gaming pieces described by Jardine (2007:58) and Hall (2008:52). Projectile points, gaming pieces, and exotics from Parowan are all located in areas near residential structures. No exotics were associated with storage structures, but gaming pieces and projectile points were recovered from said structures. Only one excavation area at Parowan was exclusively limited to exotics. The rest of the excavation areas combined all three artifact types or were exclusive to gaming pieces or projectile points. It is possible that the areas of highest projectile point concentration may also be areas of manufacture. Concentrations of projectile points, gaming pieces, and exotics are more clearly visible in the maps of Parowan.

When the amounts of projectile points, gaming bones, and exotics were tested to test the above assumptions, the graph demonstrated that the correlation between the three artifact types was weak, and at times non-existent. The only possible pattern observed in this particular artifact cluster was the cursory visual appraisal of the raw data which suggested that areas of high projectile point counts (E15, F15, and F16) were also areas where high amounts of gaming bones and exotics were recovered. When plotted in the correspondence graph however, this pattern did not appear. A comparison between projectile points, ceramics, and worked sherds however, is consistent with the areas of projectile point concentration. In Figure 4.8, the cluster in the lower left hand corner of the graph demonstrates that areas with high ceramic artifact concentrations also contain high concentrations of projectile points.

Other simple correspondence tests of artifacts from Parowan demonstrated a lack of patterning or clusters consistent with the lack of patterning described in the summary of the analysis of projectile points, gaming pieces, and exotics. In order to make inferences regarding site function, however, these other artifact types must be considered. At Parowan, the dominant artifact types are ceramics, unworked bone, and projectile points. As mentioned, gaming pieces and exotics are present at Parowan in greater amounts than at Paragonah. In spite of clear patterning or association with projectile points and other artifacts, the presence of gaming pieces and exoctics suggest that some type of trade or other socio-economic activities occurred at Parowan. While the quantities and distributions of projectile points and other artifacts do not correlate well with the

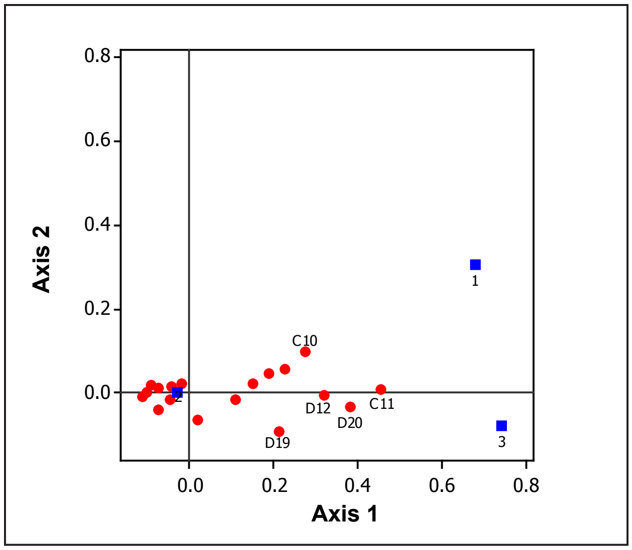


Figure 4.8. Correspondence analysis of projectile points, ceramics, and worked sherds from Parowan; plots represent excavation areas.

gaming pieces and exotics, the presence of certain projectile point types at Parowan may bolster the case for aggregation and trade.

In the Parowan site artifact assemblage, Five Bullcreek points and 1 Nawthis Side-notched points were identified. As mentioned in chapter 3, and in Holmer and Weder (1980), Bullcreek points are most common in the eastern and southern parts of the Fremont culture area, and Nawthis Side-notched points are most common northeast of Parowan Valley. The identification of these point types and the presence of exotics and gaming pieces may confirm that some trade with and aggregation of external groups from the northeast and southeast of Parowan Valley occurred.

Parowan Chronology

Radiocarbon dates from Parowan range from the late AD 900s through the mid 1100s. The projectile point assemblage from Parowan gives credence to these dates. The most commonly occurring projectile points type in the Parowan assemblage is the Parowan Basal-notched points. Rosespring Corner-notched points are also present but in smaller amounts (see Figure 3.9). The presence of these point types provides a relative chronology that is consistent with the radiocarbon dates obtained from Parowan.

The simplified types expanding stem and contracting stem were identified and plotted for the Parowan assemblage (see Figure 3.10). The results of this distribution are similar to results at Paragonah. Contracting stem points are more common than expanding stem points. As mentioned in chapter 3, 55 points have contracting stems and 8 points have expanding stems. The presence of a high amount of contracting stem points may indicate that Parowan was more commonly occupied in the late Formative Period. The abundance of contracting stem points and the total counts of visually identified Parowan Basal-notched points serve as relative temporal markers to indicating that Parowan was may have been occupied even later than the radiocarbon dates suggest.

Summit Site Function

The excavations at Summit were the most extensive of all sites excavated in Parowan Valley. As summarized in chapters 1 and 3, Summit was excavated by several institutions over the course of many years. This variance of excavation strategies caused disparities of artifact provenience, definitions of site boundaries, and artifact catalog organization. The excavations performed by SUU are particularly problematic. Due to the incomplete nature of the excavation notes from the SUU excavations, no projectile points or other artifacts can be plotted on a site map. An artifact catalog does exist and with some approximations of provenience, it places the majority of projectile points in extra-mural areas. Of the 764 projectile points analyzed, 104 are associated with structures, 650 were located in extra-mural areas, and 10 have no provenience. Therefore, the projectile points from the SUU assemblage will not be considered in specific discussions of distributional data due to their ambiguous provenience. The excavations performed by the University of Utah at Median Village and Evans Mound provide more detailed information and as with previous discussions of data, will be considered with the data from the UCLA excavations.

A total of 1,604 projectile points were recovered by UCLA and the University of Utah from Summit. Of these, only 1,160 have reliable provenience. The projectile points plotted on the plan map of Summit in chapter 3, (Figure 3.13) only demonstrate the provenience of 686 projectile points recovered by UCLA. In accordance with the data presented by Jardine (2007) and Hall (2008), the only provenience data considered in the distributions of exotics and gaming pieces is that from the UCLA excavations. Data from Median Village, Evans Mound, and SUU are considered as part of the grand totals, but not when issues of artifact distributions and projectile point identifications are concerned. I felt it best to continue in this pattern since it is implemented it in the artifact distribution comparisons for Paragonah and Parowan.

When the provenience of projectile points from the UCLA excavations is considered, only 47 of the 686 were associated with structures. According to the aggregate artifact catalog, an additional 30 projectile points are associated with structures excavated in 1960 and 1961, but the provenience of these points and the exact locations of those structures are incomplete due to poor mapping during those excavation years. The balance of projectile points from the UCLA excavations is provenienced to extra-mural areas. The vast majority of artifacts in the Summit catalog come from the south-east areas of the Summit site. These areas consist of several surface storage structures, three pithouses, and 22 excavation areas. The excavation area with the highest combined amount of these artifacts is excavation area 18A23, directly next to Structure 28.

In order to determine if the total number of projectile points recovered from Summit is statistically significant to the total number of other artifacts, the projectile

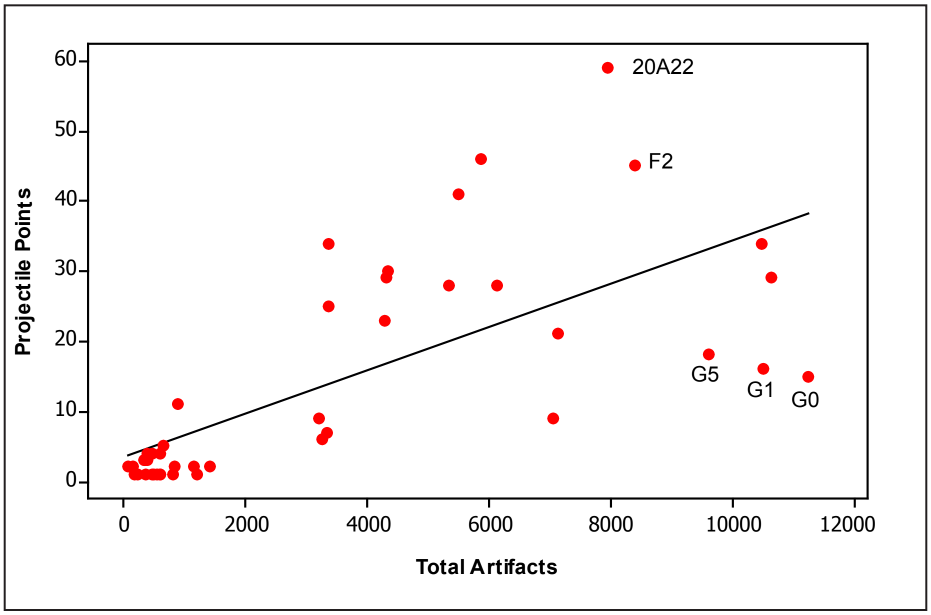


Figure 4.9. Scatterplot of projectile points vs total artifacts from Summit.

point total was tested against the total of all artifacts listed in the Summit catalog. Figure 4.9 is a scatter plot of the total amount of projectile points compared to the total amount of artifacts listed in the PVAP artifact catalog for Summit. This scatter plot indicates that specific excavation areas at Summit had higher concentrations of projectile points than others. Figure 4.9 suggests that the total amount of projectile points in certain areas is indeed higher than expected.

In order to make inferences regarding the general site function at Summit, the total amount of artifacts was considered and compared to the total amount of projectile points. Like Paragonah and Parowan, gaming pieces and exotics were recovered from the Summit excavations. The patterns of gaming piece and exotic concentrations are very similar to concentrations of projectile points. The majority of these artifacts occur in the southeast area of the Summit site. A correspondence analysis was performed comparing the total quantity of projectile points to various artifact types from Summit. In Figure 4.10, the projectile point quantities were compared to the quantities of gaming pieces and exotics. The cluster patterns in Figure 4.10, suggest that certain areas had higher densities of projectile points, gaming pieces, and exotics relative to other areas and artifact densities. Excavation areas 21A22 and 19A23 illustrate this correlation particularly well. When the total numbers of projectile points, other stone tools, and unworked bone are compared in a correspondence analysis, two clusters are visible (Figure 4.11). The cluster to the right of the x and y axis shows a correlation between high counts of projectile points, other stone tools, and unworked bone. The vertical cluster on the left side of the graph has been attenuated by the lack of bones recovered from these areas. Despite this attenuation, however, this graph suggests that in areas with high concentrations of unworked bone, other lithic tools and projectile points are more likely to be present. It must be noted though, that in areas where unworked bone counts are small or non-existent, the projectile point counts are still high especially in areas 17A22-21A23.

Simple correspondence tests based in the total number of ceramics, worked sherds, and projectile points were performed, but due to the high number of ceramics recovered from Summit, no clear patterns emerged that showed the projectile quantities were unusually abundant relative to ceramics in certain areas.

The number of residential structures and the frequency of super-positioned residential structures at Summit indicate that the site was a heavily occupied residential site in Parowan Valley. The presence of gaming pieces, exotics, and unusually high projectile point and unworked bone concentrations suggest that some form socio-economic practices like trade and gambling may have occurred at the Summit site. Much of the provenience and distributional data is difficult to discern, however, so inferences beyond speculation are not completely possible. Another factor that may strengthen the case for some sort of aggregation, is the presence of certain projectile point types.

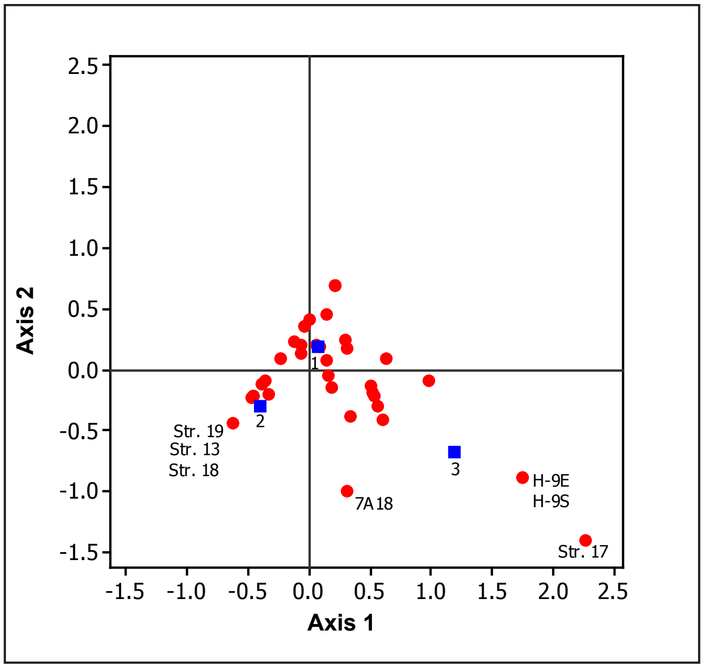


Figure 4.10. Correspondence analysis of projectile points, gaming pieces, and exotics from Summit; plots represent excavation areas.

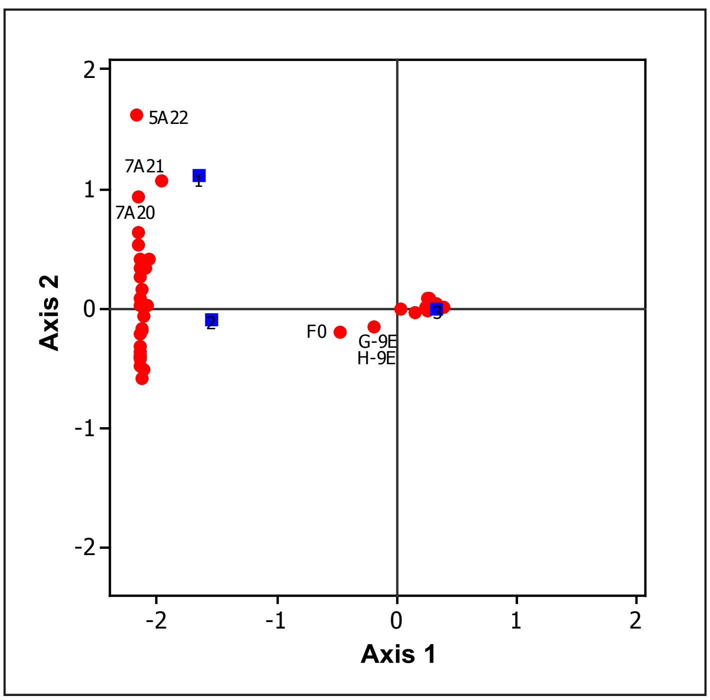


Figure 4.11. Correspondence analysis of projectile points, other lithic tools, and unworked bone from Summit.

The analysis of the assemblage from Summit (consisting of the points in the UCLA and SUU assemblages) identified 14 Nawthis Side-notched points and 11 Bullcreek points. The presence of Nawthis Side-notched points at this site suggests that interactions between the Fremont in Parowan Valley and Fremont groups to the north may have interacted. The combined presence of exotics, gaming pieces, and projectile point types common to other parts of the Fremont culture area shows some evidence that Summit, like Paragonah and Parowan experienced some form of trade and social aggregation.

Summit Chronology

The radiocarbon dates from Summit show a chronological range from the early AD 1000s to the mid 1100s. Radiometric dates were also taken by Berry (1971) and Marwitt (1970). These radiometric dates indicate a temporal range between the late AD 800s and the mid 1300s for Summit.

The projectile points recovered from Summit provide relative temporal markers that confirm the radiocarbon and radiometric dates. The most common projectile points type in the Summit assemblage is Parowan Basal-notched. Rosespring Corner-notched points are the second most common projectile point type recovered from Summit. These projectile point types date from AD 900 to 1250 and AD 300 to 900 respectively (Holmer and Weder 1980).

The simplified types of contracting and expanding stem points should also be considered. In Figure 3.14, the distributions of contracting and expanding points were plotted on the Summit site map. Contracting stem points are the predominant point type at Summit. The totals of contracting to expanding stem points are 362/141. It should be noted however, that more expanding stem points are present at Summit than Paragonah and Parowan. In addition, two excavation areas at Summit contained more expanding stem points than contracting stem points. This fact is particularly interesting if the basic assumption that expanding stem points are older in age than contracting stem points. The presence of these expanding and contracting stem points at Summit, the super-positioning of pithouses, and the radiocarbon and radiometric dates demonstrate that Summit was occupied during a period spanning the late AD 800s and the early 1300s.

General Site Function in Parowan Valley

Since the sites in Parowan Valley were occupied for a long span of time, it is unlikely that sites maintained a consistent *modus operandi*, especially when highly variable social constructs like trade and aggregation are concerned. The mutability of site function through time at any archaeological site poses some problems when inferences are made. If radiocarbon dates, projectile point types and their distributions are considered in correlation with other artifacts from Parowan Valley, inferences of site function may be derived with more confidence.

The general quantities and distributions of projectile points from Paragonah, Parowan, and Summit have been presented and discussed in an attempt to understand site function and chronology at each respective site. The general assumption is that Paragonah, Parowan, and Summit were residential sites that were occupied for spans of hundreds of years. I argue that due to the presence of certain artifact types in large quantities, certain socio-economic practices such as trade and aggregation occurred in Parowan Valley. At the beginning of this chapter, it was proposed that concentrations of projectile points, gaming pieces, exotics, and other types of artifacts would be found in the same areas of each site. Through correspondence testing, that assumption can not be made with as much confidence, however, certain areas at all three sites demonstrate that some concentrations are in fact, legitimate and that there are certain areas at each site where projectile points and other artifacts are unusually abundant relative to other artifacts. These patterns may suggest a uniformity of site function in Parowan Valley. It is likely that each site in Parowan Valley experienced interaction with groups to the north and east and that this interaction involved trade, gambling, and other activities that encouraged aggregation.

Extra-mural Areas

A final consideration regarding general site function in Parowan Valley must be considered. The discussions of provenience in chapter 3 determined that the majority of projectile points were found in extra-mural areas. Further correspondence analysis, specifically in the case of the Summit site confirmed the presence of specific artifact concentrations in extra-mural areas, especially projectile points.

An exact function of these areas is unknown since these areas were created during excavation. No formal site boundaries were designated by the excavating institutions and therefore the term "extra-mural area" is problematic in and of itself. For the purposes of this discussion, the term "extra-mural area" suggests an area outside of residential or storage structures. Some inferences regarding extra-mural areas may be possible and should be considered in order to better understand site function in Parowan Valley. The function of these areas is unknown but they could be general activity areas where events like trade or gathering occurred, or they could merely be midden areas.

Since the majority of points were recovered from these extra-mural areas, it is possible that these points were discarded or dropped. The presence of broken projectile points in these areas may indicate their disposal after breaking. If points were discarded in midden areas after breaking, a tally of the ratio of broken to complete points may prove useful.

Broken and Complete Points from Parowan Valley

Of the 321 points recovered from Paragonah, 296 are broken. At Parowan, 364 of the total 390 projectile points were broken, and at Summit (UCLA/SUU), 1465 of the total 1794 points were broken. The most common fracture patterns in the Parowan Valley projectile point assemblage are hinge fractures. These fractures most commonly occur among finished projectile points from impacts associated with use (Whittaker 1994:191-193). Since the majority of these broken points were recovered from extra-mural areas it is possible that these extra-mural areas served as refuse areas or midden areas for Paragonah, Parowan, and Summit. If midden areas in Parowan Valley could be determined, it is possible that site boundaries and site function could be better determined.

Broken and Complete Points from Baker Village

In order to test the hypothesis that a presence of many broken points correlates with the creation and use of refuse or midden areas, the broken and complete projectile point ratios from Baker Village were compared. The broken and complete point data from Five Finger Ridge were not available.

Prior to a discussion on the data, a caveat regarding the definition of broken projectile points must be made. In the analysis of the PVAP collection, any projectile point missing portions of tangs, lateral edges, and distal or proximal ends was considered a broken point. This strategy was also used in the most recent analysis of the Baker Village collection.

When amounts of broken and complete projectile points from Parowan Valley are compared those from Baker Village, a similar pattern emerges. In the Baker Village assemblage, 375 points are broken and 77 are complete. This is similar to the broken and complete point counts in the Parowan Valley assemblage.

As previously mentioned, the majority of projectile points in the PVAP collection are loosely provenienced to extra-mural areas. At Baker Village, the majority of projectile points are provenienced to structures. This pattern suggests that the provenience of broken points is not always consistent and the establishment of potential midden areas is not possible simply based on the consideration of broken and complete points. Another issue to consider is the general wear and tear that projectile points experience both during and after their active use. Delicate tangs and distal tips could snap easily during processes of climate, bioturbation, and modern excavation.

Therefore, with these conflicts of provenience and the delicate nature of projectile points, the benefits of using broken and complete points to bolster inferences of site function, especially concerning the creation and use of midden areas, seem inconclusive.

General Chronology of Parowan Valley

In chapter 1, I discussed the general chronology of Parowan Valley and the existing dates obtained from Paragonah, Parowan, and Summit and the complete list of radiometric, radiocarbon, and tree-ring dates obtained from Parowan Valley is provided in Appendix A.

The absolute and relative dates from each site were discussed and the general pattern that emerges indicates that Paragonah, Parowan, and Summit were occupied predominantly between AD 800 and AD 1300. The use of projectile point types as relative temporal markers contributed to the formation of this time span of occupation in Parowan Valley.

Were projectile points in Parowan Valley used for a function beyond arrow use?

It was proposed in chapter 2 that projectile points from Parowan Valley may have been employed for purposes beyond basic utilitarian missile use. This idea was proposed for several reasons, the most prominent being the presence of thousands of projectile points in Parowan Valley collection and the discovery of 11 projectile points with unique in-situ arrangements and non-utilitarian characteristics.

The collection of 3,079 projectile points from Parowan Valley is one of the largest assemblages of Fremont Projectile points from one area in the Great Basin. This large quantity led to the initial speculations suggested in chapters 1 and 2, that there was a large surplus of projectile points in Parowan Valley. In other words, it was proposed that projectile points were being produced in massive quantities beyond the everyday utilitarian needs of the inhabitants of Parowan Valley. After an in-depth discussion of artifact distributions and a standardization of projectile points per residential structure, it appears that the idea is still a possibility. Approximately 100 residential structures were excavated at the three sites in Parowan Valley. If the 3,079 projectile points are divided by the total number of residential structures, the quotient is 30.79 projectile points per structure. Thirty projectile points per structure is a large amount and may suggest a surplus of projectile points used for other purposes outside of utilitarian household practices.The vast majority of projectile points were found in concentrations in extra-mural areas.

Gambling and Aggregation in Parowan Valley

In her thesis, Molly Hall argued that large quantities of gaming pieces at particular sites are the result of intensive gaming activities (Hall 2008:91). Hall elaborates, demonstrating that in the ethnographic record, intensive gaming is highly associated with festivals and other periods of aggregation (Hall 2008:91). In the previous discussions of artifact distribution, it is clear that the highest concentrated gaming piece clusters in Parowan Valley are located in the southeast section of the Summit site near Structures 14, 27, and 28. This concentration of gaming pieces is located in the exact same area as the largest projectile point concentration at Summit. Due to the incomplete nature of the excavations in this area however, the complete dimensions of Structures 14, 27, and 28 are unavailable, as is information regarding other features present in these excavation units.

In chapter 2, Woodburn's ethnographic observations the Hadza of Tanzania were discussed (Woodburn 1968). Woodburn observed that many of the Hadza used arrows as currency in gambling activities. Stewart Culin (1907) has also discussed several games of chance and skill involving the use of arrows. These games were commonly tests of accuracy, providing prizes to the best marksmen. Since the highest projectile point concentrations are located at Summit and are in direct association with the highest concentrations of gaming pieces, it may be possible that projectile points played some part in the gaming or aggregation practices of the Parowan Valley Fremont. Another key element to aggregation in the ethnographic record is the provision of food for feasting. If the projectile points were not being used as currency in gambling, it is most likely that they were used to procure food for those in attendance at the gambling or trade festivals. Currently, the faunal assemblage from Parowan Valley is still being analyzed, but according to the PVAP aggregate catalog, there are approximately 75,000 faunal bones in the collection. The completion of this analysis may provide more insights into feasting activities in Parowan Valley and serve as a plausible explanation for the thousands projectile points in the collection.

As mentioned in the discussions of site function and chronology, the presence of several projectile points more common in areas outside of Parowan Valley was noted. These points could have been left or traded by travelers to the Parowan Valley from the North and East suggesting a pattern of aggregation of external groups to Parowan Valley. If common socio-economic activities like gambling, trade, and feasting happened in Parowan Valley, they would serve as reasons for the gathering of external groups.

Symbolism of Projectile Points

In chapter 2, some theories regarding the symbolic or ritual nature of projectile points were proposed. In numerous ethnographies of the Zuni, Frank Cushing outlines the symbolic meanings attributed to projectile points and their placement on or association with certain hunting fetishes (Cushing 1883). Stewart Culin (1907) also provides and in-depth discussion regarding Zuni shrines to war gods and other deities associated with the religious practices of the Bow Priesthood. These shrines or altars were adorned with quivers of arrows, projectile points, and other hunting paraphernalia. Culin suggests that through time, several Native American groups developed symbolic ritual games surrounding bow and arrow use. Among the Zuni, he describes the transition of the symbolic weapons of the Zuni twin war gods into types of gaming pieces: "The significant emblems of the Twins are their weapons. These consist of a -club made of heavy wood, their bows and cane arrows…and a netted shield…Gaming implements are almost exclusively derived from these symbolic weapons. For example, the stick dice are either arrow shafts or miniature bows, and a similar origin may be asserted for the

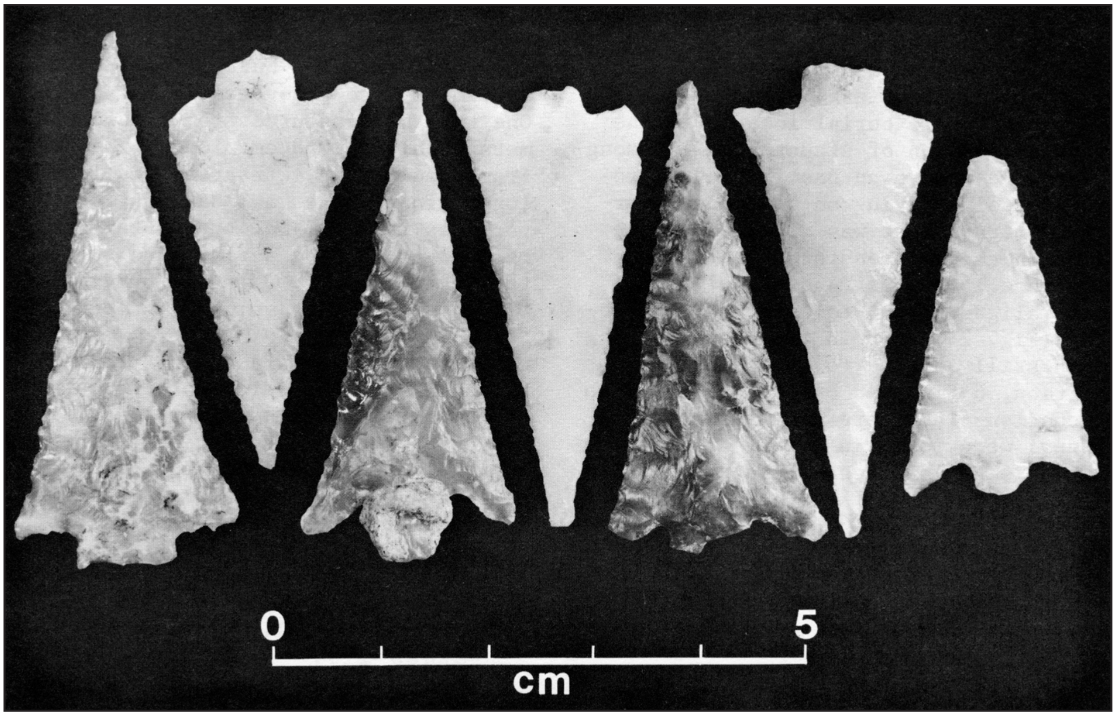


Figure 4.12. Reconstructed arrangement of projectile points found in Pit Dwelling A7 (Cozzens 1982:80).

implements used in the hand game and in the four stick game…In the games of dexterity we find again bows and arrows and the netted shields with bows" (Culin 1907:33). The multiple levels of symbolism surrounding bows, arrows, hunting, and gaming may have important application in Parowan Valley. If the sites in Parowan Valley served as aggregation areas for gambling, feasting, and trade, it is also possible that some type of games or symbolic activities associated with projectile points may have taken place.

Additional data from Parowan Valley also suggest that some projectile points in the assemblage may have been used for other purposes that hafted projectiles. In chapter 3, four unique projectile points were discussed (see Figure 3.2). These projectile points have been ground smooth in certain areas. It appears that these points were flaked in a normal reduction sequence, and when the desired thickness and shape were acquired, they were ground smooth along the lateral, distal, and proximal ends. This intensive grinding would not be technologically advantageous in the utilitarian practice of game procurement or warfare. The edges and distal tips of these projectile points would have little success penetrating the hide or cutting into the flesh of prey. Therefore, the exact function of these ground projectile points is unknown. These objects could range in function from pieces of adornment to objects associated with some sort of sympathetic magic similar to that utilized by the Zuni. The provenience of these points provides no clue to their function. They are found in extra-mural areas not associated with large concentrations of projectile points.

In addition to these ground projectile points, another atypical use of projectile points occurred at Evans Mound. A unique in-situ alignment of projectile points provides the final example used in the speculation that projectile points may have functions beyond utilitarian (Figure 4.12). During the final year of excavations at Evans Mound, an alignment of projectile points was found near a human burial. Whether the association with the burial was direct or indirect is unknown, but it is in close proximity. The alignment is described: "Also possibly associated with the burial were 7 Parowan Basal-notched projectile points resting on the surface of an inverted metate in the northeast corner of the floor of structure A7. Four of the 7 were laid alternately point to base and side to side. It is likely that they all had been arranged in a similar fashion" (Pecotte 1982:120).

If these projectile points are associated with Burial 1, it is possible that their alignment had some sort of ritual or symbolic significance. The individual was also buried with the remains of a great horned owl (*Bubo virginianus*), the remains of nine magpies (*Pica pica*), pieces of worked bone (including a bone whistle), several bifaces, bone shavings, and a quartz crystal. 8 ceramic vessels, 2 of which contained various seeds were located near the burial and it is speculated that 7 of the 8 vessels were associated with the burial (Pecotte 1982:120).

As rule, burial goods are conspicuously absent from Fremont burials (Janetski et al 2000: 252-256; Madsen and Lindsay 1977:77). This burial from Evans Mound is a large exception to that rule. The number and nature of objects associated with this burial indicate that this individual held some sort of status in this society. The inclusion and positioning of projectile points near the burial goods, suggests that a ritual importance was, in some form, associated with these projectile points. The data regarding the ground projectile points, the points associated with the burial, and the associations of points, gaming pieces, exotics, and other artifact types in similar concentrations and distributions throughout the site suggest that some of the projectile points from Parowan Valley may have enjoyed a function or role beyond that of utilitarian projectiles.

Conclusions

The high quantities of projectile points in Parowan Valley provide numerous opportunities for speculations regarding site function, site chronology, and projectile point use among the Fremont. The magnitude of the PVAP collection has hindered the abilities of researchers to make clear inferences regarding these aforementioned issues. To date, the only completely analyzed data sets from the PVAP collection are the exotic ornaments and the worked bone gaming pieces. The chipped stone collection was sampled and this thesis focused exclusively on the projectile points from Parowan Valley. There are several data sets that need to be analyzed before a thorough understanding of the activities in Parowan Valley can be achieved.

In this thesis, I presented the results of an extensive chipped stone tool analysis. I also attempted to answer questions regarding site function, site chronology, projectile point provenience and the relationship between projectile points and other artifact types. With the use of comparative data provided by Jardine (2007), Hall (2008), and the total amount of artifacts in the PVAP catalog, I was able to further promote the idea that sites in Parowan Valley experienced some sort of aggregation due to the quantities and distributions of certain artifacts. On a purely utilitarian level, if numerous gatherings occurred in Parowan Valley, many projectile points would be needed to procure game and feed those in attendance. These assumptions, however, remain incomplete due to the fact that the faunal and ceramic assemblages have yet to be completely analyzed.

Finally, I discussed the possible social and economic values associated with projectile points. The similar distributions of projectile points and gaming pieces, particularly at Summit and the ethnographic information provided by Woodburn (1968), Cushing (1883), and Culin (1907) may suggest that projectile points played some role in the gaming systems, and by default, the economic systems of Parowan Valley. The examples of the ground projectile points and the in-situ placement of projectile points in the burial at Evans Mound also suggest that points may have possessed a value beyond that of utilitarian missiles.

When used in concert with all previously reported and discussed data from Parowan Valley, this information regarding Parowan Valley projectile points opens one more perspective into reconstructing the life-ways of the Parowan Valley Fremont. In addition, it is my hope that the discussions and models proposed concerning projectile point function will be tested at other large Fremont sites in order to expand research into the ever growing literature surrounding the complexities of Fremont social organization.

APPENDIX A

Table A.1. Radiocarbon Dates for the Parowan Valley

Site	Str./ Location	Sample Number	Conv. Date	Calibrated Date (2σ)	Analysis	Material	Reference
Summit (42IN40)	Structure 12	PRI-07-58-395-4712	970 ± 20 BP	AD 1010-1060 and AD 1070-1160	AMS	Corn cob	No Reference, BYU
Summit (42IN40)	Structure 1	PRI-07-58-283-3101	965 ± 20 BP	AD 1010-1060 and AD 1070-1160	AMS	Corn cob	No Reference, BYU
Summit (42IN40)	Structure 18	PRI-07-58-509-3236	945 ± 20 BP	AD 1020-1160	AMS	Corn cob	No Reference, BYU
Summit (42IN40)	Structure 3	PRI-07-58-365-2814	990 ± 20 BP	AD 990-1050 and AD 1080-1150	AMS	Corn cob	No Reference, BYU
Summit (Evan's Mound-42IN40)	Pit Dwelling A7	UGa-2713	1825 ± 60 BP	AD 59-346 AD 373-376	Radiometric	Unknown	Dodd, 1982
Summit (Evan's Mound-42IN40)	Structure 14	GX-1549	1295 ± 90 BP	AD 596-900 AD 918-965	Radiometric	Charcoal	Marwitt, 1970, p.144
Summit (Evan's Mound-42IN40)	Pit Dwelling B2	RL-237	1190 ± 90 BP	AD 615-1025	Radiometric	Unknown	Dodd, 1982
Summit (Evan's Mound-42IN40)	Pit Dwelling A1	RL-236	1050 ± 90 BP	AD 780-1210	Radiometric	Wood	Dodd, 1982
Summit (Evan's Mound-42IN40)	Pit Dwelling 1	GX-2405	940 ± 90 BP	AD 895-1255	Radiometric	Unknown	Berry 1972
Summit (Evan's Mound-42IN40)	Pit Dwelling 11	GX-2407	870 ± 90 BP	AD 920-1290	Radiometric	Charred Beam	Berry 1972
Summit (Evan's Mound-42IN40)	Grid 17-A-23	GX-1550	855 ± 90 BP	AD 1016-1289	Radiometric	Charred corn cobs	Marwitt, 1970, p.144
Summit (Evan's Mound-42IN40)	Pit Dwelling 3	GX-2404	830 ± 80 BP	AD 1025-1325	Radiometric	Charred Beam	Berry 1972
Summit (Evan's Mound-42IN40)	Pit Dwelling 2	GX-2406	775 ± 90 BP	AD 1048-1344	Radiometric	Charred Beam	Berry 1972
Summit (Evan's Mound-42IN40)	Pit Dwelling 6	GX-2403	595 ± 90 BP	AD 1248-1428	Radiometric	Charred Beam	Berry 1972

Table A.1. Continued

Site	Str./ Location	Sample Number	Conv. Date	Calibrated Date (2σ)	Analysis	Material	Reference
Summit	Structure 2	GaK-2114	1050 ± 90 BP	AD 774-1185	Radiometric	Charred wood	Marwitt, 1970, p.144
(Median Village-42IN124)							
Summit	Structure 8	GaK-2115	1020 ± 90 BP	AD 782-789	Radiometric	Charred wood	Marwitt, 1970, p.144
(Median Village-42IN124)				AD 810-847			
				AD 855-1215			
Summit	Structure 9	GaK-2116	990 ± 100 BP	AD 784-787	Radiometric	Charred wood	Marwitt, 1970, p.144
(Median Village-42IN124)				AD 825-841			
				AD 862-1259			
Summit	Structure 9	GaK-2117	500 ± 80 BP	AD 1291-1523	Radiometric	Charred wood	Marwitt, 1970, p.144
(Median Village-42IN124)				AD 1572-1629			
Paragonah (42IN43)	Structure 38	Beta-171936	1120 ± 40 BP	AD 810-840 and 860-1000	AMS	Charred corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 19	Beta-171932	1040 ± 40 BP	AD 910-920 and 960-1030	AMS	Charred corn cobs and kernels	No Reference, BYU
Paragonah (42IN43)	Structure 13	Beta-171928	1030 ± 40 BP	AD 960-1040	AMS	Charred corn cobs and kernels	No Reference, BYU
Paragonah (42IN43)	Structure 15	Beta-171930	990 ± 60 BP	AD 960-1180	Radiometric	Charred corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 27	Beta-171934	970 ± 40 BP	AD 1000-1170	AMS	Charred corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 8	Beta-171925	960 ± 40 BP	AD 1000-1180	AMS	Charred corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 12	Beta-171927	960 ± 40 BP	AD 1000-1180	AMS	Charred corn kernels	No Reference, BYU

Table A.1. Continued

Site	Str./ Location	Sample Number	Conv. Date	Calibrated Date (2σ)	Analysis	Material	Reference
Paragonah (42IN43)	Structure 28	Beta-171935	940 ± 40 BP	AD 1010-1190	AMS	Charred corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 14	Beta-171929	920 ± 60 BP	AD 970-1280	Radiometric	Corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 22	Beta-171933	920 ± 40 BP	AD 1020-1210	AMS	Charred corn cobs	No Reference, BYU
Paragonah (42IN43)	Structure 17	Beta-171931	910 ± 40 BP	AD 1020-1220	AMS	Charred corn cobs and kernels	No Reference, BYU
Paragonah (42IN43)	Structure 10	Beta-171926	900 ± 90 BP	AD 980-1280	Radiometric	Charred corn cobs	No Reference, BYU
Parowan (42IN100)	Structure 8	GX-1547	1005 ± 80 BP	AD 878-1218	Radiometric	Charred wood	Marwitt, 1970, p.144
Parowan (42IN100)	Structure 10	PRI-07-58-433-9688	1005 ± 20 BP	AD 980-1050 and AD 1100-1120	AMS	Corn cob	No Reference, BYU
Parowan (42IN100)	Structure 4	PRI-07-58-433-9646	990 ± 20 BP	AD 990-1050 and AD 1080-1150	AMS	Corn cob	No Reference, BYU
Parowan (42IN100)	Structure 7	PRI-07-58-433-7825	985 ± 20 BP	AD 990-1050 and AD 1080-1160	AMS	Corn cob	No Reference, BYU
Parowan (42IN100)	Structure 12	PRI-07-58-433-8266	960 ± 20 BP	AD 1020-1060 and AD 1070-1160	AMS	Corn cob	No Reference, BYU
Parowan (42IN100)	Feature 2 in Grid E16	GX-1548	700 ± 80 BP	AD 1178-1413	Radiometric	Charcoal	Marwitt, 1970, p.144
42IN2262	Burial	Beta-222448	990 ± 40 BP	AD 990-1160	AMS	Bone collagen extrac-tion	No Reference, BYU or Ron Rood

Table A.1. Continued

Site	Str./ Location	Sample Number	Conv. Date	Calibrated Date (2σ)	Analysis	Material	Reference
Tree-Ring Dates for the Parowan Valley							
Site	Structure	Date	Sample Number	Reference			
Paragonah (42IN43)	Structure 15	1157 (tree dying when felled)	UTM 117	No Reference, BYU			
Paragonah (42IN43)	Structure 15	March-May 1168	UTM 118	No Reference, BYU			
Paragonah (42IN43)	Structure 15	May 1174-March 1175	UTM 119	No Reference, BYU			
Paragonah (42IN43)	Structure 16	Unknown number of years after 1108	UTM 120	No Reference, BYU			
Paragonah (42IN43)	Structure 30	May 1108	UTM 122	No Reference, BYU			
Paragonah (42IN43)	Structure 30	May 1108	UTM 123	No Reference, BYU			
Paragonah (42IN43)	Structure 31	May 1137-March 1138	UTM 124	No Reference, BYU			

APPENDIX B

All projectile point type abbreviations used in the analysis and illustrated in the subsequent analysis tables are consistent with the Intermountain Antiquities Computer System (IMACS). The toolstone type abbreviations are used and developed by The Department of Anthropology, Brigham Young University. Tables B.1 and B.2 provide a reference to understand the abbreviations.

Table B.1. Projectile point type abbreviation reference.

CA	Elko Series
CC	Pinto Series
CD	Humblodt
CM	Gypsum
CZ	Unidentified Archaic
DC	Rosespring Corner-notched
DG	Eastgate Expanding-stem
RG	Rosegate
DD	Nawthis Side-notched
DE	Parowan Basal-notched
HG	Bullcreek
DZ	Unidentified Formative
EC	Desert Side-notched

Table B.2. Toolstone Material Reference

CC	Cryptocrystalline chert, generally white or gray in color, transluscent or opaque.
CD	Darker colored cryptocrystaline chert, generally dark brown or black, mostly opaque.
CR	Red, yellow, and orange cryptocrystalline chert
OB	Obsidian
QC	Coarse Grained Quartzite
ZZ	Various tool stone types like siltstone that were in the minority.

Table B.3. Analysis Data from Paragonah

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-5170	24”-36” Level of Structure 6	CC	DC/ DG		16.7			6.3	3.3	1.1
125-5169	24”-36” Level of Structure 6	OB	DE	45.6	13.3			5.3	3.7	1.2
125-5897	Floor of Structure 9	OB	DZ		15.8				4.1	0.9
125-5998	24”-Floor Level of Structure 10	CR	DZ		14.9				3.7	1.2
125-5997/5999	24”-Floor Level of Structure 10	CR	DZ		9.2				3	1.5
125-5996	24”-Floor Level of Structure 10	CC	DE		18			6.5	4.1	1.4
125-6616	12”-24” Floor Level of Structure 13	CC	DE	28.2	17	3.7		7	3.2	1
125-6615	12”-24” Floor Level of Structure 13	CR	DG		17.2	4.6		5.5	3.3	1
125-6614	12”-24” Floor Level of Structure 13	CC	DZ		16.5				2.8	0.9
125-6974	Clay Rimmed Hearth of Structure 14	CC	DZ		15.4				3.5	0.8
125-6892	12”-24” Floor Level of Structure 14	CR	DZ		16.9				4.7	1.6
125-6892	12”-24” Floor Level of Structure 14	CR	DZ		16.9				4.7	1.6
125-6882	12”-24” Floor Level of Structure 14	OB	DZ		16				4.1	1.7
125-6881	12”-24” Floor Level of Structure 14	OB	DE		15.6			5	3	1.1
125-6880	12”-24” Floor Level of Structure 14	CC	DD		11.9	3.4		8.3	2.8	0.9
125-6879	12”-24” Floor Level of Structure 14	CC	DE		16			5.8	3.3	1
125-6876	12”-24” Floor Level of Structure 14	CC	DE		15.2	2.2	5.5	4.4	2.2	0.8
125-6878	12”-24” Floor Level of Structure 14	CC	DZ		15.6	3.1	5.6	5.8	3.6	1.1
125-6877	12”-24” Floor Level of Structure 14	CC	DE		16.3		6	4.8	2.9	0.9
125-6877	12”-24” Floor Level of Structure 14	CC	DE		16.5			5.5	3.4	1.3
125-6875	12”-24” Floor Level of Structure 14	OB	DE		20.8			5.5	3.9	1.7
125-6874	12”-24” Floor Level of Structure 14	CC	DZ	33.7	13.1				2.6	1
125-6873	12”-24” Floor Level of Structure 14	OB	DC		13.6			5.5	3	0.9
125-6872	12”-24” Floor Level of Structure 14	OB	DC		13.7			5.2	3.3	1
125-6871	12”-24” Floor Level of Structure 14	OB	DD	28.3	12.2	1.6		5.2	3.5	0.8
125-3546	Subfloor of Structure 17	CC	DC		14.2			5.2	3.8	1
125-3545	Subfloor of Structure 17	CC	DE	23.4	15.7		5.6	2.6	3.8	0.9
125-3348	Subfloor of Structure 17	OB	DE		18.1			5.4	3.6	1.3
125-3348	Subfloor of Structure 17	OB	DZ	20.7	11.9				2.6	0.4
125-2949	Floor of Structure 17	OB	DC		19.2			6.5	3.4	1.7
125-2948	Floor of Structure 17	CC	DG		18.3			7.5	3.7	1.1
125-7276	Floor of Structure 19	OB	DE		19.1			6.5	3.3	1.4
125-7275	Floor of Structure 19	CC	DE		17.7	3.4	7.1	6	3.7	1.1
125-7465	Floor of Structure 25	OB	DC/ DG		17			7.1	4.1	1.4
125-7465	Floor of Structure 25	OB	DC/ DG		17				4.1	1.4
125-7769	Floor 1 of Structure 22	CR	DZ	21.1	17.8				2.8	0.8
125-7426	Floor of Structure 23	OB	DC		13.1			7.1	3.7	1
125-7422	Floor of Structure 23	CC	DZ		18.7	6.3	5.9	6.3	2.8	1.7

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-9074	Floor of Structure 26	CC	DC/ DG					6.3	3	0.9
125-9160	Floor of Structure 28	OB	DE		18.8	3.8	8.2	6.7	4.2	1.4
125-9159	Floor of Structure 28	OB	DZ		11.2				4.3	0.9
125-9158	Floor of Structure 28	CR	DC		13.7	3.3		5.9	3.3	1
125-9157	Floor of Structure 28	CR	DE		16.2		6.2	5.3	3.2	1.3
125-11,852	Floor 2 of Structure 32	CR	DE		16.4			6.7	3	1
125-9998	Floor 1 of Structure 32	DZ	DZ	36.4	17.4	4.2	7.4	7.7	3.4	1.5
125-11,461	Floor 1 of Structure 32	CD	DC/ DG	31.1	15.8	3.6	6.5	6.7	3.6	1.1
125-10,255	0”-26” Fill above Surface 4	CC	DZ		12.7				3.1	0.9
125-10,254	0”-26” Fill above Surface 4	OB	DE		16.8			7.5	3.6	1.5
125-11,926	Floor of Structure 35	CR	DE		15.6			6.2	3.9	1.6
125-11,702	Floor of Structure 37	CC	DZ		14				4.1	1.4
125-11,683	Floor of Structure 37	CC	DE		16.4			16.4	4	1.6
125-11,371	Floor of Structure 37	CC	DE	32.1	17.3	3.5	6	5.3	2.9	1.3
125-11,237	Floor of Structure 37	OB	DZ		16.2				4.1	1.2
125-11,978	Floor of Structure 38	CC	DE		19.6			7	3.1	1.1
125-11,663	Floor of Structure 38	OB	DZ		16.2				3.4	1
125-10,559	Mound X	CR	DZ		14.2	4	2.6		4.7	1.7
125-2504	Site Surface	OB	DE		19.4	4.1	5.7		6.5	1.5
125-3038	Site Surface	OB	DE		19.4	3.1	3.3	6	5.7	0.5
125-3039	Site Surface	OB	DC/ DG		17.4	3.5	3.8	7.4	5.7	1.3
125-9477	Site Surface	OB	DC		15.2	3.5	2.9	7.5	8	0.9
125-560	6”-18” Level of Structure 1	OB	DE		15.7	4.6			5.6	1.3
125-2146	12”-36” Level of Structure 4	CC	DE	18.2	13.9	2.4		4.9	4	0.5
125-1651	18”-24” Level of Pit H-13 Mound B	OB	CA		22	5.7				4
125-1652	18”-24” Level of Pit H-13 Mound B	CC	DZ		14.2	4.4				1.8
125-1885	12”-18” Level of Pit F-14 Mound B	CC	DZ		12.2	3				1.1
125-2129	0”-18” Level of Pit F14-15 Mound B	OB	DE		12.9	2.7			3.5	0.5
125-2129	0”-18” Level of Pit F14-15 Mound B	OB	CA		16.4	3.6				1.3
125-1859	12”-18” Level of Pit G-13 Mound B	CC	DE		16	3.2	4.5		6.4	1.5
125-1837	18”-24” Level of Pit G-15 Mound B	OB	DC		12.2	3		6.6	5	0.8
125-2061	30”-60” Level of Pit G-15 Mound B	CR	DC		13.5	3			4.6	0.8
125-2848	0”-6” Level of Structure 5	CC	DZ		18	3.9				1.4
125-3690	24”-30” Level of Structure 5	OB	DE		15	3.2				1.1
125-4017	24”-30” Level of Structure 8	OB	DC		14.1	3.2			5.8	1.1
125-4030	30”+ Level of Structure 8	OB	DG		18.7	3.2	3.7	6.3	5	1.1

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-2245	12”-18” Level of Structure 8	OB	DC/ DG		14	2.5			8	0.9
125-2274	30”-36” Level of Structure 8	CR	DZ		14.4	2.6				1.5
125-5820	12”-18” Level of Structure 8	OB	DZ	22.8	12.9	2.3				0.5
125-5676	0”-6” Level of Structure 8	OB	DZ		24.9	5				3.4
125-5684	6”-12” Level of Structure 8	OB	DZ		16.1	2.3				0.6
125-5877	30”-36” Level of Structure 8	CC	DC		16.1	2.9	3.8	5.2	4.3	0.9
125-5878	30”-36” Level of Structure 8	CR	DZ		11.7	3.1				0.8
125-5415	18”-24” Level of P-3	OB	DZ		19.7	3.9	2.3		7.6	1.4
125-5969	12”-24” Level of Structure 10	OB	DE		18.9	4.7		5.5	4.9	2
125-5969	12”-24” Level of Structure 10	CD	DC/ DG		15.9	3.8	3.1		5.4	1.5
125-5970	12”-24” Level of Structure 10	CD	DC/ DG		16.7	2.5			5.7	0.8
125-6246	12”-Floor Level of Structure 12	OB	DE		19.9	3.6			7.4	1.4
125-6466	Subfloor Pit of Structure 12	CC	DE		17.8	3.6	3.9	8.2	5.8	1.2
125-6465	12” Level of Structure 12	CC	DZ		16.2	3.8				1.1
125-6467	12” Level of Structure 12	CR	DE		17.1	3.4		7.5	6.7	1.9
125-6468	12” Level of Structure 12	CR	DE		14.6	2.9			6.2	1
125-6469	12” Level of Structure 12	CC	DZ		15.4	4.4				1.5
125-6470	12” Level of Structure 12	OB	DC/ DG	24	15.2	3.8	2.7	6.6	7.7	1.1
125-6472	12” Level of Structure 12	OB	DG		17.5	3.8	6.2		7	0.9
125-6473	12” Level of Structure 12	OB	DG		16.7	3.4	2.5		8	0.9
125-6474	12” Level of Structure 12	OB	DE		13.7	3.1			7.3	0.9
125-6475	12” Level of Structure 12	OB	DE		15	3			5.6	0.9
125-6941	54” Level of Structure 14	CC	DE		15.4	2.7			6.3	1.2
125-7003	20”-32” Level of Structure 15	CC	DZ		15.1	3.3				0.9
125-7003	20”-32” Level of Structure 15	OB	DZ		14.9	3.6				1.3
125-7068	32”-Floor of Structure 15	CR	DZ		18.3	3.2				1
125-7077	32”-Floor of Structure 15	CC	DC		13.6	4.3	3.8		8.5	1
125-3977	Subfloor of Structure 17	CC	DE		17.4	3.2			6.4	0.9
125-2874	Ventilator Fill of Structure 17	CC	DG		15.5	2.9	3.2	8.4	8	0.8
125-7263	Fill of Structure 19	CC	DZ	22.8	15.5	5.2				1.3
125-7265	Fill of Structure 19	OB	DZ		15.3	4.1				0.6
125-7354	Fill of Structure 20	OB	DC		15.5	2.6			3.6	0.4
125-7360	Fill of Structure 20	OB	DE		17.2	4.5			6.1	1.6
125-7362	Fill of Structure 20	OB	DC		15.2	3.9			4.9	1.2
125-7366	Fill of Structure 20	CR	DE		16	3.6			6.9	1.1

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-7656	Fill of Structure 21	OB	DZ		16.7	3.6				1.2
125-7490	Ventilator of Structure 20	CC	DE		15.9	3.8	4.4	5.2	3.3	1.8
125-7533	Fill of Structure 20	OB	DE		18.2	3.6			5.5	1.2
125-7534	Fill of Structure 20	CC	DZ	39.2	18.1	4.2	3	8.4	6.5	2
125-7655	Fill of Structure 21	CC	DZ		13.9	3.6				1.1
125-7657	Fill of Structure 21	OB	DC	27.5	14.6	2.7	1.8	7.7	7.5	1.1
125-7700	Fill of Structure 22	CR	DE	25.2	15.9	4.5	3	6.1	5.1	1.2
125-7701	Fill of Structure 22	CC	DZ		13.4	4.2				0.7
125-7702	Fill of Structure 22	CR	DZ		13.3	3				1.1
125-7703	Fill of Structure 22	CC	DZ		14.2	4				1.1
125-7704	Fill of Structure 22	OB	DE	31.2	19.5	3.1	3.9	7	5.9	1.1
125-7705	Fill of Structure 22	OB	DC		15.5	3.5			7.8	1.6
125-7708	Fill of Structure 22	OB	DZ		14	2.9				0.6
125-7841	Fill of Structure 22	OB	DZ		18.5	3.3				0.9
125-7786	Fill of Structure 22	CR	DZ		18.1	3.4				0.9
125-7809	Burial of Structure 22	CR	DC		17.2	3.7		6.4	5	1.5
125-7423	Floor of Structure 23	CR	DC		11.5	3.5			4.2	1.1
125-8821	Fill of Structure 25	CR	DZ		14.9	2.2				0.5
125-8823	Floor of Structure 25	CC	CA	20.9	19.2	7.3				3
125-9096	6”-12” Level of Structure 26	CR	DZ		15.8	3.3	3.7		5.6	1.3
125-9311	Floor of Structure 27	OB	DE		17.2	2.8			6.6	1
125-9177	0”-12” Level of Structure 27	OB	DZ		14.1	3.1				0.6
125-9284	12”-18” Level of Structure 27	OB	DZ		15.6	3.6				0.7
125-9303	6”-12” Level of Structure 27	OB	DZ			2.3				0.6
125-9295	18”-29” Level of Structure 27	OB	DZ		15.2	3.6				1.1
125-8072	6”-12” Level of Structure 28	OB	DZ		14.2	3				1.2
125-8073	6”-12” Level of Structure 28	CR	DE		15.4	3.8			5.1	1.2
125-9014	9”-15” Level of Structure 28	OB	DZ		12.9	3.8				0.9
125-9029	15”-21” Level of Structure 28	OB	DG			3.6		7.3	5.3	1
125-9030	15”-21” Level of Structure 28	OB	DZ		14.1	4.1				0.9
125-9001	21”-27” Level of Structure 28	OB	DZ		12.3	3.2				0.7
125-9009	21”-27” Level of Structure 28	OB	DG		20.5	3.1			6.9	0.7
125-9047	27”-33” Level of Structure 28	OB	DG	22.7	15.1	3.3		7	4.8	0.9
125-8956	Trench Through Structure 28	OB	DD		12	4.1	2.7		8.5	1.5
125-9192	Structure 29	OB	DZ	36.9	13.2	3.4				1.5
125-9124	0”-12” Level of Structure 30	OB	DE		17	3.3	3.3		6.2	0.8
125-9125	0”-12” Level of Structure 30	OB	DZ		18.7	6.5				2.7
125-9089	Structure 30	OB	DE			2.6				0.6
125-10,056	0”-18” Level of Structure 31	CC	DZ		14.6	3.4				0.9

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-9877	0”-18” Level of Structure 31	OB	DG		23.1	3.3			5.3	1
125-10,143	0”-23” Level of Structure 31	CC	DZ		18.2	4.6				2.1
125-10,007	24”-46” Level of Structucte 32	OB	DZ		17.2	3.9				1.1
125-10,010	24”-46” Level of Structucte 32	CC	DZ		13.9	3.8				1.2
125-10,225	24”-46” Level of Structucte 32	CC	DZ		17.3	4.2				2.1
125-10,226	24”-46” Level of Structucte 32	OB	DC/ DG		13.8	2.8	2.6		5.3	0.5
125-10,619	24”-46” Level of Structucte 32	OB	DG		17.2	3.2	4		6.5	0.8
125-10,777	24”-46” Level of Structucte 32	CR	DZ		13.9	2.3				0.7
125-10,778	24”-46” Level of Structucte 32	OB	DZ		15.9	3.8				1.3
125-11,008	24”-46” Level of Structucte 32	CR	DE		19.2	4.1			4.3	1.2
125-11,389	24”-46” Level of Structucte 32	CC	DZ		17.9	3.5				1.5
125-11,391	24”-46” Level of Structucte 32	CC	DE		16.5	4.5			3.8	1.9
125-9820	24”-46” Level of Structucte 32	CC	DZ		16	4.2				1.3
125-9822	24”-46” Level of Structucte 32	OB	DZ		11.9	2.1				0.4
125-9825	24”-46” Level of Structucte 32	CR	DZ	43.3	16.7	3.6	4		6.5	1.6
125-9826	24”-46” Level of Structucte 32	OB	DE	29	17.7	4.1	3.5	8.7	8.3	1.3
125-9827	24”-46” Level of Structucte 32	CC	DZ		16.6	3.7				1.6
125-11,392	24”-46” Level of Structucte 32	CC	DE		20.4	3.6		7.4	5.3	1.8
125-9848	0”-12” Level of Structure 35	CR	DZ		14.1	3.3				0.9
125-10,266	12”-42” Level of Structure 35	OB	DZ		19.7	3.7				1
125-10,422	12”-42” Level of Structure 35	CC	DZ		11.3	3.4				1
125-10,434	12”-42” Level of Structure 35	OB	DC		11.4	3.3			3.3	0.8
125-10,490	12”-42” Level of Structure 35	CR	DE		15.3	3.4			5.9	1
125-9808	12”-42” Level of Structure 35	CR	DZ		14.2	3.2				0.7
125-10,111	0”-18” Level of Structure 36	CC	DZ		23.3	5.5				2.2
125-10,189	0”-18” Level of Structure 36	OB	DE		16.4	4.6			4.5	2.1
125-10,187	4”-24” Level of Structure 36	CC	DE		14.5	2.8			4.4	1.2
125-10,396	4”-24” Level of Structure 36	CC	DE		17.8	3.4			8.9	2.3
125-10,795	0”-12” Level of Structure 37	OB	DE		14.7	3.5			6.1	1
125-10,818	12”-48” Level of Structure 37	OB	DG		18.8	3			6.3	0.6
125-11,112	12”-48” Level of Structure 37	CR	DZ		12.4	4				1.2
125-10,663	0”-24” Level of Structure 38	CR	DG		18.7	3.3		5.9	4	1
125-10,966	0”-24” Level of Structure 38	CR	DE		15.6	2.5			6.3	1
125-11,415	24”-Floor Level of Structure 38	CC	DG		18.8	3			4.9	1.1
125-54	0”-12” Level of F11	OB	DZ		20.9	3.5				1.5
125-80	12”-18” Level of F11	CC	DG	20.9	15	3.2	4.3	6.7	4.7	0.7
125-123	0”-12” Level of G10	CC	DC		14.7	3.8			5.8	1.4
125-39	0”-12” Level of G11	CC	DC		13.6	3.7	3		6.9	1.5
125-334	0”-12” Level of I10	CR	DZ		14	3.6				1.1

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-44	0”-12” Level of I11	CR	DC		13.6	3.1	3.4		6.5	1.2
125-733	0”-12” Level of I11	CC	DC		12.6	2.6			5.3	1
125-495	0”-12” Level of I6	OB	DE		14.7	3.2		8.3	7	1
125-160	12”-18” Level of J11	OB	DZ		16.2	3.6				0.9
125-133	0”-6” Level of C3	CC	DC			3.5				0.7
125-109	6”-12” Level of C3	CC	DC		14.5	3.5	2.4	5.9	4.7	1.5
125-147	6”-12” Level of C4	OB	DC		15.9	4.9	2.9	6.9	7.2	1.7
125-555	0”-6” Level of C7	CC	DZ		17.8	5.3				1.7
125-210	6”-12” Level of D3	OB	DE	27.3	14.6	2.9			6.7	1
125-430	6”-12” Level of D5	OB	DE		17.1	3.3			8.9	1.5
125-512	12”-18” Level of D5	OB	DE		15.8	2.9			6.1	0.8
125-513	12”-18” Level of D5	OB	DZ		15.8	2.1				0.6
125-991	0”-24” Level of D5	CC	DE		13.2	3.9		5.6	4.3	1.2
125-679	0”-6” Level of D7	CC	DZ		12.6	4.3				1.4
125-630	0”-6” Level of D8	OB	DE		16.5	2.7			5.3	1.3
125-214	6”-14” Level of E3	OB	DE		13.1	2.3			3.9	0.4
125-256	6”-12” Level of E4	CC	DE		20.3	3.7		7.6	6.2	1.7
125-265	12”-18” Level of E4	CC	DE		16.6	3.9		5.6	4.5	1.3
125-267	12”-18” Level of E4	OB	DE			3			6.9	1.4
125-324	18”-24” Level of E4	OB	DC/ DG	23.6	15	3.2	2.4		6.2	0.9
125-307	0”-6” Level of E5	OB	DC		13.4	3.5			5.1	0.8
125-417	6”-12” Level of E5	OB	DZ	36.1	20.8	5.2				2.9
125-462	12”-18” Level of E5	OB	DZ		17.8	3.9				1.9
125-1865	18”-24” Level of E5	OB	DZ		19.7	4.4				1.8
125-1865	18”-24” Level of E5	OB	DZ		19.7	4.4				1.8
125-325	0”-6” Level of E6	CC	DC		14.3	3.1	2.4		6.4	1.1
125-564	0”-6” Level of E7	OB	DE		13.9	3.4				0.7
125-1945	1”-18” Level of E9	OB	CA		17.2	2.8				1.2
125-1999	12”-18” Level of F15	OB	DE		16.7	4.3			5.9	1.3
125-205	6”-12” Level of F4	OB	DE		15.7	3.2			7.1	0.7
125-206	6”-12” Level of F4	OB	DG		13.5	2.6	3.1	5.8	4.9	0.5
125-294	0”-6” Level of F5	OB	DZ	33.4	14.1	4.4				1.7
125-549	0”-6” Level of F9	OB	DZ		14	2.8				0.2
125-2030	24”-30” Level of G15	CD	DZ		16.7	4.2				1.2
125-1900	6”-12” Level of G16	OB	DC		11.4	3.1	3.3	4.6	8.6	1
125-10	0”-6” Level of G3	CC	DZ		12.3	3.4				0.6
125-7	0”-6” Level of G3	OB	DZ		13.7	3.4				0.9
125-98	6”-12” Level of G3	CC	DG		15.9	3.5	2.6		6.7	0.7
125-119	6”-12” Level of G4	OB	DE		13.7	2.8			3	0.8

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-421	12”-20” Level of G5	CC	CA		22.1	4.9				4
125-1321	0”-6” Level of H13	OB	DG	23.2	16.3	2.8	4.7	6.6	8.3	0.7
125-1261	6”-12” Level of H15	CR	DE		13.2	3.5			5.1	1.2
125-1270	6”-12” Level of H16	OB	DE		15.2	2.4			4.3	0.7
125-997	6”-12” Level of H8 Mound B	CC	DE		13	3.6			4.8	0.9
125-1269	24”-30” Level of N3	CR	DE	24.3	17.3	4.7			5.9	0.8
125-239	0”-6” Level of Strata Pit 1	CC	DZ		15.4	5				1.7
125-358	30”-36” Level of Strata Pit 1	OB	DG		18.3	3.7				0.7
125-401	54”-57” Level of Strata Pit 1	CC	DE		17.1	4			7.6	1.3
125-402	54”-57” Level of Strata Pit 1	CR	DC	33.2	15.8	3.4	4.4	4.9	5.7	1.3
125-645	24”-30” Level of Strata Pit 3	OB	DZ		17	3.9				1.8
125-646	24”-30” Level of Strata Pit 3	OB	DG		14.7	3.9	4.2		6.9	1
125-2809	0”-6” Level of E17	CC	DZ		16.7	3.4				0.7
125-5778	6”-12” Level of F17/18-G17/18	OB	DE		13.7	2.8			3.9	1
125-3180	0”-6” Level of G18	OB	DG		17.3	3			7	0.8
125-3395	6”-12” Level of G18	CR	DE		15.6	3.9			5.4	1.3
125-2503	12”-18” Level of H18	CC	DZ	21.1	17.2	3.9				0.9
125-2601	Wall of I17	CR	DE		18.1	3.7		5.5	4.3	1.7
125-3081	24”-30” Level of I21	CR	DZ		17	2.6				1
125-5557	0”-6” Level of J6	CC	DE		16.7	2.7			7	1.2
125-5558	0”-6” Level of J6	CC	DE		19.2	3.2	3	7.9	6.4	1.5
125-5537	24”-30” Level of J7	CC/ CR	DE		18.3	4.1	3.1		5.2	1.8
125-5095	12”-18” Level of K5	OB	DZ	21.3	18.1	2.8				0.8
125-5230	30”-34” Level of K5	OB	DE		15.5	3.1			5.3	1.1
125-5131	12”-18” Level of K6	OB	DE		16	3.1	2.5		6.7	1.2
125-5132	12”-18” Level of K6	OB	DZ		13.3	4				1.1
125-5694	12”-18” Level of K7	OB	DC		12.8	3.1	4.1		4.1	0.8
125-3810	12”-18” Level of L5	OB	DE		18.3	3			7.4	0.9
125-3959	18”-24” Level of L5	OB	DZ	17	2.7	3			7	0.5
125-3967	24”-30” Level of L5	CR	DE	29.7	19.5	3.2		6.9	5.3	1.1
125-5508	30”-36” Level of M7	OB	DC		13.2	3.1			6.5	0.7
125-5509	30”-36” Level of M7	OB	DE		16.2	3.1			6.5	0.9
125-3414	24”-30” Level of N12	OB	DZ		16.7	3.6				1.3
125-3016	12”-18” Level of P12	OB	DZ		18.6	5				1.8
125-5443	18”-24” Level of R1	CC	DE		18.2	3.1			5.5	1
125-4024	6”-12” Level of M6	CD	DZ		15.5	3.8				0.8
125-6188	0”-12” Level of A16	CC	DZ		14.4	2.8				1
125-6302	0”-12” Level of A20	CC	DZ		12.8	3.7				1
125-6302	0”-12” Level of A20	CC	DZ		12.8	3.7				1

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-6173	0"-12" Level of B13	CR	DZ		21.5	4.7				1.6
125-6281	6"-12" Level of B19	OB	DZ		15	3.5				1.1
125-6228	0"-12" Level of Z18	OB	DE		13.5	4.1			4.8	1
125-7872	Excavation Unit BP#8	CC	DZ		16.9	3.5		7.7	4.6	1.4
125-7309	0"-12" Level of N11 E8	OB	DE		14.9	3.5			6.8	1.3
125-7230	18"-24" Level of S3 E10	OB	DD		12.6	3.2	3.3		10.4	1.1
125-7219	18"-24" Level of S4 E10	OB	DZ		18.1	4.6				1.2
125-7220	18"-24" Level of S4 E10	CR	CA	47.8	25.1	4.5				5.1
125-7221	18"-24" Level of S4 E10	CC	DZ		15.2	3.5				1.1
125-9540	0"-41" Level of Trench C	OB	DE		18.4	2.5		6.5	5.4	0.8
125-9541	0"-41" Level of Trench C	CC	DE		14.4	3.3	2.8	7.5	6.2	0.9
125-9512	0"-18" Level of Trench E	CC	DC/ DG		17.1	3.4			7	1.1
125-9629	0"-25" Level of Trench H	CC	DE		13.6	3.3			6.2	0.9
125-9629	0"-18" Level of Trench I	OB	DZ		14.6	3.7				1.2
125-9721	0"-18" Level of Trench I	OB	DE		18.7	3.1			5.6	1
125-9606	0"-24" Level of Trench J	OB	DE		17.2	3.9			5.9	1.3
125-10,180	0"-30" Level of Trench M	CR	DD		13.7	3.2	3.2		6.7	1.5
125-10,181	0"-30" Level of Trench M	CC	DZ		14.8	3.1				0.5
125-10,627	24"-30" Level of F4	OB	DZ		18.4	4.3				2.5
125-11,040	18"-24" Level of G4	OB	DE		16.9	4.1			7.7	1.5
125-10,905	30"-36" Level of H4	OB	DE		17.9	3.2			4.3	0.9
125-10,071	18"-24" Level of H8	CC	DC		13.4	2.8	2.2		4.8	0.8
125-11,313	0"-24" Level of Section B	OB	DZ	31.6	20.6	5.1				1.9
125-8270	18"-24" Test Trench	CR	DZ		19	4.8				2
125-8271	18"-24" Test Trench	OB	DE		16.6	4.5				1.4
125-8352	24"-30" Test Trench	OB	DZ		15.3	3.6				1
125-9314	18"-29" Unit 5B	OB	DZ		13.6	3.7				0.8
125-9341	18"-29" Unit 5B	CC	DC		14.9	2.6		3.9	4.8	1
125-8076	12"-18" Unit 5D	CC	DE		14.9	3.7	2.8	6.3	4.9	1.2
125-9340	18" to Floor Unit 6B	OB	DE		19.3	4.4			7.3	1.6
125-11,929	No Provenience	CC	DC		16.6			5.7	3.8	1.3
2313-1	No Provenience	OB	DE		16.4	3.3	3.3		5.4	1
2313-2	No Provenience	OB	DC		16.3	2.9			5.1	0.8
2313-3	No Provenience	OB	DZ		14.5	4.2			4.8	1.1
2313-4	No Provenience	CC	DE		18.1	3.4			6.3	1.8
2313-5	No Provenience	CC	DZ		13.7	3.3	3.2		3.7	0.8
2313-6	No Provenience	CR	DC		16.2	4			6.1	1
125-2180	No Provenience	CR	DZ		22	3.9				3.5
125-3737	No Provenience	CC	DE	28.4	17.5	3.5	2.5	6.7	6	1.6

Table B.3. Continued

Accession of Catalog No.	Provenience	Material	Projectile Point Type	Length	Width	Neck length	Distal Neck Width	Proximal Neck width	Thickness	Weight
125-546	No Provenience	CR	DZ		12.2	3.2				1.2
125-7427	No Provenience	OB	DE		17.9	3.4			6.6	1.2
125-Y744	No Provenience	OB	DE		20.3	3.3	3		7.3	1
125-Y745	No Provenience	OB	EC	18.1	11.2	2.5				0.5
125-Y746	No Provenience	OB	DE		15.6	3.4			4.9	0.9
125-Y747	No Provenience	OB	DE		18.9	3.1	3.5	6.6	5.6	0.9
125-Y748	No Provenience	OB	DC	21.4	11.8	3.5	1.9	5.5	5.7	0.7
125-Y749	No Provenience	OB	DE		15.1	3			5.1	0.8
125-Y750	No Provenience	OB	DE	22.3	15.3	3.4		4.9	4.6	0.7
125-Y751	No Provenience	OB	DZ		13	2.4				0.6
125-Y752	No Provenience	CR	DZ		15.8	3.8				0.9
125-Y753	No Provenience	OB	DZ	20.9	17	4.5				1.2
125-Y754	No Provenience	OB	DC		12.1	3.1			5.2	0.7
125-Y755	No Provenience	OB	DZ		13.6	2.4				1
125-Y756	No Provenience	OB	DZ		18.6	3.5				0.8
125-9187	No Provenience	CC	DE		19.2	3.6		6.6	5.2	1.6

Table B.4. Analysis Data From Parowan

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-8355	12”-18” Structure 3	353	OB	CA		23.2				5.3	3.6
433-9543	60”-66” Structure 8	853	OB	DZ		12.4				2.9	0.7
433-9515	48”-54” Structure 10	1051	OB	DZ	24.3	15.7	3.8		6	2.4	0.9
433-9744	54”-60” Structure 10	1052	CC	DE		16.3			7	3.1	0.9
433-9696	54”-60”Structure 10	1052	OB	DZ	26.3					4.6	1.1
433-8073	30”-36” Level of E14	2251	OB	DE		17.2			7.6	3.6	1.1
433-9453	26”-42” Level of E14	2252	OB	DE		14.8			6.7	3.3	0.9
433-9276	54”-60” Level of E14	2255	CC	DE	22	13.2	2.1		4	4.3	0.9
433-6112	12”-18” Level of D17	3002	CC	DE	26.8	16.3	2.3	6.8	6.2	3.7	1.1
433-6118	12”-18” Level of D17	3002	CC	DE		14.7			6	3.2	1
433-6869	12”-18” Level of D17	3002	OB	DE			2.4		6.5	3.6	0.6
433-6858	12”-18” Level of D17	3002	OB	DZ	22.2	10.2				2.6	0.5
433-606	12”-18” Level of D17	3002	OB	DZ		13.1				2.5	0.9
433-5194	30”-36” Level of D17	3005	OB	DE		17.9			8.3	3.2	1.2
433-7964	36”-42” Level of D17	3006	CC	DE		13.2			7.7	4.7	1.7
433-7491	36”-42” Level of D17	3006	CC	DE	25.8	16.1		7	5.8	2.2	1
433-7965	36”-42” Level of D17	3006	CC	DC		15.5	2.1	8.7	7.2	4.1	1.9
433-7975	36”-42” Level of D17	3006	OB	DZ		14.1				3.2	1.1
433-7962	36”-42” Level of D17	3006	CC	DZ	28.5	16.2				3.2	1.4
433-7977	42”-48” Level of D17	3007	OB	DE		16.1			5.9	4.5	1.6
433-7837	42”-48” Level of D17	3007	CC	DE		15.6	2.8	7.6	6.8	3.8	1.5
433-6124	42”-48” Level of D17	3007	OB	DC		18.2			6.7	4.1	1.3
433-3067	6”-12” Level of D19	3011	OB	DG	25.9	17.7	2.7	7	7.7	2.7	0.9
433-3819	12”-18” Level of D19	3012	CR	DZ	27.1	19.1				3.9	1.6
433-6252	12”-18” Level of D19	3012	CC	DJ		16.3				2.8	1
433-6371	18”-24” Level of D19	3013	OB	DC		14.8	1.7		5.2	3.2	0.4
433-6286	18”-24” Level of D19	3013	OB	DC		14.5	2.6		5.5	3.6	1.8
433-5365	24”-30” Level of D19	3014	CR	DG	27.1	13.4	2.4		6.4	3.7	1.2
433-5366	24”-30” Level of D19	3014	OB	DZ	34.2	20.1	3.1	7.7	8.1	3.1	1.7
433-8270	42”-48” Level of D19	3017	CC	DZ		18.8				3.9	2.8
433-2056	0”-6” Level of D20	3023	OB	DE		15.8			7	3.3	1
433-2055	0”-6” Level of D20	3023	OB	DC		15			5.1	3.3	0.9
433-2069	0”-6” Level of D20	3023	OB	DC		11.8			4.5	3.3	0.7
433-2058	0”-6” Level of D20	3023	CC	DC		16.8	3.6	7.9	6.7	4.2	1.6
433-2136	6”-12” Level of D20	3024	CC	DE		18.1			7.4	3.5	1.8
433-3505	6”-12” Level of D20	3024	CC	DG		15.9	2.1		5.2	3.4	0.9
433-3615	6”-12” Level of D20	3024	CR	DG		17.3	2.9		6.8	3.3	1

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-2138	6”-12” Level of D20	3024	CC	DZ		14.9	2.7		7.1	4	1.1
433-3905	12”-18” Level of D20	3025	OB	DC		14.9			5.8	2.4	0.6
433-5772	12”-18” Level of D20	3025	OB	DG		17.9	2.5	7.3	6.4	2.8	0.5
433-2137	12”-18” Level of D20	3025	CC	CA		26.6				5	5.2
433-5104	24”-30” Level of D20	3027	CC	DE		17.7			6.8	3.9	1.4
433-5106	24”-30” Level of D20	3027	CC	DE		15.1			6.8	3.7	1.2
433-4620	30”-26” Level of D20	3028	CC	DE		17.4			6.3	3.9	1.2
433-4617	30”-26” Level of D20	3028	OB	DZ		15.9				3.8	1
433-8176	48”-54” Level of D20	3034	CC	DC/ DG		18.6	4.2		8.9	3.7	1.1
433-3271	0”-6” Level of F19	3038	CC	DE		18.5	3.4		7.1	3.9	1.6
433-2284	0”-6” Level of F19	3038	CC	DE		13.7	1.9		6.5	2.7	0.7
433-2285	0”-6” Level of F19	3038	OB	DE		17.1			7.3	3.6	1
433-3150	6”-12” Level of F19	3039	CC	DE		15.6				3.7	1.5
433-2701	6”-12” Level of F19	3039	OB	DG		13.8			4.9	3.5	0.7
433-7002	18”-24” Level of F19	3042	CR	DE		18.9			7.6	3.8	1.2
433-7559	30”-36” Level of F19	3044	CC	DE		16			4.9	3.1	0.9
433-7566	30”-36” Level of F19	3044	CC	DE		19.3			9.2	2.6	1.7
433-7022	18”-24” Level of E19	3049	OB	DE	41.2	13.4				4.7	1.9
433-9097	30”-36” Level of E19	3051	CC	DE		20.4		8.6	7.6	3.8	1.1
433-8863	36”-42” Level of E19	3052	OB	DE		17.9			5.7	3.5	1.1
433-9037	36”-42” Level of E19	3052	OB	DC/ DG		15	2.1		6.5	3.2	1
433-9035	36”-42” Level of E19	3052	OB	DE		20			7.5	3.8	1.1
433-9040	36”-42” Level of E19	3052	CC	DZ		18.4				4	2.1
433-9120	42”-48” Level of E19	3053	OB	DE		16.1			6.1	3.1	0.7
433-6487	48”-54” Level of E19	3054	OB	DE		17.8	2.1	6.5	5.6	2.9	0.9
433-4917	0”-6” Level of F17	3058	CR	DE		15.7			6.6	3.8	1.3
433-7128	0”-6” Level of F17	3058	CC	DE	29.1	16.2	1.8	6.6	5.7	3.5	1.4
433-4916	0”-6” Level of F17	3058	OB	DC		15	2.2	7.5	8.7	2.9	1.1
433-7403	6”-12” Level of F17	3059	OB	DE		15.4			6.6	3.7	1.1
433-2999	0”-6” Level of E20	3060	OB	DC		12.9			5.8	3.1	0.5
433-3391	6”-12” Level of E20	3061	CR	DE		17.8	3		6.5	4.2	1.2
433-3390	6”-12” Level of E20	3061	CC	DE	32.8	17	2.3	6.8	5.7	3.4	1.1
433-3385	6”-12” Level of E20	3061	OB	DZ		17.4				4	1.5
433-3928	12”-18” Level of E20	3062	CC	DC/ DG		15.1	2.6		6.6	3.6	0.6
433-6968	30”-36” Level of E20	3065	CC	DE		17.8			6.2	4.3	2.3
433-7497	30”-36” Level of E20	3066	OB	DE		15.8			7.8	3.5	1.4

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-7490	30”-36” Level of E20	3066	CC	DE	32.4	17.5	1.6	8.3	7.4	3.3	1.3
433-7494	36”-36” Level of E20	3066	OB	DG						2.9	0.9
433-7493	36”-36” Level of E20	3066	CC	DC/ DG	32.7	18.6				4.1	1.9
433-7495	36”-36” Level of E20	3066	OB	DE		20.4			9.3	4.2	1.6
433-4166	36”-42” Level of E20	3067	CC	DE	24.6	17.1	3.5	9.8	8.4	3.4	1.1
433-4164	36”-42” Level of E20	3067	OB	DE		13.8			6.5	3.7	0.9
433-4163	36”-42” Level of E20	3067	CR	DZ	27.4	12.6				2.9	1
433-4142	36”-42” Level of E20	3067	OB	DJ		15.4				2.9	0.3
433-2220	42”-50” Level of E20	3068	CC	DC		10.7			5.8	3.1	1
433-2216	42”-50” Level of E20	3068	OB	DZ		17.5	3.3		5.8	3.4	1.2
433-2218	42”-50” Level of E20	3068	OB	DG		14.1			5	2.6	0.5
433-2217	42”-50” Level of E20	3068	OB	EC		14.4				2.7	0.3
433-2378	6”-12” Level of D16	3069	CC	DE		19.1	3	8	7.6	4.1	1.6
433-2376	6”-12” Level of D16	3069	CR	EC		15.1				2.2	0.7
433-2637	18”-24” Level of D16	3071	CD	DZ		12.8				2.6	0.6
433-3016	18”-24” Level of D16	3071	ZZ	DC		16.8	2.6		4.3	2.8	0.8
433-5896	24”-30” Level of D16	3073	OB	DG		17.3			8.4	4.2	0.9
433-9658	24”-30” Level of D16	3073	OB	DZ						3.5	0.7
433-5895	24”-30” Level of D16	3073	OB	DZ		12.6				4	0.7
433-6185	36”-42” Level of D16	3075	OB	DE		16.3		6.6	5.7	4.2	1.8
433-5974	36”-42” Level of D16	3075	CR	DE		18.1	2.2	7.7	7.1	3.3	1
433-6175	36”-42” Level of D16	3075	CC	DE		17.2			6.9	3.2	1.3
433-6192	36”-42” Level of D16	3075	OB	DZ		14				3.3	1.2
433-5800	42”-48” Level of D16	3076	CR	DE		15.3			4.5	5.1	1.8
433-5791	42”-48” Level of D16	3076	OB	DE		19	1.6	9	7.9	3.2	0.9
433-3675	12”-18” Level of E14	3091	CC	DE		20.2			8.8	3.9	1.9
433-6552	18”-24” Level of E14	3092	OB	DE		16	2.6	8.1	6.6	3.2	1
433-6553	18”-24” Level of E14	3092	OB	DE		18.1			6	3.5	0.9
433-2795	30”-36” Level of D16	3074	OB	DZ		14.7				4.1	1.2
433-6579	18”-24” Level of E14	3092	OB	DC	28.9	13.4			6.4	2.9	0.9
433-6548	18”-24” Level of E14	3092	CR	DZ	23.8	15.7				3.8	1.3
433-3419	6”-18” Level of D15	3105	CC	DE		18.4			7	3.7	1.5
433-3236	6”-18” Level of D15	3105	CR	DE		18.3	2.2	5.7	4.6	3.2	1.2
433-2688	6”-18” Level of D15	3105	OB	EC						2.8	0.5
433-4841	36”-42” Level of D15	3109	OB	DC		18	3.5	7.3	9.7	4.1	1.6
433-4571	42”-48” Level of D15	3110	OB	DE						3	0.7
433-5698	12”-18” Level of D14	3115	CC	DE		18.1			9	4.2	1.9

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-5700	12”-18” Level of D14	3115	OB	DE		17.5			6.2	3.4	1
433-5918	18”-24” Level of D14	3116	CC	DE		16.1			6.9	2.9	0.6
433-5916	18”-24” Level of D14	3116	CC	DE		17.7	1.7	8.8	8	3.2	1
433-5920	18”-24” Level of D14	3116	OB	DE		15.1			5	3.8	0.9
433-5967	18”-24” Level of D14	3116	OB	DZ						3.8	0.6
433-5951	18”-24” Level of D14	3116	OB	DZ	25.9	13.1				4.3	1.2
433-5843	30”-36” Level of D14	3118	OB	DE		17.3			6.1	3.5	1.6
433-5739	36”-42” Level of D14	3119	OB	DE		15.2	1.8	5.8	4.8	3.5	0.8
433-5988	42”-48” Level of D14	3120	CC	DE		19.6		6.4	6.2	3.9	1.5
433-5995	42”-48” Level of D14	3120	OB	CA		27				5.2	5
433-7722	48”-54” Level of D14	3121	CC	DZ		10.2			4.9	2.9	0.6
433-9265	48”-54” Level of D14	3121	CC	DE		17.4	2.3	8.7	7.3	3.3	0.7
433-9269	48”-54” Level of D14	3121	OB	DC		14.8	3.3		5.4	3.9	1.3
433-4268	48”-54” Level of D14	3121	OB	DC		13.9			5.1	3.1	0.8
433-2263	0”-6” Level of F15	3124	CC	DZ		15.8			5.4	3.7	1.1
433-2262	0”-6” Level of F15	3124	CD	EC		13.4				1.7	0.2
433-2584	6”-12” Level of F15	3125	OB	DE	18.9	15.2			5	3.1	0.6
433-2581	6”-12” Level of F15	3125	CR	DE	23.3	12.2	1.9	7.7	6.5	2.9	1
433-2585	6”-12” Level of F15	3125	OB	DZ		14.5				3.7	0.8
433-2579	6”-12” Level of F15	3125	CC	DJ		13.4				3.3	0.6
433-3022	18”-24” Level of F15	3127	OB	DE						3.6	1.1
433-3024	18”-24” Level of F15	3127	CR/ CC	DE		16.6	2.7		6.3	3.6	0.5
433-3027	18”-24” Level of F15	3127	CC	DE		17.4				2.9	0.8
433-3025	18”-24” Level of F15	3127	CC	DG		17.2	3	6.5	6.7	2.8	0.6
433-3370	24”-30” Level of F15	3128	OB	DE		17.3			7.8	3.7	1
433-2889	24”-30” Level of F15	3128	CC	DE		17.6			7	3.9	0.6
433-7243	30”-36” Level of F15	3129	OB	DE		17.8			7.4	4.4	1.7
433-7246	30”-36” Level of F15	3129	CC	DE		16.8			7.3	3.6	1.2
433-7244	30”-36” Level of F15	3129	OB	DG		17.2			6.1	4.2	1.3
433-4453	36”-42” Level of F15	3130	OB	DE		17.3				3.4	0.9
433-4452	36”-42” Level of F15	3130	CR	DG		17.1			5.2	3.3	0.8
433-4451	36”-42” Level of F15	3130	CC	DD		12.9	2.5		9.2	3	1.1
433-7387	42”-48” Level of F15	3131	OB	DZ		14				2.8	0.6
433-10,068	54”-60” Level of F15	3133	CD	DE		16.7		9	7.7	2.4	0.8
433-10,211	54”-60” Level of F15	3133	OB	DC	26.7	14.3	2	6	6.8	2.8	1
433-2406	0”-6” Level of E15	3136	OB	DC/ DG	30.9	16.2	2.9		8	2.2	0.9

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-2198	0”-6” Level of E15	3136	OB	DC/ DG		16.7			7.1	4.2	1.5
433-2197	0”-6” Level of E15	3136	OB	DZ		13.7				2.9	0.6
433-2457	6”-12” Level of E15	3137	CC	DE		15.6		7.6	6.7	3.1	0.8
433-2475	6”-12” Level of E15	3137	OB	DE		17.8		6.5	4.8	3.8	1.2
433-2463	6”-12” Level of E15	3137	CC	DE		17.8		6.2	5.3	3.3	1.3
433-2457	6”-12” Level of E15	3137	CC	DE		20.5	2.2		7.6	3.4	1.6
433-2463	6”-12” Level of E15	3137	CC	DC		16.3				3.8	1.4
433-2464	6”-12” Level of E15	3137	CC	DE		15.7			5.4	4.4	1.1
433-2460	6”-12” Level of E15	3137	CR	EC		12.8				3.1	0.6
433-10,731	12”-18” Level of E15	3138	CC	DE		15.5			4.7	3.7	1
433-2830	12”-18” Level of E15	3138	OB	DC	25.3	11.9	3.4		5.3	3	0.7
433-2824	12”-18” Level of E15	3138	CC	DZ		15.5				3.8	1
433-3423	18”-24’ Level of E15	3139	CR	DE	19.8	15.1	2.7	5.8	4.3	3.6	0.9
433-3102	18”-24’ Level of E15	3139	OB	DE		14.5	2.9		6.5	3.3	1
433-3100	18”-24’ Level of E15	3139	CC	DG	21.5	14.6	4.1	6.8	5.3	2.9	0.8
433-3104	18”-24’ Level of E15	3139	CR	DG	23.2	20	3.3	8.1	7	3.8	1
433-7071	24”-30” Level of E15	3140	CC	DC		14.4		6.5	4.9	3.2	0.9
433-4901	30”-36” Level of E15	3141	CC	DZ		16.4				3.3	0.6
433-6616	36”-42” Level of E15	3142	OB	DE		17.9	2.8		7.9	3.5	1.3
433-4414	36”-42” Level of E15	3142	OB	DC		13.6			6	4.1	0.9
433-4418	36”-42” Level of E15	3142	CC	DG		14.2	2.5	7	6.1	3	0.7
433-6618	36”-42” Level of E15	3142	CC	DG		17.4	2.8	5.9	6.3	3.8	0.8
433-4415	36”-42” Level of E15	3142	OB	DE		14.2			5.8	2.6	0.8
433-6622	36”-42” Level of E15	3142	OB	DZ		12.6				2.1	0.4
433-4281	42”-48” Level of E15	3143	OB	DZ		14.7				4.2	1
433-6808	42”-48” Level of E15	3143	CC	DE		15.2			6	2.7	1.3
433-6809	42”-48” Level of E15	3143	CC	DE		17.7			9.3	2.8	1.1
433-6806	42”-48” Level of E15	3143	OB	DE	25.4	17.1	1.8		5.8	3	1.1
433-6816	42”-48” Level of E15	3143	OB	DE		17.1			6.7	3.2	1.7
433-9128	54”-60” Level of E15	3145	OB	DE		16.3			7.9	2.7	0.9
433-10,688	54”-60” Level of E15	3145	CC	DE		17.5			5.9	4.1	1.6
433-9782	54”-60” Level of E15	3145	OB	DZ						2.6	0.5
433-11,018	66”-72” Level of E15	3147	OB	DE		16.5			6.5	4.2	1.4
433-8560	6”-12” Level of E16	3150	OB	DE	27.4	16.2	3.6	6.6	5.5	3.5	1.2
433-3658	12”-18” Level of E16	3151	CC	DG		19.5			5	4.3	1.3
433-3759	18”-24” Level of E16	3152	OB	DE	24.3					2.9	0.7
433-3829	24”-30” Level of E16	3153	OB	DE		17.7	2.6	7.6	6.5	2.9	0.8

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-9326	30”-36” Level of E16	3154	OB	DE		18.6			8.5	4.4	2.1
433-8559	36”-42” Level of E16	3155	OB	DE		15.1			6.9	3.7	1.7
433-8563	36”-42” Level of E16	3155	CC	DE		16.7			8.2	3.7	1.4
433-8788	42”-48” Level of E16	3156	OB	DE		16.1			4.9	3.9	1.3
433-8789	42”-48” Level of E16	3156	OB	DE		17.6			8.8	3.7	1.3
433-8787	42”-48” Level of E16	3156	OB	DE		16.2			7.8	4	1.5
433-10,254	42”-48” Level of E16	3156	CR	CD		21.5				6.4	7.5
433-3308	0”-6” Level of F16	3160	OB	DC/DG		16.5			7.7	3.3	1.3
433-2310	0”-6” Level of F16	3160	CC	DJ		16.5				2.8	0.7
433-3858	6”-12” Level of F16	3161	CC	DZ		15.4				3.8	1.1
433-3917	12”-18” Level of F16	3162	CC	DC/DG		13.9	2.3	5.6	4.8	2.8	0.7
433-5335	18”-24” Level of F16	3164	OB	DE		18.2			6.6	3.7	1.3
433-5334	18”-24” Level of F16	3164	OB	DE		15.9			6	3.5	1.2
433-5212	18”-24” Level of F16	3164	OB	CZ		19				4.2	3.2
433-5338	18”-24” Level of F16	3164	CC	DZ		15.6				2.9	0.9
433-5211	18”-24” Level of F16	3164	OB	CC	30	16.2				4.7	2.1
433-4854	24”-30” Level of F16	3165	OB	DE		18.8	2	8	7.2	3.1	1.2
433-4875	24”-30” Level of F16	3165	OB	DE	31.5	14.3	2.4	9.1	6.9	3.4	1.1
433-4861	24”-30” Level of F16	3165	CC	DC/DG		14.9	1.9		7	3.6	1.2
433-4855	24”-30” Level of F16	3165	OB	DC		13.2	2.2		5.5	3.8	0.9
433-4856	24”-30” Level of F16	3165	OB	DG		22.2			6.4	4.1	1.2
433-4859	24”-30” Level of F16	3165	CC	DC		16.7			7.1	3.1	1.6
433-8939	30”-36” Level of F16	3166	CC	DE		21.1			6.5	4.5	3.1
433-9861	36”-42” Level of F16	3167	OB	DE		18.6		6.8	5.4	3.4	0.9
433-9860	36”-42” Level of F16	3167	OB	DZ		15.2			4.4	3.2	0.8
433-10,402	42”-48” Level of F16	3168	OB	DE		15.7			5.1	3.6	1.4
433-10,348	42”-48” Level of F16	3168	CR	DE		16.5	2.1	8.5	7.5	4	1.4
433-10,401	42”-48” Level of F16	3168	OB	DE		12	1.2		5.9	3.2	0.7
433-10,345	42”-48” Level of F16	3168	CC	DE		17.4			6	3.1	1.3
433-10,350	42”-48” Level of F16	3168	OB	DC/DG		19.1	2.3	9.2	8.2	3.7	1.3
433-10,348	42”-48” Level of F16	3168	OB	DG		15.2			4.3	2.8	0.6
433-11,136	12”-18” Level of E10	3178	OB	DE		16.1			8.3	3.2	0.7
433-3166	0”-6” Level of E11	3179	OB	DE		16.2				4.1	1.4
433-2910	0”-6” Level of E11	3179	CR	DC/DG		16.9			7.5	4.1	1.2

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-10,436	12”-18” Level of E11	3181	OB	DE		17.4				3.5	1.5
433-6230	12”-18” Level of E12	3184	OB	DD	26.4	14.9	2.5		6.2	2.5	0.8
433-7417	0”-12” Level of F10	3185	CC	DC		13.5	2.3		5.6	2.5	0.8
433-4387	18”-24” Level of F10	3187	OB	DG		13.9			4.9	3.3	1
433-11,101	18”-24” Level of F10	3187	OB	DE		18.6			6.7	3.9	1.1
433-7515	0”-6” Level of F11	3188	CR	DZ		15.5				2.8	0.4
433-5146	6”-12” Level of F11	3189	OB	DE		16.7			6.8	2.3	0.9
433-5147	6”-12” Level of F11	3189	OB	DZ		17.8				3.9	2.3
433-9292	12”-18” Level of F11	3190	OB	DC	38.8	11			5.2	2.6	1
433-10,553	30”-36” Level of F11	3193	OB	DC	20.7	12.8	2.4		4	3	0.6
433-10,546	30”-36” Level of F11	3193	OB	CA		21.5				4.9	3.1
433-10,545	30”-36” Level of F11	3193	OB	DC	29.6	14.3			5.9	2.9	1
433-2683	6”-12” Level of F12	3195	OB	DZ	26.5	13.6	2.4		6.1	3	0.8
433-8440	12”-18” Level of F12	3196	OB	DC		12.4				3.3	1
433-5469	0”-6” Level of C12	3200	OB	DZ						3.1	0.4
433-5375	6”-12” Level of C12	3201	OB	DE	31	15.3				4	1.2
433-5426	6”-12” Level of C12	3201	OB	DC		13.7	2.8		5	2.4	0.7
433-5558	18”-24” Level of C12	3203	OB	DE		15.1	2.4	4	4.6	3.2	0.8
433-5557	18”-24” Level of C12	3203	OB	DC/ DG	24.4	17.1	2.6		6.3	3.7	1.1
433-4435	18”-24” Level of C12	3203	OB	DC/ DG	25.6	13.9	2.5		6	2.3	0.7
433-554	18”-24” Level of C12	3203	OB	DZ		15.9			7.3	3.7	1.5
433-5385	18”-24” Level of C12	3203	CC	DC		12.7			5.3	3	0.9
433-5562	18”-24” Level of C12	3203	CC	DZ	19.2	14				4.3	0.9
433-6007	24”-30” Level of C12	3204	OB	DC	31	16.7	3.7	7.6	7	3.5	1.2
433-5644	30”-36” Level of C12	3205	CC	DE		15.7			7.7	4.2	1.6
433-5633	30”-36” Level of C12	3205	OB	DZ	23.9	13.5				4.2	1.2
433-11,063	48”-54” Level of C12	3208	OB	DE		23.1	3.6	12.1	11.4	3	0.9
433-3458	12”-18” Level of D12	3216	CR	DZ		12.4				3.3	1.2
433-5565	18”-24” Level of D12	3217	CC	CA		33.3				6	5.2
433-5722	24”-30” Level of D12	3218	CD	DE		15.1			8.3	2.8	1.1
433-5810	24”-30” Level of D12	3218	OB	DZ		13.4			5.1	3.3	1
433-5808	24”-30” Level of D12	3218	CC	DC		12.8	1.9		5.7	2.6	0.8
433-4713	30”-36” Level of D12	3219	OB	DE		14			5	3.7	1
433-4785	30”-36” Level of D12	3219	CC	DG		18.9	2.5		7	3.6	1.2
433-4787	30”-36” Level of D12	3219	OB	DZ		11.6				3.5	0.7
433-4716	30”-36” Level of D12	3219	OB	DZ		13.3				4.2	1.4

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-7812	36”-42” Level of D12	3220	CC	DE	30.6	17.8	2.5	7.4	5.7	3.9	1.8
433-7915	36”-42” Level of D12	3220	OB	DE		16			6.2	3.7	1
433-10,866	42”-48” Level of D12	3221	OB	DE	23.2	15.4	2.1		5.1	3.9	1
433-10,868	42”-48” Level of D12	3221	QC	CZ	56.7	32.3				7.3	11.3
433-4883	0”-6” Level of C11	3225	CR	DC		15.4	2.8		6.1	2.9	1
433-9890	0”-6” Level of C11	3225	OB	DC/ DG		13.8				2.9	0.5
433-3752	0”-6” Level of C11	3225	OB	DZ	21.7	11				3.9	0.8
433-4362	12”-18” Level of C11	3227	OB	DE	22.5	15.3			4.5	3.8	0.9
433-4359	12”-18” Level of C11	3227	OB	DE	27.3	18.8	2.4	8.6	6.1	3.3	1.5
433-4370	12”-18” Level of C11	3227	CC	DZ		13.2				3	1.3
433-8342	24”-30” Level of C11	3229	OB	DE		7.4			7.2	2.3	0.6
433-8330	24”-30” Level of C11	3229	OB	DC		12.7			4.4	3.6	1.1
433-8341	24”-30” Level of C11	3229	OB	DG		19.7			6.7	3.3	1.2
433-9518	30”-36” Level of C11	3230	CC	DE		15.5			7.3	3.6	1
433-9415	30”-36” Level of C11	3230	OB	DE		13.5			7.1	2.9	1
433-9414	30”-36” Level of C11	3230	CC	DE		18			7.1	3.4	1.5
433-7670	30”-36” Level of C11	3230	OB	DE		18.9	2.5		9.1	4.2	1.3
433-7660	30”-36” Level of C11	3230	OB	DC	31.1	15.7	1.4		6.9	3.1	1.1
433-7672	30”-36” Level of C11	3230	CC	DE		16	2.7	5.8	4.3	4.4	1
433-10,710	48”-54” Level of C11	3233	OB	DE	23.1	15.1	2.4	6.9	5.6	2.8	0.9
433-10,711	48”-54” Level of C11	3233	CC	DE		16.5			8.2	2.6	0.6
433-2012	0”-6” Level of D11	3239	OB	DG		14.9	1.9		5.2	3.1	0.7
433-2011	0”-6” Level of D11	3239	OB	DC		11.9			3.8	3.8	0.9
433-2024	0”-6” Level of D11	3239	CR	DZ		13.5			6.5	2.3	0.5
433-5594	6”-12” Level of D11	3240	CD	DE		15.9			8.6	3.5	1
433-4229	6”-12” Level of D11	3240	CC	DC		10.4	2.3		5	2.7	0.7
433-9377	36”-42” Level of D11	3245	CC	DE		14.2			5.4	2.5	0.6
433-9376	42”-48” Level of D11	3246	CC	DE		17.2			8.4	3.4	1.1
433-8735	48”-54” Level of D11	3247	OB	CA		23.8				4.6	2.9
433-8727	48”-54” Level of D11	3247	OB	DC		16.4	1.9	7.7	9.4	3.2	1
433-7769	C10,C11	3253	CC	DZ		30.5				4	4.2
433-4525	6”-12” Level of C10	3261	OB	DE		15.7			6.2	3.3	0.6
433-4534	6”-12” Level of C10	3261	OB	DE	21.8	17.1	3.8	6.6	4.4	3.2	0.8
433-4535	6”-12” Level of C10	3261	OB	DE		15.7			6.8	3.2	1
433-4540	6”-12” Level of C10	3261	OB	DC		15	2.2	6.9	9.2	1.9	0.7
433-5180	6”-12” Level of C10	3261	OB	DZ		11.8				3.4	0.8
433-4539	6”-12” Level of C10	3261	OB	DZ		12.9				3.7	0.8

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-4447	12”-18” Level of C10	3262	OB	DZ		13.4				3.6	1
433-8053	18”-24” Level of C10	3263	OB	DZ		15.7				5.6	1.2
433-5127	18”-24” Level of C10	3263	CC	DZ		14				2.6	0.7
433-7542	24”-30” Level of C10	3264	OB	DE		20.3			7.9	3.1	1.1
433-9607	30”-36” Level of C10	3265	OB	DG		18.9	3.2		6.3	4.1	1.4
433-9606	30”-36” Level of C10	3265	CC	DZ		15.9				2.3	1.2
433-9757	42”-48” Level of C10	3267	CC	DC		15.3			6.6	3.3	0.9
433-3386	0”-6” Level of D10	3270	OB	DG	31.8	18.1	2.7		6.7	3	1
433-9207	18”-24” Level of D10	3273	OB	DZ		16.2	2.6		5.7	4.4	1.4
433-9826	30”-36” Level of D10	3275	OB	DE		16.4			6.5	3.1	1.3
433-7759	48”-54” Level of D16	3294	CR	DE		19.3			9.2	3.5	1.1
433-5228	6”-12” Level of E10	3315	OB	DC		14.9			5.8	2.7	1
433-3641	6”-12” Level of E10	3315	OB	DZ	24.3	15.5				2.6	0.7
433-5084	6”-12” Level of E10	3315	CR	DJ		14				3.1	1
433-2798	18”-24” Level of E12	3337	CC	DJ		11.8				2.7	0.6
433-8259	18”-24” Level of F18	3413	OB	DE		15.2			4.8	3.1	0.9
433-7293	12”-30” Level of E20	3064	CC	DE		15			4.7	3.5	0.8
433-10,652	42”-54” Level of D10	3277	OB	DE		14.8			7.8	3.8	1.1
433-3684	6”-12” Level of F12	3195	CD	EC						3.3	0.8
433-10,392	48”-54” Structure 10	1051	CR	DZ	22.1	12				2.6	0.6
433-3030	18”-24” Level of F15	3127	OB	DE	30.1	16.1	3.3		5.2	3.1	0.9
433-7420	0”-12” Level of F10	3185	CC	DE		16.7			7.7	4.8	1.5
433-10,342	42”-48” Level of F16	3168	OB	DZ		18.1			7.9	3.8	1.7
433-249	6”-12” Level of C10	3261	CR	DE		16.5			4.7	4.8	1.2
433-6105	24”-30” Level of D16	3073	CC	DE		18.2	3.3		6.5	4.7	1.4
433-10,113	48”-54” Level of F15	3132	OB	DE		13.2			4.8	3.5	0.6
433-4715	30”-36” Level of D12	3219	OB	DZ		16.1			7.5	3.9	1.4
433-10,712	48”-54” Level of C11	3233	OB	DZ		13			6.1	3.4	0.6
433-11,122	60”-66” Level of F15	3134	OB	DZ		17.4			10.7	4	1.4
433-2582	6”-12” Level of F15	3125	OB	DZ		15.6			5.3	3.7	1.1
433-3330	12”-18” Level of F19	3040	CC	DZ		16.5	3.8		6.2	4	1.6
433-2232	0”-6” Level of E20	3060	CC/ CD	DZ		14			5.8	4	1
433-3686	6”-12” Level of E14	3090	OB	DZ		12.7	2.9		7.6	3.6	1
433-7567	30”-36” Level of F19	3044	OB	DZ		14.3	3.9		5.6	3.3	0.8
433-3331	12”-18” Level of F19	3040	CC	DZ		15.8	4.3		7.9	3.2	1
433-5523	6”-12” Level of D11	3240	OB	DC	26.6	13.2	3.5		5.6	3	0.8
433-5555	18”-24” Level of C12	3203	OB	DZ	26	13.3	2.8		9	3.7	1

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-6271	24"-30" Level of D17	3004	CC	DZ	21.8		2.5		8.2	3.5	0.7
433-7464	30"-36" Level of F19	3044	OB	DC		11.6			5.5	3.5	0.9
433-8207	12"-18" Level of F17	3401	OB	DZ		14.9	2.9		5.5	3.6	1
433-8361	24"-30" Level of C10	3264	OB	DZ	25.5	15	3.2		5.2	3.3	0.9
433-521	42"-48" Level of Unit A	2508	CC	DE	30.3	15.7	2.8		4	3.2	1.4
434-54	6"-12" Level of Unit B	2513	CR	DE		17	2.5	6.3	4.9	4	1
434-497	36"-42" Level of Unit B	2520	OB	DZ		11.9	2.9		11.1	3.2	1
434-556	42"-48" Level of Unit B	2521	CC	DZ		13.6			8.5	5.2	1.3
434-560	42"-48" Level of Unit B	2521	OB	DE		16			6.4	3.8	1.4
434-19	0"-6" Level of Unit A	2500	CC	DE		15.9			7.6	3.7	0.7
434-41	6"-12" Level of Unit A	2501	CR	DE		17.6	3.4	7.2	6.5	2.7	1.1
434-136	12"-18" Level of Unit B	2514	OB	DE		17		5	3.6	3.4	0.8
434-137	12"-18" Level of Unit B	2514	OB	DZ		14.2			6.6	3.8	1.1
434-204	18"-24" Level of Unit B	2515	CC	DZ		15.5			5	4.9	1.9
434-252	24"-30" Level of Unit A	2504	OB	DE	29.9	18.5			9.9	3.9	1.4
434-254	24"-30" Level of Unit A	2504	OB	DZ		12.7			3.6	1.5	0.4
434-336	24"-30" Level of Unit B	2516	OB	DC		16.2			6.9	3.3	1.1
434-337	24"-30" Level of Unit B	2516	OB	DZ	23.1	17.5	2.2		10.2	3.9	1.2
434-338	24"-30" Level of Unit B	2516	CC	DZ		13.8			7.1	3.1	1.1
434-403	30"-36" Level of Unit A	2506	CR	DE		18.7			7.1	4.4	1.3
434-561	42"-48" Level of Unit B	2521	CR	DC	38.3	13.2	3.2		7.1	3.2	1.3
434-495	36"-42" Level of Unit B	2520	OB	DE		16.4			7.3	3.3	0.9
434-55	6"-12" Level of Unit B	2513	OB	DE		21.9	3		8.5	2.5	1.1
434-496	36"-42" Level of Unit B	2520	OB	DE		17.2			4.6	3.5	0.9
434-168	18"-24" Level of Unit A	2503	OB	DE	35.8	16.7	2.9	6.6	5.6	3.6	1.3

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
434-57	6”-12” Level of Unit B	2513	OB	DE		16.2			4.9	3.5	0.9
434-404	30”-36” Level of Unit A	2506	CC	DE		16.3			8.1	3.3	1.5
434-402	30”-36” Level of Unit A	2506	OB	DC		13.9	2.5		7.1	4	1.3
434-198	18”-24” Level of Unit B	2515	OB	DE		15.9			6	3.1	0.8
434-335	24”-30” Level of Unit B	2516	OB	DE		18	2.6	7.8	5.6	2.8	0.8
433-4712	24”-30” Level of D12	3219	CR	DE		17.1				3.9	1.6
433-10,528	54”-60” Structure 4	454	OB	DE		15.5	6.1		5	2.5	0.7
433-10,529	54”-60” Structure 4	454	OB	DE		16.4			4.5	4	1
433-10,530	54”-60” Structure 4	454	CC	DE	24.1	17.5	5.3		2.6	3.2	1
433-10,531	60”-66” Structure 4	455	CC	DC	35.5	13.1	5.8		4.5	5	1.7
433-9151	No Provenience	No Catalog Number	CC	DE		18.2			5.7	3.2	1.5
433-7990	No Provenience	No Catalog Number	CR	DC		13.6	2.7	7.2	6	4	1.1
433-2871	No Provenience	No Catalog Number	CD	DZ		16.7				3.8	1.2
433-Y756	No Provenience	No Catalog Number	OB	DC		14.5			5	3.2	1
433-Y760	No Provenience	No Catalog Number	OB	DZ	27.5	13.7				4.2	1.5
433-Y759	No Provenience	No Catalog Number	OB	DC		15.8			5.1	2.8	0.5
433-Y758	No Provenience	No Catalog Number	OB	DC		13.1			5.8	3.5	1.1
433-Y757	No Provenience	No Catalog Number	OB	DC		13.9	3.1		8.4	4	1.4
433-Y743	No Provenience	No Catalog Number	OB	DZ		16			5.5	3.4	0.6
433-Y742	No Provenience	No Catalog Number	OB	DZ		17.6	3.2		5.6	3.9	1.1

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-Y741	No Provenience	No Catalog Number	OB	DE		15.7			5	2.8	0.9
433-Y740	No Provenience	No Catalog Number	OB	DZ		14.7				4.6	1.4
433-Y739	No Provenience	No Catalog Number	CC	DZ		15.5			5.2	3.1	0.8
433-Y738	No Provenience	No Catalog Number	OB	DG		15.9			5.5	3.7	1.1
433-Y737	No Provenience	No Catalog Number	OB	DE		15.5			4	3.2	1
433-Y736	No Provenience	No Catalog Number	OB	DC		15.5			5.8	3.5	1.2
433-Y735	No Provenience	No Catalog Number	OB	DZ		14.1			5.4	3.4	1
433-Y734	No Provenience	No Catalog Number	OB	DZ	20.1	13			5	2.6	0.5
433-Y733	No Provenience	No Catalog Number	OB	DE		18.6			6.5	3.3	1.9
433-Y732	No Provenience	No Catalog Number	OB	DE		16.7			8.7	3.6	0.7
433-Y731	No Provenience	No Catalog Number	OB	DZ						2.8	0.1
433-Y730	No Provenience	No Catalog Number	OB	DE		16.7			4.3	3.5	0.7
433-Y729	No Provenience	No Catalog Number	OB	DE		19.1			6.2	3	1.3
433-Y728	No Provenience	No Catalog Number	OB	DE	23.3	16.6			5	3.2	0.7
433-Y727	No Provenience	No Catalog Number	CC	DZ		13			5.3	3.6	1.2

Table B.4. Continued

Accession	Provenience	Feature #	mtrl	Point Type	Length	Width	Neck Length	Distal Neck Width	Proximal Neck Width	Thickness	Weight
433-Y726	No Provenience	No Catalog Number	OB	DC		14.8				3.2	1.1
433-Y725	No Provenience	No Catalog Number	OB	DZ		14.2			11.2	4	1.7
433-Y724	No Provenience	No Catalog Number	OB	DE	23.4	18.2			5.2	2.5	0.8

Table B.5. Analysis data from Summit

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
283-3006	26”-36” Test Unit, Structure 1	CC	DE		16.7			7.5	2.1	1.7
333-6887	42”-48” Level of Structure 11	CR	DE		15.9				4	1.5
509-2501	24”-30” Level of Structure 12	CC	DE	26.4	17.3	3.4		8.5	3.1	1
509-2471	24”-30” Level of Structure 12	OB	DE		17.8			6	3.2	1.1
395-4374	14”-26” Level of Structure 13	OB	DE		15.7			7	3.9	1.1
395-4520	14”-26” Level of Structure 13	OB	DE		16.8	3.7		6.5	3.1	1.7
395-5306	14”-26” Level of Structure 13	CC	DE		15.9	3.4		7.8	3.8	1.5
395-4210	27”-53” Level of Structure 14	OB	DE		16.8			6.8	3.8	1.3
509-2667	24”-30” Level of Structure 16	OB	DE	32.3	15.2	3.4		6.3	3.8	1.5
395-6541	Upper Floor of Structure 28	CR	DE		16.6			9.3	4.6	2
395-3525	30”-36” Level of 18A23	OB	DE		15.4				3.3	1.4
509-3374	30”-39” Level of Structue 21	OB	DC		11.5				3.8	0.8
509-3468	42”-54” Level of Structure 23	CR	DE		16				3.4	1
509-3515	42”-54” Level of Structure 23	CC	DC		13.5			5	3.3	1.3
283-1313	Evans Mound A, Area 1 and 2	CR	DE		18.4			6.4	4.1	1.5
283-2811	Evans Mound A, Area 1 and 2	OB	DC		14.7			6.1	3.5	0.8
283-2145	0”-26” Fill of Structure 1	OB	DE		15.2			7	3.2	1.4
283-1933	0”-26” Fill of Structure 1	CC	DE		17.8	3.7		7.1	3.3	0.5
283-2973	0”-26” Fill of Structure 1	CR	DE	26.9	17.5	3.1		6.2	2.8	1.1
283-2970	0”-26” Fill of Structure 1	CR	DE		14.9			5.6	3.5	1.6
283-1910	0”-26” Fill of Structure 1	OB	DC		12.8			5.4	3	0.5
283-1311	0”-26” Fill of Structure 1	OB	DZ	30.1	12.8				3.1	1.1
283-2301	0”-12” Level of Structure 2	CR	DE	28.5	17.8	4.7		7	3.5	1.6
283-1821	12”-18” Level of Structure 3	OB	DZ	31	14.7				2.7	1.2
283-1997	24”-30” Level of Structure 3	OB	DE	26	14.4	3.8		4.3	3.2	1.1
283-2089	30”-36” Level of Structure 3	OB	DE		17.7			8.1	3.4	0.8
283-2091	30”-36” Level of Structure 3	OB	DE		16.2	4		7.5	3.4	1.3
283-2098	30”-36” Level of Structure 3	CC	DE		16.3			5.2	2.4	0.7
283-2298	36”-42” Level of Structure 3	CR	DC		14			6.1	3.6	1.8
333-2850	12”-36” Level of Structure 9	CR	DE		16			7.2	3.2	1.2
333-7224	42”-48” Level of Structure 9	OB	DE	28.2	18.5	3.4		8.2	3.8	1.4
333-7736	24”-30” Level of Structure 10	CC	DE	33.8	15.5	2.7		8	3.5	0.8
333-6360	36”-42” Level of Structure 10	OB	DE		16.2			8.2	3.2	0.7
333-6408	42”-48” Level of Structure 10	OB	CZ		17.6				4	2.6
333-8142	54”-60” Level of Structure 10	CR	DE	48.3	14.2	4.3		9	3.4	1.6
333-8494	54”-60” Level of Structure 10	OB	CA	31.3	19.6				4.1	2.5
333-6446	36”-42” Level of Structure 11	CD	DE		12.7				3.4	0.8

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-6889	42"-48" Level of Structure 11	OB	DC/ DG		14.5	2.1	7.7	6.2	3.1	1.2
333-6888	42"-48" Level of Structure 11	OB	DZ		17.7				3.9	1.3
395-4282	Ventilator of Structure 12	OB	DE		18			8.3	3.7	1.3
509-3150	Test Trench 0"-66"	CC	CZ		17.1				4.6	2.2
509-2753	0"-54" Level of Structure 16	CC	DE		15.9			8.2	2.9	0.5
509-2661	0"-6" Level of Structure 16	OB	DG	24	17.1	3.4		5	3.2	0.7
509-2250	12"-18" Level of Structure 16	OB	DE	29.7	16.2	1.9		6.8	3.2	1.3
509-2301	12"-18" Level of Structure 16	OB	DE		13.3			4.2	3.1	0.7
509-2247	12"-18" Level of Structure 16	CR	DE	35.2	17.8	2.9		5.7	2.7	0.9
509-2820	24"-30" Level of Structure 16	CR	DE	31.3	19.7	3	6.4	5.6	2.7	1.1
509-2807	36"-42" Level of Structure 16	CC	DE	29.9	14.9	2.4	7.4	6.7	3.3	1.1
509-2810	36"-42" Level of Structure 16	OB	DE		13.7			5.6	3.9	1.1
509-2812	36"-42" Level of Structure 16	OB	DE	33.4	18.1	3.3	8.4	7	3.1	1.4
509-2809	36"-42" Level of Structure 16	CC	DC	30.6	16.1	3.2	8	6.9	3.7	1.3
509-2204	30"-36" Level of Structure 17	CC	DE		17.9			8	4.7	1.5
509-2367	24"-30" Level of Structure 18	CC	DE		18.2	1.4		7	3.6	1.3
509-2309	30"-36" Level of Structure 18	CC	DE		19.8	3.1		10.3	4.1	2.2
509-2476	30"-36" Level of Structure 18	CR	DE	23	19.2	2		8	3.9	1.1
509-2593	36"-42" Level of Structure 18	OB	DE		18.6			8.4	2.5	0.6
509-2024	0"-24" Level of Structure 19	OB	DE	28.5	13.4	3.1		4.7	2.6	1
509-2055	0"-24" Level of Structure 19	OB	DE	34.1	17.1	2.4	8.5	7.5	3.6	1.4
509-3482	0"-19" Level of Structure 30	CC	DE		14.8	5.2		5	4.2	2.1
509-3180	30"-36" Level of Structure 21	CD	DE		13.5	3.3	6.6	5.6	3.5	0.4
509-3527	36"-42" Level of Structure 23	CC	DE		18	2.4	7.1	6.5	3.1	1.1
509-3465	36"-42" Level of Structure 23	OB	DC		15.8	3.2		7.3	3.5	1
283-2136	6"-30" Level of Structure 26	CC	DC	28.9	15.8	3.5	5.3	6.3	3.3	1.2
283-2759	Floor of Structure 25	CR	DC		14.1			6.4	4.6	1.5
283-2663	30"-36" Level of Structure 26	OB	DE		14.3		6.3	7.2	3.4	1
395-6558	66"-90" Level of Structure 27	OB	DC		14.3				4	1.8
395-6557	66"-90" Level of Structure 27	CR	DE		18.1			6.6	4.6	2
395-6352	66"-90" Level of Structure 27	CC	DZ		14.4				3.3	1.4
395-6371	60"-90" Level of Structure 28	OB	DC		15.9			6.4	4.7	1.5
395-6335	60"-90" Level of Structure 28	OB	DC		15.8			5.7	3.5	1.2
395-6230	60"-90" Level of Structure 28	OB	DE		15.7			7	3.5	0.6
395-6312	60"-90" Level of Structure 28	OB	DZ		16.3				3.2	0.7
395-6455	60"-90" Level of Structure 28	CC	DE		15.5	2.9		6.6	4.3	1.4

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-6579	60”-90” Level of Structure 28	CC	DE		17.7			8.1	3.6	1.5
395-6423	60”-90” Level of Structure 28	OB	DC		17.8			7.1	3.7	1.8
395-6335	60”-90” Level of Structure 28	OB	DE	24.2	19.4	3.2		9.3	3.5	0.9
395-6409	60”-90” Level of Structure 28	OB	DZ		18.5				3.2	0.8
395-6408	60”-90” Level of Structure 28	OB	DZ		16.2				3.5	1.1
283-192	12”-18” Level of Unit 4L4	CC	DE	20.6	17.5	3		7.3	4.4	0.7
283-484	18”-24” Level of Unit 2L4	CC	DE	20.9	19.1	4.6		7.7	3.5	1
283-483	18”-24” Level of Unit 2L4	OB	DC	29.9	15.2	4.2		4.5	3.8	0.8
283-927	18”-24” Level of Unit 4L2	CC	CA		20.4				4.5	2.2
283-329	18”-24” Level of Unit 5L4	OB	DE	22.9	16.8			6.1	4.4	1.4
283-467	18”-24” Level of Unit 5L3	OB	DE		15.6			7.1	2.7	0.7
283-480	24”-30” Level of Unit 5L3	CD	DE		18.3	4.3		7.5	3.5	1.7
283-479	24”-30” Level of Unit 5L3	CR	DC		13.7	3	5.6	6.1	2.6	0.7
283-624	0”-6” Level of Unit A2	CC	DZ		14.3				2.9	0.8
283-2064	12”-18” Level of A2	CR	DC		16.3	3.1	7.3	6.5	3.7	1.3
283-2591	12”-18” Level of Unit A3	CC	DC		17	4.7		7.3	4	1.6
283-2664	12”-18” Level of Unit A3	OB	DZ		9.8			4.6	2.9	1
283-604	6”-12” Level of Unit A4	CC	DC		14.2	4.3	5.9	6.2	3	0.6
283-66	0”-6” Level of Unit A5	CR	DE		18.5			7	3	1
283-83	0”-6” Level of Unit A9	OB	DC		16.1			6.4	3.5	1
283-1411	0”-6” Level of Unit B3	OB	DE		18.7			7.7	3.2	1.4
283-1234	0”-6” Mound G	OB	DG		20				3.3	1.4
283-123	6”-12” Mound G	CC	DE			2.1		6.5	3.3	0.9
283-859	6”-12” Mound G	CR	DE		18.3	3.2		5.2	3.1	1.3
283-446	6”-12” Mound G	CR	DC	29.7	17.2	3.4	6.5	5.4	3.7	1.6
283-492	6”-12” Mound G	CR	DC	23.1		2.9		6.3	3.1	0.9
283-416	12”-18” Mound G	OB	DE		15.8			5.1	2.8	0.6
283-754	12”-18” Mound G	CC	DE		14.6	2.7		5.4	4.6	1.9
283-124	12”-18” Mound G	CC	DE		14.3	3.5		7.9	4.3	1.2
283-2798	12”-18” Mound G	CR	DE		15			7.4	2.8	1
283-424	12”-18” Mound G	CR	DC		17.8			6.3	3.9	1.3
283-461	18”-24” Mound G	OB	DE		19.1	2.5		7	0.6	1.6
283-2156	18”-24” Mound G	CC	DE	13.5	12.5	3		3.4	2	0.3
283-858	18”-24” Mound G	CR	DE		19.2			9.5	3.2	1.3
283-656	18”-24” Mound G	CC	DZ		16				3.6	1.2
283-1717	18”-24” Mound G	OB	DZ	23.2	16.5				2.9	1.1
283-1780	30”-36” Mound G	CR	DE		17.5	3.9		6.9	4.4	1.3

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
283-1249	30”-36” Mound G	OB	DC		12.1	2.4		8	3.3	0.5
283-373	36”-42” Mound G	CC	DC		16.4	4.3	6.3	6.5	3.4	1.1
333-1883	12”-18” Level of E-9E	OB	DC		13		6.1	6.8	3.5	1
333-2037	30”-36” Level of E-9E	OB	DC		14.7			5.6	5	1.5
333-685	24”-30” Level of E-9W	CR	DE		18.1			8.9	3.7	1.5
333-1356	36”-42” Level of E-9W	OB	DE		15.9		6	5	4.2	1.1
333-626	12”-18” Level of F-9E	OB	DE		18.8			7.8	3.8	1
333-1963	24”-30” Level of F-9E	CC	DE	20	16.9	2.2		7.6	3.6	0.9
333-38	0”-6” Level of G-9E	OB	DE		15.9			8.4	3.2	1.1
333-1868	24”-30” Level of G-9E	OB	DE		14.7	3.9		6.3	3.1	1.2
333-3150	12”-18” Level of H-9E	OB	DE		18.9				3.4	1.2
333-5797	12”-18” Level of H-9S	CC	DE		16.4			7.2	2.9	0.6
333-2555	12”-18” Level of I-9E	OB	DE		15.9			7.9	3.4	1
333-6331	24”-30” Level of I-9E, I-8N	CC	DC		15.8			5.6	3.4	1.4
333-2344	18”-24” Level of F4	OB	DE	30.2	15.4	2.2		9	3.7	1.1
333-4663	24”-30” Level of F4	CC	DE		14.2			6.8	2.5	0.8
333-3000	30”-36” Level of F4	CC	DE	38	18.1	2.5		7.7	4.1	1.6
333-4288	36”-42” Level of F4	OB	DC		16.4			7.5	4	1.1
333-4418	42”-48” Level of F4	CC	DE		13.2	3.4		5.1	2.9	0.8
333-4411	42”-48” Level of F4	OB	DD	28.6	12.6	2.3		8.5	3.8	1.2
333-4310	48”-54” Level of F4	OB	DE		16.8			6.4	3.3	1.3
333-119	18”-24” Level of F5	OB	DC		14.9	2.6		9	3.1	0.9
333-1984	24”-30” Level of F5	OB	DE	27.3	16.4				3.4	0.4
333-1788	24”-30” Level of F5	OB	DE		17			8.5	2.6	0.7
333-7202	24”-30” Level of F5	CC	DE		15	2.1		6.1	2.2	0.6
333-2819	30”-36” Level of F5	CC	DC		11.3	2.9		6	3.1	0.9
333-3819	36”-42” Level of F5	CR	DE		14.6			4.6	2.9	0.8
333-4704	36”-42” Level of F5	CC	DC	27.9	14.3	4.9	6	6.4	2.9	0.9
333-3820	36”-42” Level of F5	OB	DZ		21.7				3.2	1.1
333-5419	42”-48” Level of F5	CR	DE		15.1			7.7	3.8	1.8
333-129	0”-12” Level of G4	OB	DC/ DG		15.8			5.7	1.9	0.7
333-808	12”-18” Level of G4	OB	DE		16.4				3.4	0.9
333-807	12”-18” Level of G4	OB	DE		16.6			5.7	3.6	0.9
333-1169	12”-18” Level of G4	CR	DE		14.3	4.7		8	3.3	1
333-1171	12”-18” Level of G4	OB	DC		14.5			6.2	3.2	0.7
333-3199	18”-24” Level of G4	OB	DE		13.4			7.6	2.6	0.6

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-2745	18”-24” Level of G4	CD	DE		16.4			5.3	3.7	1.1
333-3353	18”-24” Level of G4	CC	DE		15.1			8.7	3.6	1.1
333-3200	18”-24” Level of G4	OB	DE		17	3.5		7.2	2.9	0.7
333-2790	24”-30” Level of G4	CC	DE	35.5	18.2	2.6		6.9	3.6	1.4
333-2792	24”-30” Level of G4	OB	DE	32.9	19	4.3		6.4	3.9	1.8
333-3607	24”-30” Level of G4	OB	DE		15	4.5		6.2	3.6	1.5
333-2886	24”-30” Level of G4	CC	DE		18.5	3.6		8.3	2.7	1.1
333-2793	24”-30” Level of G4	CC	DC		12.6	1.7		6.7	3.5	1.1
333-4211	30”-36” Level of G4	CR	DE		21.2	4.4		8.1	3.6	1.1
333-7197	36”-42” Level of G4	OB	DE		18.8	4.1		8.1	3.9	1.3
333-8008	42”-54” Level of G4	CC	DE		19.8			9.8	4.5	2.5
333-8011	42”-54” Level of G4	CC	DE		16.5			7.6	3.7	1.6
333-8016	42”-54” Level of G4	CD	DC		15.8	3.5	5.6	4.6	3.1	1.3
333-7941	42”-54” Level of G4	OB	DC		15.5	1.6		8.2	3.4	1.3
333-7871	42”-54” Level of G4	OB	DZ		14.9				3.7	1.1
333-3402	12”-18” Level of G5	OB	DE		19.3	4.4		7.6	3.3	0.5
333-379	18”-24” Level of G5	CD	DE	30	19.5			6.6	4	1.5
333-1225	24”-30” Level of G5	OB	DZ	16	13.1	2		6.7	2.9	0.5
333-2136	30”-36” Level of G5	CR	DE	31.1	18.7	2.6		7	2.8	1.1
333-3522	30”-36” Level of G5	OB	DE		16.7	4.1		7.3	3.5	1.1
333-3047	30”-36” Level of G5	CR	DE		16.2	2.6		7.2	2.8	0.5
333-3840	30”-36” Level of G5	CC	DE		16.6			6.9	2.8	1.4
333-3057	30”-36” Level of G5	OB	DC		14.5			7	3.1	1.2
333-4393	36”-42” Level of G5	OB	DE		15.5		9.2	8.8	3.1	0.2
333-4847	36”-42” Level of G5	OB	DC		14.1	4.3	7.9	9.3	5.5	1.6
333-5434	36”-42” Level of G5	OB	CC	29.8	17.8				3.7	2
333-4392	36”-42” Level of G5	OB	DE	22.8	12.8			5	4.1	0.9
333-5193	42”-48” Level of G5	CR	DE		15.4			5	3.7	1.4
333-3934	42”-48” Level of G5	CR	DE		15.8			6.2	3.4	1.1
333-5192	42”-48” Level of G5	CC	DZ		14.7				4.1	1.5
333-7075	48”-54” Level of G5	OB	DC		15.9			5.9	3.5	1.4
333-6247	54”-60” Level of G5	CR	DE	33.6	16.3	4.2		7.3	3.8	1.2
333-6241	54”-60” Level of G5	CC	DE		18	3.7		7.2	4	1.4
333-6468	60”-66” Level of G5	OB	DE	32.1	16			4.8	3.3	1.2
333-5933	Surface of F0	CC	CA		29.9				5.5	7.7
333-248	Surface of F0	OB	DE		15.3			5.3	3.9	0.7
333-1382	0”-6” Level of F0	CR	DE		17.9			9.2	3.6	1.6

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-1368	0”-6” Level of F0	OB	DE		15.6			7.1	3.5	1.3
333-309	0”-6” Level of F0	CC	DE		16.8	3.7		7.6	3.2	1
333-531	0”-6” Level of F0	CR	DG		17.9	2.7	5.7	6	2.8	1.1
333-3250	6”-12” Level of F0	CC	DE		17	2.7		5.1	3	1
333-3304	6”-12” Level of F0	CC	DG		17.4	3	6.9	5.6	2.8	0.7
333-4680	18”-24” Level of F0	CC	DZ		21.1				3.8	1.5
333-7022	24”-30” Level of F0	OB	DE	21.4	18.1	3.5		5.7	2.6	0.6
333-4113	24”-30” Level of F0	CC	DE	31.2	18.6	3.3		6	3.3	0.8
333-4107	24”-30” Level of F0	OB	DE	38.9	15.2	4.3		7.7	3	1.1
333-4109	24”-30” Level of F0	CD	DE	26.9	18.6	4.1		5.6	5.4	1.6
333-4111	24”-30” Level of F0	OB	DG		19				2.8	0.9
333-5868	24”-30” Level of F0	CC	CA		20.6				4.3	2.7
333-4148	24”-30” Level of F0	OB	CA		18.7				3.2	2.5
333-5767	30”-36” Level of F0	CR	DE		13.9				3	0.9
333-7033	30”-36” Level of F0	CC	DC		12.9	2.6		6.2	4.1	1.3
333-4590	30”-36” Level of F0	OB	DG		16.1	2.6		6	3.3	1.5
333-5683	36”-42” Level of F0	OB	DE		16.1			5.4	3.3	1
333-6189	36”-42” Level of F0	CR	DE		15.6			6	3.1	1.1
333-7894	42”-48” Level of F0	OB	DZ	30.2	12.6				3.5	1.1
333-7993	48”-54” Level of F0	CC	DE		17.4	2.8		7.1	2.5	1.2
333-695	48”-54” Level of F0	OB	DG		18.6			5.7	1.6	1.1
333-7943	54”-60” Level of F0	CC	DE		16.1	3.5		8.4	3.6	1.2
333-8123	54”-60” Level of F0	OB	DE		19			7.7	3.6	1.3
333-9167	66”-72” Level of F0	OB	DE	37.3	16.8	4		8.3	4	1.8
333-9209	66”-72” Level of F0	CC	DC		12.6			5.7	3.4	0.9
333-9125	72”-78” Level of F0	OB	DG		14.5			6.4	2.8	1
333-2276	6”-12” Level of F0	OB	DE		16.4			6.1	3.4	1
333-2280	6”-12” Level of F0	CC	DE		16.8	3.2		8.3	4.3	1.2
333-2279	6”-12” Level of F0	CR	DC		16.7		6.6	6.9	3.7	1.4
333-2281	6”-12” Level of F0	CC	CZ		17.2				4.6	1.9
333-2278	6”-12” Level of F0	CR	DZ		18.2				4.3	1.6
333-3427	12”-18” Level of F1	CC	DE		14.5			7.2	3.3	0.9
333-2312	12”-18” Level of F1	CC	DE		19.2			6.4	3	0.6
333-2449	12”-18” Level of F1	CC	DZ		14.8				3.6	0.8
333-4719	18”-24” Level of F1	CC	DE		18.5			7.4	4.2	2.2
333-5648	18”-24” Level of F1	CC	DE		16.1			6.5	3	0.9
333-4494	18”-24” Level of F1	CC	DZ		17.5	4.5		7	4.2	1.8

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-4720	18”-24” Level of F1	OB	DZ		13.7				3.7	0.8
333-4863	24”-30” Level of F1	CC	DE		19.5	3.5		6	4.2	1.8
333-5406	24”-30” Level of F1	OB	DC		13.8			7.1	3.2	0.8
333-6668	30”-36” Level of F1	OB	DE		17.2			7.4	3.2	1.4
333-6666	30”-36” Level of F1	CC	DC	30.8	16.1	1.9	5.7	5.7	2.4	1.1
333-6042	36”-42” Level of F1	OB	DE		20.2	1.9		8.8	4.1	1.5
333-6483	36”-42” Level of F1	OB	DE		16.5	3.9		6.7	3.1	0.7
333-6482	36”-42” Level of F1	OB	DC		15.3	1.9	7.7	8	4	1.2
333-6045	36”-42” Level of F1	CC	DC	25.2	15.7	2.3	6.7	5.8	4	1.3
333-7655	42”-48” Level of F1	CR	DG	18.6	14.7	2.1	4.9	5.1	2.5	0.8
333-8288	48”-54” Level of F1	OB	DC		4.5			4.6	3.9	1.2
333-8267	48”-54” Level of F1	OB	DE		17.6	3.3		8.4	3.5	0.5
333-8287	48”-54” Level of F1	OB	DE		21.1			6.8	3.8	1.9
333-8270	48”-54” Level of F1	CR	DC		16.2	4.1	6.8	7.2	2.6	1.2
333-8273	48”-54” Level of F1	OB	DC		12.5	1.9		5.3	3.7	1.1
333-8286	48”-54” Level of F1	OB	DE		12.5			4.3	3	0.6
333-8936	48”-54” Level of F1	OB	DE		21.8	2.1		9.4	3.1	1.4
333-8775	54”-60” Level of F1	CR	DE		16.5	2.8		6.2	3.5	0.7
333-8738	54”-60” Level of F1	CC	DE		16.1	3.8		7	4.3	0.7
333-8643	54”-60” Level of F1	CD	DD		12.9	2		8.5	3.5	1.7
333-8732	54”-60” Level of F1	OB	DE	29.8	14.2	4.1		8.2	3.8	1.5
333-9168	60”-66” Level of F1	OB	DC		16.7			7.3	2.8	1
333-4097	0”-6” Level of F2	CC	DE		15.8			6.4	3.1	1.1
333-4096	0”-6” Level of F2	CC	DC		13.9			5.7	3.3	0.9
333-5386	18”-24” Level of F2	OB	DE		18.9			7.8	4.3	1.4
333-5338	18”-24” Level of F2	CC	DE		17.6				3	0.7
333-5389	18”-24” Level of F2	CC	DC		16.1	2.8	6.5	7.2	3.2	1
333-5377	18”-24” Level of F2	OB	CA	28.5	17	2.3		7.8	4.1	1.3
333-5385	18”-24” Level of F2	OB	DE		14.9	3.6		7.3	3.4	1.1
333-5078	24”-30” Level of F2	CC	DE		20.3			6.3	2.7	0.8
333-5056	24”-30” Level of F2	CC	DE		16.2	3.5		9	3.1	0.7
333-5079	24”-30” Level of F2	CC	DC	21	13.2		6.6	7.1	3.4	0.8
333-5031	24”-30” Level of F2	OB	DC		17.6		6.2	6.8	4.3	1.3
333-5076	24”-30” Level of F2	CC	DZ		19.2			8.5	4	30.6
333-6107	30”-36” Level of F2	OB	DE		21			7.9	3	1.3
333-6101	30”-36” Level of F2	OB	DE		15.6			7.6	3.8	1.1
333-6099	30”-36” Level of F2	OB	DE	30.8	15	2.6		6.9	2.8	1

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-6106	30”-36” Level of F2	CC	DG		19.5			5.9	2.6	0.8
333-6110	30”-36” Level of F2	OB	CA		12.9	1.4		8.1	4	1.1
333-5876	36”-42’ Level of F2	CC	DE	30.2	14.9	3.1		8.9	3	1.2
333-5825	36”-42’ Level of F2	OB	DE	31	14.1	3.1			3.5	1
333-6716	36”-42’ Level of F2	OB	DE		19.5			7.2	3.7	1.2
333-5823	36”-42’ Level of F2	OB	DE	22.2	16.5	2.9		5.2	3.3	0.7
333-5824	36”-42’ Level of F2	OB	DE	27	16.2	4.3		3	3.6	1
333-6714	36”-42’ Level of F2	OB	DC	31.5	17.1	3.9	8.5	9.2	3.3	1.4
333-6715	36”-42’ Level of F2	OB	DC		13.8			4.6	3.2	0.8
333-6700	42”-48” Level of F2	CC	DE	39.1	18.3	4		7.7	3.1	1.6
333-6644	42”-48” Level of F2	CC	DE	33.3	19.2	3.1		6	3.9	1.9
333-6642	42”-48” Level of F2	OB	DE	22	13.7			5.7	3.7	0.8
333-6739	42”-48” Level of F2	CD	DE		16.3			5.9	3.2	1.2
333-6740	42”-48” Level of F2	CR	DE		11.9	2.6		5.7	3	0.6
333-6738	42”-48” Level of F2	OB	DC		12.7	5.8		9	3.3	1.2
333-6737	42”-48” Level of F2	OB	DZ		17.8				3.1	0.9
333-6313	48”-54” Level of F2	CR	DE	27.1	19.3	2.9		8.1	2.9	1.1
333-6314	48”-54” Level of F2	CC	DE		16.7			9.3	2.8	1.2
333-6315	48”-54” Level of F2	OB	DZ		18.2				3.6	1.3
333-7171	54”-60” Level of F2	OB	DE		17.5	4		7.9	3.7	1.9
333-6947	54”-60” Level of F2	OB	DE	22.7	16.7	3.1		5.2	3.6	0.8
333-7808	54”-60” Level of F2	OB	DE		16.5			7	3.3	1.3
333-7899	54”-60” Level of F2	CC	DC	25.8	14.7	3.9	6.2	6.4	3.8	0.9
333-7806	54”-60” Level of F2	CC	DC		14.3	3	6.8	6	3.9	1.3
333-7170	54”-60” Level of F2	OB	DZ		12.4				3.1	0.8
333-8108	66”-72” Level of F2	CC	DE		15.5	1.9		5.9	3.3	1.4
333-8686	66”-72” Level of F2	CD	DC		11.1			4.8	2.6	0.9
333-8156	66”-72” Level of F2	OB	CA		29.2				5.4	3.6
333-8164	66”-72” Level of F2	OB	CZ		17.3				3.4	1.4
333-7958	72”-84” Level of F2	CR	DE		16.1	3.7		6.4	3.3	1.1
333-6927	0”-6” Level of F3	CC	DZ		18.4			9.1	2.9	0.9
333-6794	6”-12” Level of F3	OB	DE	33.6	20.7	3		6.5	2.9	1.5
333-6803	6”-12” Level of F3	OB	DE		15.7	4.3		6.4	4.4	0.7
333-6807	6”-12” Level of F3	CD	DG		17.5	1.7	7.3	6.5	2.3	0.7
333-5586	6”-12” Level of F3	OB	DG		16.5			6.8	2.2	0.8
333-6797	6”-12” Level of F3	OB	DD	29.7	11.3	2.5		8.6	4.1	1.1
333-6801	6”-12” Level of F3	OB	DE		15.4			5.3	3.5	1.2

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-5585	6"-12" Level of F3	OB	DE	24.8	14.2	2.6		5.1	3.6	0.7
333-6202	12"-18" Level of F3	OB	DE		19.2			8	3.1	0.9
333-6509	12"-18" Level of F3	CC	DG		17.5			5.9	2.5	0.9
333-7063	12"-18" Level of F3	CC	DE	21.4	20	2.2		7.1	3.9	1.1
333-6201	12"-18" Level of F3	OB	DE	27.2	15.2	2.2		7.3	3.2	1
333-6924	12"-18" Level of F3	OB	DZ		15.1				2.6	0.7
333-7339	12"-18" Level of F3	OB	DE	37.9	15.7			5.7	4	1.3
333-7309	12"-18" Level of F3	CC	DC		13.9			5	4	1.2
333-7340	12"-18" Level of F3	OB	DE		18.3			7.1	3.7	1.9
333-7621	18"-24" Level of F3	CR	DE	26.9	16.9	2.6		5	3.4	1.1
333-7498	18"-24" Level of F3	OB	DC	33.2	15.4	1.3	6.9	10	3.9	1.5
333-7620	18"-24" Level of F3	OB	DC		15.1			5.5	3.4	1.3
333-6987	18"-24" Level of F3	CC	DG	27.4	16.1	1.6		5	2.8	1.3
333-8269	24" Level of F3	OB	DZ		14.3				3.7	0.8
333-7619	30"-36" Level of F3	OB	DE		18	2.8		6.5	3.8	1.4
333-8082	30"-36" Level of F3	CC	DE	25	16	1.7		7.6	4.4	1.2
333-8081	30"-36" Level of F3	OB	DZ	24	19.5				2.6	1.2
333-8922	42"-48" Level of F3	OB	DE		17.4			8.5	3.2	1.2
333-4168	18"-24" Level of G3	CC	DC		17		7.8	6.6	3.9	1.7
333-1405	6"-12" Level of G3	CC	CA		21.4				3.2	2.1
333-2203	12"-18" Level of G3	CC	DE		19	3		7.9	2.7	0.9
333-2174	12"-18" Level of G3	CC	DE		14.9			6.3	2.9	1.4
333-2207	12"-18" Level of G3	OB	DC		13.4			5.2	3	0.8
333-3022	12"-18" Level of G3	OB	DC		15.2			5.8	3.3	1
333-3752	18"-24" Level of G3	CC	DE		15.9			6.5	4.2	1.6
333-3853	18"-24" Level of G3	CR	DC	32	12.3	3		4.2	3.4	1.2
333-3855	18"-24" Level of G3	CC	DE	21.7	18.9	2.2		7.3	3.4	0.9
333-6941	24"-30" Level of G3	CC	DE	43.1	16.3	2.3		6.1	4.1	2.5
333-4774	24"-30" Level of G3	CC	DC		13.9	3.4		7.7	3.4	1.9
333-6940	24"-30" Level of G3	OB	DC		14	2.2		7	4.3	1.6
333-922	6"-12" Level of G0	CC	DE		17.3	3.4		8.3	3.2	0.8
333-1906	6"-12" Level of G0	CC	DE		15.3			5.8	3.6	0.9
333-1905	6"-12" Level of G0	CR	DC		15.2			6.1	4.2	2.2
333-1922	6"-12" Level of G0	CR	DC		12.2	2.2		5.5	3.4	1
333-2399	12"-18" Level of G0	CD	DE		24.1	4.4		8.4	4.5	1.6
333-2162	12"-18" Level of G0	CR	DE	25.7	21.7	2.5		6.7	3.7	1.3
333-2623	12"-18" Level of G0	CC	DE		20.9	2.6		7.4	3.2	1.7

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
333-2415	12”-18” Level of G0	CD	DC		18.8	2.3	6.3	5.3	3.7	2.2
333-3090	18”-24” Level of G0	CC	DE		18.2	3.5		6.7	3.2	1
333-3567	24”-30” Level of G0	OB	DZ	25.6	15.4				3	0.8
333-3864	30”-36”’ Level of G0	CC	DE		18.4			7.3	2.8	1.1
333-5934	30”-36”’ Level of G0	CC	DE		19.6	3.9		6.3	3.7	1.4
333-3863	30”-36”’ Level of G0	CC	DZ		8.7				3.4	0.7
333-6010	36”-42” Level of G0	CC	DE		16.1	3.7		7.8	2.6	1.3
333-6012	36”-42” Level of G0	CC	DZ		16.4				4	1.2
333-6868	48”-54” Level of G0	OB	DE		16.3			7.6	3	0.8
333-7431	60”-66” Level of G0	OB	CA		14.4				3.9	1
333-1033	0”-6” Level of G1	OB	CA		21.6				6.3	3.5
333-2150	6”-12” Level of G1	CC	DE		16.1			5.9	4.1	1.2
333-1317	6”-12” Level of G1	CC	DC		14.8	2.6	6.7	7.3	3.6	0.8
333-2152	6”-12” Level of G1	OB	DG		19.3	2.6		4.7	3.4	0.8
333-1316	6”-12” Level of G1	OB	DG		14.8	1.8		4.8	1.7	0.6
333-3253	12”-18” Level of G1	CR	CA		24.3				24.3	3
333-6514	18”-24” Level of G1	OB	DE		15.2			5.9	3	1.4
333-5330	30”-36” Level of G1	CR	DE		18.8			7.3	2.8	0.7
333-4827	36”-42” Level of G1	CC	DC		14.6	2.6		6.9	3.7	1.3
333-6529	36”-42” Level of G1	CR	DG		14.3	1.7	7.6	8	2.6	1
333-6126	48”-54” Level of G1	OB	DE	27.2	16.7	3.5		7.1	3.6	1.1
333-6132	48”-54” Level of G1	CC	DC		17.3		5.7	6.1	4	1.7
333-6138	48”-54” Level of G1	CD	DG		12.4			7.1	3.4	0.8
333-7234	48”-54” Level of G1	OB	DC		14.6	3.3		7.9	3	1.1
333-6756	54”-60” Level of G1	CD	DE		17.7	4		9.1	4.1	2.3
333-7748	60”-66” Level of G1	OB	DE		16.6			7.5	4	32.4
333-7845	60”-66” Level of G1	OB	DE		14.7			5.4	3.9	1.4
333-552	6”-12” Level of G2	CC	DC		12.9	3.2	6.6	5.8	2.9	1.2
333-2870	18”-24” Level of G2	OB	DC		14.6		8.6	7.6	3.3	1.3
333-2292	24”-30” Level of G2	CR	DC		14.1		7	5.1	4.1	1.2
333-2293	24”-30” Level of G2	CC	DE		18.4			9.7	3.8	1.3
333-2535	30”-36” Level of G2	OB	DE	25.7	13.5				3.2	0.8
333-4585	30”-36” Level of G2	CC	CZ		15.8				3.9	1.6
333-5476	42”-48” Level of G2	OB	DE		19.3			6.6	4	1.8
333-9021	60”-66” Level of G2	OB	DE		17.7			8.3	2.9	1.2
333-5672	24”-30” Level of G0	OB	DE		20.2			6.9	2.6	0.7
395-478	0”-6” Level of 21A22	OB	DC	27.4	12.5	4.2	5.8	4.2	3.3	0.8

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-232	0”-6” Level of 21A22	OB	DE		14.3				2.4	0.5
395-200	0”-6” Level of 21A22	CR	DE	30.2	19.1	3.3	6.4	5.6	3.4	1.4
395-478	0”-6” Level of 21A22	CC	DZ		15.4				3.7	0.9
395-1459	6”-12” Level of 21A22	CC	DZ		16.3				4.5	1.4
395-1307	6”-12” Level of 21A22	CC	DZ		16.4				4.8	2.3
395-1784	12”-18” Level of 21A22	OB	DZ		14.9				3.6	0.9
395-1428	12”-18” Level of 21A22	OB	DE		15.8	3.6		5.9	2.2	0.9
395-1197	12”-18” Level of 21A22	OB	DC		12.4	4.3		5.2	2.8	0.4
395-1187	12”-18” Level of 21A22	CC	DZ		16.8				2.4	0.8
395-2613	18”-24” Level of 21A22	CR	DE		19.3			7.6	3.8	1.6
395-2611	18”-24” Level of 21A22	CR	DE	33.1	19.4	4.9	10.6	9.7	4.4	1.7
395-2614	18”-24” Level of 21A22	CR	DE		17.8	4.2		8.3	3.1	1
395-2095	18”-24” Level of 21A22	CC	CM		19				4.4	2
395-3735	30”-36” Level of 21A22	OB	DE		18.5			8.2	3.9	1.5
395-3514	30”-36” Level of 21A22	OB	DE		19.9			9.3	3.8	1.4
395-3513	30”-36” Level of 21A22	OB	DE	28.8	18.4	4.3	7.5	6.5	3.7	1.2
395-3307	30”-36” Level of 21A22	OB	DE		18.3			8.9	3.5	1.1
395-3736	30”-36” Level of 21A22	OB	DE		19			7.2	2.7	1.1
395-3512	30”-36” Level of 21A22	CC	DC	22.6	14.3	3.5	6.7	5.9	4.1	1.1
395-3737	30”-36” Level of 21A22	OB	DZ		7.7				2.9	0.5
395-4120	36”-42” Level of 21A22	OB	DC		14.1			5.2	4.1	1.6
395-4111	36”-42” Level of 21A22	CR	DE	25.7	17.1	3.1		8.2	2.7	1
395-4120	36”-42” Level of 21A22	OB	DE		17.8			6.9	3.5	1.2
395-3658	42”-48” Level of 21A22	OB	DC		13.9		7.7	6.5	3.5	1.2
395-3653	42”-48” Level of 21A22	CC	DC	26.2	11.5	3.5		4.9	3.3	0.9
395-3652	42”-48” Level of 21A22	CC	DE		16.8			7.8	3.5	1.3
395-3651	42”-48” Level of 21A22	OB	DE	28.2	17.1	3.9		7.6	3.4	1.1
395-3659	42”-48” Level of 21A22	OB	DZ		13				2.6	0.7
395-5463	54”-60” Level of 21A22	OB	DD	35.8	14.6	14.3		8.9	2.8	1.2
395-5464	54”-60” Level of 21A22	CC	DE		19.1	4.1	7.7	7	3.4	1.4
395-5464	54”-60” Level of 21A22	OB	DZ	22.6	14.6	3.1		6.5	2.9	0.8
395-3019	66”-70” Level of 21A22	OB	DC		13.3			4.9	3.6	1
395-387	6”-12” Level of 21A23	CC	DC		15.1			7.5	4.4	1.8
395-374	6”-12” Level of 21A23	CC	DE	28.5	17.6	3.9	7.7	6.3	3.3	0.9
395-387	6”-12” Level of 21A23	OB	DC		12	4.7		5.2	3.8	0.7
395-374	6”-12” Level of 21A23	OB	DC	26	12.9	4.4		5.6	3.3	0.9
395-771	12”-18” Level of 21A23	OB	DE	19.4	12.8			5	1.7	0.4

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-1610	12"-18" Level of 21A23	OB	DC		16.2			6.8	3.4	1.4
395-769	12"-18" Level of 21A23	CC	DC		17.2	5.2	7.3	6	4.1	2.4
395-1609	12"-18" Level of 21A23	OB	DZ		14.9				2.7	0.8
395-1640	12"-18" Level of 21A23	CR	DZ		15.3				3.4	1
395-1077	12"-18" Level of 21A23	CR	DZ	22.5	14.2				3.4	0.8
395-1648	18"-24" Level of 21A23	OB	DC		12.6			5.2	3.3	1
395-1443	18"-24" Level of 21A23	OB	DE	33	17.9	4.9		6.7	3.4	1.3
395-1648	18"-24" Level of 21A23	CR	DE		17.8			7.5	3.3	1.2
395-1648	18"-24" Level of 21A23	OB	DE		14.7			6.2	3.6	0.9
395-2279	24"-30" Level of 21A23	OB	DC		18.5	4.8		6.5	3.3	0.5
395-2279	24"-30" Level of 21A23	OB	DE		19.8	2.5		7	3.9	1.9
395-2382	24"-30" Level of 21A23	OB	DE		18			7.9	3.5	1.3
395-2277	24"-30" Level of 21A23	CC	DZ	19.5	11.1	2.5		5.2	3.1	0.5
395-2277	24"-30" Level of 21A23	OB	DC		12.4			4.9	2.7	0.7
395-2349	30"-36" Level of 21A23	OB	DE		18.5	4.7	7.1	6.5	3.3	0.8
395-2798	30"-36" Level of 21A23	CC	DE		19			8	3.6	1.3
395-2795	30"-36" Level of 21A23	CC	DE	25.8	14.9	2.9	5.6	4.7	3.8	1.1
395-2349	30"-36" Level of 21A23	CD	DE		18.4	4.2		9.2	4	0.9
395-2796	30"-36" Level of 21A23	CC	DE		16.2	2.7	7.3	5.8	3.5	1.1
395-2797	30"-36" Level of 21A23	OB	DC	24.8	16.3	4.9	7	7.9	3.7	1.1
395-2794	30"-36" Level of 21A23	CC	DZ		12.5				3.2	0.7
395-2979	36"-42" Level of 21A23	CC	DE	23	18.9	4.3	7.8	7.1	3.3	1
395-2887	36"-42" Level of 21A23	OB	DZ						2.6	0.4
395-2979	36"-42" Level of 21A23	CC	DE		18.9			7.6	3.5	1.2
395-2978	36"-42" Level of 21A23	OB	DE	29.6	17.5	4		6.9	3.5	1.2
395-4234	42"-48" Level of 21A23	OB	DE		18.8			7.1	2.3	0.9
395-4234	42"-48" Level of 21A23	OB	DZ		13			7.7	3.1	1
395-4684	48"-54" Level of 21A23	OB	DC		13	2.1		5.4	6.8	1.4
395-4684	48"-54" Level of 21A23	CR	DC		13.5				3.1	1.2
395-4685	48"-54" Level of 21A23	OB	DZ		13.9				3.3	0.5
395-4514	48"-54" Level of 21A23	OB	DC		14.2			7.4	2.7	0.8
395-4513	48"-54" Level of 21A23	OB	DE	26.6	15.7	3.9		6.6	3	0.9
395-4681	48"-54" Level of 21A23	OB	DE	29.1	18	3.1	6.6	6.1	3.4	0.9
395-4513	48"-54" Level of 21A23	OB	DE	25.2	18.5	4.2		8.8	3.2	1
395-4513	48"-54" Level of 21A23	OB	DE	26.6	16.8			6.5	3.1	1
395-4685	48"-54" Level of 21A23	CC	DZ		12.6				3.7	1.1
395-4721	54"-60" Level of 21A23	OB	DE	29	17.2	3.7		7	3.2	1.2

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-6159	66”-72” Level of 21A23	CC	DE	28	16	3.7		5.2	4.3	0.9
395-6158	66”-72” Level of 21A23	CC	DE		19.3			10	3.5	1.4
395-5845	66”-72” Level of 21A23	CR	DE	31.8	16.7	3.1	7.4	5.9	3.7	1.4
395-6152	66”-72” Level of 21A23	OB	DE		16.2			7.8	4.6	1.3
395-13	0”-6” Level of 20A22	OB	DC		13.2			4.8	3.4	0.6
395-1341	0”-6” Level of 20A22	CR	DC		11.8	3.8		5.5	2.9	0.9
395-799	0”-6” Level of 20A22	CC	DE		15.5			6.8	4	1.6
395-313	0”-6” Level of 20A22	CC	DC	28.4	14.8	3.8		7.4	3.9	1.2
395-14	0”-6” Level of 20A22	OB	DE	17.2	22.3	3.4		7.8	3.2	0.9
395-1716	6”-12” Level of 20A22	OB	DC		15.2	3.4	6	6.3	3.9	1.3
395-1766	6”-12” Level of 20A22	CR	DC		17	3.7	5.9	4.6	3.4	1.1
395-1502	6”-12” Level of 20A22	OB	DZ	10.9	15.4	3.6	7.3	5.9	3.5	0.5
395-1717	6”-12” Level of 20A22	OB	DE	29.2	11.4				2.1	0.9
395-1502	6”-12” Level of 20A22	CD	DE		17.5	4.7		7.8	3.6	1.7
395-1505	6”-12” Level of 20A22	OB	DZ		13.5				4	0.8
395-1969	12”-18” Level of 20A22	OB	DE	30.4	15.1	4.5		6.7	3.2	0.9
395-1968	12”-18” Level of 20A22	OB	CA	19	20.5				4.6	1.6
395-1970	12”-18” Level of 20A22	OB	DZ		13.4				3.1	0.7
395-2164	18”-24” Level of 20A22	CR	DZ	27.3	12.5				3.1	0.8
395-2470	18”-24” Level of 20A22	CR	DE		12.6				2.5	0.6
395-2855	24”-30” Level of 20A22	CC	DZ		15	2.4		6.3	4.5	1.2
395-2942	24”-30” Level of 20A22	CC	DZ		14.9				2.9	1.2
395-3102	24”-30” Level of 20A22	OB	DZ	20	9.6				2.2	0.3
395-4341	24”-30” Level of 20A22	OB	DE	32.4	17.3	4		5.5	4.1	1.5
395-2855	24”-30” Level of 20A22	CC	DE		16.1			6.3	3.2	1
395-2941	24”-30” Level of 20A22	CC	DE		18.6	3.4		8.2	3	1.2
395-2947	24”-30” Level of 20A22	OB	DE		16.8			8	3.2	1.2
395-3102	24”-30” Level of 20A22	OB	DE	26.5	12.1	4.2		7.4	2.6	0.9
395-3015	24”-30” Level of 20A22	CC	DE		15.2	4.6	9.5	9	2.3	0.8
395-2581	24”-30” Level of 20A22	CC	DE	22.6	13.4	2.7		4	2.5	0.5
395-2855	24”-30” Level of 20A22	QC	CA		25.1				4.5	3.8
395-3019	24”-30” Level of 20A22	OB	DD	30.5	14.9	2.3		8.3	3.2	0.9
395-3102	24”-30” Level of 20A22	CR	DZ		16.1				4.6	1.3
395-3102	24”-30” Level of 20A22	CR	DZ		16.6				3.4	1
395-3370	30”-36” Level of 20A22	OB	DE	23.1	15.4	3.6	6.4	5	3.3	0.9
395-3371	30”-36” Level of 20A22	OB	CZ		13.6				3.1	

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-3069	30”-36” Level of 20A22	CR	DZ		15.4				3.4	1.5
395-4349	36”-42” Level of 20A22	CR	DE	31.1	17.1	3.5		6.7	2.4	0.9
395-4343	36”-42” Level of 20A22	OB	CA	32.8	23.6				4.4	3.2
395-4341	36”-42” Level of 20A22	OB	DE		17			6.8	3.6	1.6
395-3849	36”-42” Level of 20A22	CC	DE		14.8	4.2		5.8	3.2	1.2
395-3827	36”-42” Level of 20A22	CC	DE		19.9		10.5	9.5	3.2	0.4
395-4346	36”-42” Level of 20A22	CC	DE	35	16.2	5		8.5	3.2	1.4
395-4344	36”-42” Level of 20A22	OB	DE		16.1	3		5.8	3.4	1.3
395-3827	36”-42” Level of 20A22	CC	DE	31.5	23.3	4.8		11	5	2.1
395-3826	36”-42” Level of 20A22	CC	DE	26.8	19.4	2.9		9.3	3.9	1.2
395-4937	42”-48” Level of 20A22	OB	DE		19.9			9	3.4	1
395-4734	42”-48” Level of 20A22	OB	DC	29	13.1	3.6		5.6	3.3	0.9
395-4597	42”-48” Level of 20A22	CC	DE	28.4	12.1	2.2		3.4	3.4	0.9
395-4597	42”-48” Level of 20A22	OB	DC/ DG	19.5	13.3	3.5		6.1	3.1	0.6
395-4931	42”-48” Level of 20A22	CC	DE		17.5	1.8		6.3	3.6	0.4
395-5170	42”-48” Level of 20A22	OB	DE		18.4			6.6	4.6	2
395-5171	42”-48” Level of 20A22	CD	DE	21.6	16.3	4.1		7.2	3.1	0.7
395-4534	42”-48” Level of 20A22	CC	DE	19.4	16.4	2.2		5.4	3.7	0.9
395-4597	42”-48” Level of 20A22	OB	DE		17.5	3.8		6.8	3.6	1
395-4597	42”-48” Level of 20A22	OB	DE	24	14.9				3.7	1
395-5529	48”-54” Level of 20A22	CC	DC		14.3			6.6	3.1	1.3
395-5091	48”-54” Level of 20A22	OB	DC		16.1			6.9	3.3	1.2
395-5402	48”-54” Level of 20A22	CC	DZ		15.7				3.9	0.8
395-5441	48”-54” Level of 20A22	OB	DZ		14.4				3.1	1.3
395-5442	48”-54” Level of 20A22	OB	DC		15.8			4	3.5	0.7
395-6345	60”-66” Level of 20A22	OB	DE		22.3	3.4		4.9	3.9	2
395-6345	60”-66” Level of 20A22	OB	DE	27.2	16.4	3.9		8	3.5	1.2
395-1691	6”-12” Level of 20A23	CC	DC		14.7	3.6	7.2	5.8	2.9	1.2
395-1109	6”-12” Level of 20A23	CC	DE	34.5	18.5	4.3	6.1	4.4	3.5	1.6
395-823	6”-12” Level of 20A23	CR	DE		16	2.5		8.9	3.7	1.2
395-1691	6”-12” Level of 20A23	CC	DG		16	3.6	5.5	6.4	3.4	1.3
395-1691	6”-12” Level of 20A23	CR	DE		16.6	4.2		7.5	3	1.1
395-726	6”-12” Level of 20A23	CC	DE		14.7			5.5	2.3	0.8
395-2066	12”-18” Level of 20A23	OB	DZ	20.8	13.5				4.4	0.8
395-2567	18”-24” Level of 20A23	CR	DC		16			6.5	4	1.3
395-2439	18”-24” Level of 20A23	CC	DE		19.9	3.5	9.6	9	3.2	1.3

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-2566	18”-24” Level of 20A23	OB	CZ		10.3				3.1	0.7
395-3150	24”-30” Level of 20A23	OB	DC	26.2	14.8	3.7		6.1	3.1	0.7
395-2719	24”-30” Level of 20A23	OB	DC		12.6			5.3	3.8	1.6
395-3321	24”-30” Level of 20A23	CR	DE		16.6			7.4	3.9	1.1
395-3385	24”-30” Level of 20A23	OB	DZ		14.7				2.9	0.8
395-3582	30”-36” Level of 20A23	CR	DC		14.8			5.3	2.4	0.9
395-3647	30”-36” Level of 20A23	OB	DZ		12.7				2.7	0.7
395-4032	30”-36” Level of 20A23	OB	DE		16.4	4.4		7.2	3.1	0.9
395-3461	30”-36” Level of 20A23	OB	DG	30	13.7			6	3.4	1.1
395-4491	36”-42” Level of 20A23	OB	DE	29.9	18.6	3.3		8.4	4.5	1.8
395-4124	36”-42” Level of 20A23	OB	DE		19.5	4.6	6.9	5.6	3.9	1.5
395-4492	36”-42” Level of 20A23	CR	CZ		37.7				4.6	4
395-4589	42”-48” Level of 20A23	OB	DE		16.6			4.2	4.1	1.6
395-4909	48”-54” Level of 20A23	OB	DE		18.7			7.5	3.4	1.3
395-4771	48”-54” Level of 20A23	CC	DE		19.8			8.2	4.6	1.4
395-5580	54”-60” Level of 20A23	OB	DC		16.8			6.9	3.4	1.3
395-5038	54”-60” Level of 20A23	CC	DC		13.8	3.6		5.5	3.2	1.5
395-5521	54”-60” Level of 20A23	CC	DE		17.5			8.2	3.4	1.2
395-51	0”-6” Level of 19A22	OB	DE		19.6			6.9	3	1.4
395-631	6”-12” Level of 19A22	CD	DE	30	16.5	4.8	6.1	4.9	4.4	1.6
395-519	6”-12” Level of 19A22	OB	DE	29.5	16.2	4.1		6.4	2.9	1.1
395-1938	12”-18” Level of 19A22	OB	DZ		16.3				4.1	1.9
395-1295	12”-18” Level of 19A22	CC	DC	33.1	14.9	3.8	6.2	5.7	3	1.1
395-1230	12”-18” Level of 19A22	OB	DC		12.6			6.7	4.1	1.4
395-1294	12”-18” Level of 19A22	OB	DE		19.9			8.5	2.9	1
395-2035	18”-24” Level of 19A22	OB	DE	23.9	16.1	3.5		6.5	3	0.7
395-2032	18”-24” Level of 19A22	CR	DZ		27.7				5.9	6.6
395-2034	18”-24” Level of 19A22	OB	DG		15.7	2.6	4	3	3.4	0.7
395-2856	0”-12” Level of 4A21	CC	DC		15.6			5.7	3.9	1.6
395-1554	6”-12” Level of 5A20	CC	DE		17.6			8	3.7	1.1
395-2805	0”-8” Level of 5A22	CC	DE		17.6	3.6		5.9	3.6	1
395-1103	6”-12” Level of 6A20	OB	DE	29.1	17.3	4.5		7.4	3.1	1.2
395-1490	6”-12” Level of 6A20	CC	DE		15.4	4		6.7	3.5	0.4
395-661	6”-12” Level of 6A20	OB	DE		17.4	4.4		7.4	2.9	0.6
395-1490	6”-12” Level of 6A20	OB	DZ		11.6				3.2	0.7
395-592	6”-12” Level of 7A20	OB	DZ		14.8				3.1	1.2
395-600	0”-6” Level of 7A21	OB	DE		17.5	5		6.7	3.1	0.8

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-902	6”-12” Level of 7A21	CR	DE	29.1	15.8	3.2		6.3	4.6	2.1
395-539	6”-12” Level of 7A21	OB	DE		15.2	4.8		6.1	4.4	0.9
395-539	6”-12” Level of 7A21	OB	DZ		16.3				2.6	0.8
395-1931	12”-18” Level of 7A21	CC	DE		17.1	4.4		6.6	4.6	1.5
395-2190	24”-30” Level of 19A22	OB	DC		15.6			6.8	2.8	1.2
395-2631	24”-30” Level of 19A22	OB	DC		16.2	5.9		8.6	4.5	1.8
395-2382	24”-30” Level of 19A22	CR	DE		19.4	4.8		9.2	4	1.7
395-3531	30”-36” Level of 19A22	OB	DE		19.7			9.5	3.3	1
395-3241	30”-36” Level of 19A22	OB	DE		19.1			8.9	4	1.6
395-3295	30”-36” Level of 19A22	OB	DZ		18				2.9	0.8
395-4048	36”-42” Level of 19A22	OB	DE		18			7.4	3.8	1.4
395-4637	36”-42” Level of 19A22	CR	DE	30.4	19.8	4.5	8.4	6.9	4	1.7
395-4048	36”-42” Level of 19A22	OB	DE		17.4			6.9	3.5	1
395-4025	42”-48” Level of 19A22	OB	DC		14.3			6.5	3.5	0.9
395-4387	42”-48” Level of 19A22	OB	DC		15.7			6.3	3.9	1.6
395-3809	42”-48” Level of 19A22	CR	DC		17	5.9	5.3	5.7	4	1.7
395-4393	42”-48” Level of 19A22	CD	DE		19.3	4.8		9.9	3.5	1.4
395-4025	42”-48” Level of 19A22	CC	DE	33.7	12.8				4.5	1.4
395-4390	42”-48” Level of 19A22	OB	DE		16.5			7.1	3.7	1.3
395-4025	42”-48” Level of 19A22	OB	DD		12.8				3.1	0.7
395-4024	42”-48” Level of 19A22	CC	DE	23.8	15.7	2.8		5.8	3.6	1
395-4023	42”-48” Level of 19A22	OB	DE	24.7	17	2.7		5.3	3.3	1
395-4385	42”-48” Level of 19A22	OB	DZ		17.2				3.7	1.3
395-4180	48”-54” Level of 19A22	OB	DE		18.4			7.4	3.5	1.5
395-4636	48”-54” Level of 19A22	OB	DE		16.1			5.3	1.9	1.9
395-4797	54”-60” Level of 19A22	OB	DE		15.6			8	3.6	1.5
395-5336	54”-60” Level of 19A22	OB	DE		19.9	3.6	8.4	6.7	3.3	1.1
395-5234	60”-66” Level of 19A22	CC	DE		17.9			9.1	4.2	1.6
395-5568	60”-66” Level of 19A22	CC	DE	17.9	17.6	3.3	7.4	5.9	3	0.7
395-5721	66”-72” Level of 19A22	OB	DC		13.3			5	3.5	1.1
395-5721	66”-72” Level of 19A22	OB	DZ		17.7			6.2	3.1	1.4
395-6118	66”-72” Level of 19A22	OB	DE	30.5	15.2			8.4	3.3	1.1
395-5721	66”-72” Level of 19A22	OB	DE		16.2			6.7	3.6	1.2
395-6118	66”-72” Level of 19A22	CC	DE		18.5			9.5	3.8	1.5
395-5721	66”-72” Level of 19A22	OB	DE		14.9			5.7	3.1	0.9
395-104	0”-6” Level of 18A22	OB	DC		14.3				3.7	1.3
395-562	0”-6” Level of 18A22	OB	DE		14.2			5.4	2.8	0.9

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-352	0”-6” Level of 18A22	CR	DE	30.8	16.4	5.9		9.1	4	1.9
395-319	0”-6” Level of 18A22	CC	DE	21.8	16.8	3.8		6.7	3.3	0.8
395-102	0”-6” Level of 18A22	CR	DG		17.6			4.9	2.7	0.9
395-105	0”-6” Level of 18A22	OB	DE		18	4.9	6.1	5.6	3.3	0.6
395-1280	0”-6” Level of 18A22	CR	DC		16.9			6.9	3.3	1.2
395-318	0”-6” Level of 18A22	OB	DZ		14			6.4	3	0.9
395-1518	6”-12” Level of 18A22	CR	DZ		12.8				3.3	0.9
395-1523	6”-12” Level of 18A22	CR	DE	29.6	16	2.2	8.8	7.3	3.4	1.4
395-1389	6”-12” Level of 18A22	OB	DE		17.6			5.8	3	0.4
395-1389	6”-12” Level of 18A22	OB	DE		19.8			11.1	3.9	1.3
395-1388	6”-12” Level of 18A22	OB	DE	29.1	16.3	3.4		6.6	3.3	1.3
395-1523	6”-12” Level of 18A22	OB	DZ		11.8				3.1	0.7
395-1883	6”-12” Level of 18A22	CC	DZ		17.1	3.9		8	2.8	0.8
395-1984	12”-18” Level of 18A22	OB	DC	24.1	12.7		4.3	3.8	3.2	0.7
395-2692	18”-24” Level of 18A22	OB	DC		16.8	4.5	8.1	7	2.7	0.7
395-2683	18”-24” Level of 18A22	OB	DE		15	3.1		7.8	2.8	1.1
395-2692	18”-24” Level of 18A22	CR	DE		13	3.4		6.9	3.7	0.9
395-2692	18”-24” Level of 18A22	OB	CA						21.1	4
395-2690	18”-24” Level of 18A22	OB	DZ		16.6				4.6	1.7
395-3029	24”-30” Level of 18A22	CD	DE		16.2	3.8		6.3	4.1	1.3
395-4367	36”-42” Level of 18A22	CC	DE	25	17.5	3.3	6.4	5.8	4.1	1
395-4728	42”-48” Level of 18A22	OB	DE	33.5	18.5	4.1	6.7	6	3	1.2
395-5097	48”-54” Level of 18A22	OB	DE		16.5			10	3.8	1.8
395-5098	48”-54” Level of 18A22	CR	DE		20.1			7.5	3.5	1.2
395-5412	54”-60” Level of 18A22	CR	DC	39.5	13.3	3.9	7.4	6.6	2.9	1.3
395-5412	54”-60” Level of 18A22	CC	DE		17.9	4.4		6.3	4.9	1.9
395-5491	54”-60” Level of 18A22	CC	DG	20.3	12		4.6	7.3	2.8	0.5
395-5973	60”-66” Level of 18A22	OB	DE		15.2	2.9		6.3	3.9	1
395-1100	0”-6” Level of 17A23	CC	DC	29.3	15.1	4.6	5.2	4.9	3.4	0.9
395-653	0”-6” Level of 17A23	CD	DC		15			7.3	3.8	1.5
395-883	0”-6” Level of 17A23	CC	DE	23.4	18	3.2	7.7	7	4.2	1.4
395-1100	0”-6” Level of 17A23	CC	DC		16.9	4.6	6.8	5.8	3.6	1
395-1249	6”-12” Level of 17A23	OB	DE	34.6	14.7	4.7		6.7	2.9	1
395-1392	6’-12” Level of 17A23	OB	DZ		15.4			5.4	2.7	0.7
395-2364	12’-18” Level of 17A23	OB	DC		13.9	4.8	5.2	5.8	3.9	1
395-2018	12’-18” Level of 17A23	OB	DE	30.2	13.9	2.8		5.1	3	1
395-2364	12’-18” Level of 17A23	OB	DZ		13.8				3.1	0.6

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-2149	18”-24” Level of 17A23	CC	DE		18.1	4.1		11.1	3.7	1.3
395-3222	24”-30” Level of 17A23	OB	DC		16.1		8.3	7.3	3.1	0.8
395-3300	24”-30” Level of 17A23	CC	DC	25.5	13.7	3	6.7	11.5	3.5	1
395-3343	24”-30” Level of 17A23	CC	DZ		14.2				3.4	1.1
395-3618	30”-36” Level of 17A23	CC	DE		15.8	4.5		6.2	3.6	1.1
395-3618	30”-36” Level of 17A23	OB	DE		15.5			6	3.2	1.1
395-3618	30”-36” Level of 17A23	OB	DE		23.8	4.6		8.5	4	1.2
395-4262	36”-42” Level of 17A23	CC	CA	31.2	19.7				3.1	1.9
395-3899	36”-42” Level of 17A23	OB	DZ		16.7				3.7	1.4
395-3899	36”-42” Level of 17A23	OB	DD		14.1				3.5	1.2
395-5110	48”-54” Level of 17A23	OB	DZ	31.9	12.4				5.3	1.7
395-5111	48”-54” Level of 17A23	OB	DE		16.5			8.2	2.8	1.2
395-5387	48”-54” Level of 17A23	OB	DE		19.2	5.1		7.7	3.3	1.3
395-5952	60”-66” Level of 17A23	CC	DE	24.7	16.8	3.8	7.5	6.5	3.5	1
395-178	0”-6” Level of 17A22	CR	DE		21.6			8.9	3.4	1.5
395-481	0”-6” Level of 17A22	CC	DE		18			6.1	3	0.9
395-611	0”-6” Level of 17A22	CR	DC		13.8	4.1		5.6	3.8	1.5
395-179	0”-6” Level of 17A22	CR	DC		14.1			6.1	3.3	1.1
395-481	0”-6” Level of 17A22	CC	DE		15.6			8.8	3.5	0.9
395-611	0”-6” Level of 17A22	CD	DZ		17				3.5	1.2
395-481	0”-6” Level of 17A22	CR	DZ		23.4				5.6	4.8
395-481	0”-6” Level of 17A22	CC	DE		19.3	4.4		7.5	4	1.2
395-3390	0”-6” Level of 17A22	OB	DZ		14				3.1	1.2
395-1532	6”-12” Level of 17A22	OB	DE		16.9			6.9	3	0.6
395-1532	6”-12” Level of 17A22	OB	DZ		13.2				3.6	0.8
395-1993	12”-18” Level of 17A22	CC	DC	39.3					3.5	1.4
395-1992	12”-18” Level of 17A22	CR	DC		15	4.8		7.2	4.1	1.2
395-1993	12”-18” Level of 17A22	OB	DC		14			5.1	3.1	1.1
395-1993	12”-18” Level of 17A22	OB	DE		13.8	3.9		7.4	3.5	1.3
395-1994	12”-18” Level of 17A22	OB	DE		16.1			6.5	3.3	0.8
395-1993	12”-18” Level of 17A22	OB	DC		18.2			7.4	3.8	1.5
395-2132	18”-24” Level of 17A22	OB	DZ		13.1				3.4	0.8
395-3555	24”-30” Level of 17A22	OB	DD	25.5	15.9				4.5	1.1
395-2427	24”-30” Level of 17A22	OB	DZ		15.9				3.4	1.5
395-4200	30”-36” Level of 17A22	OB	DZ		15.2				2.7	0.7
395-3621	30”-36” Level of 17A22	OB	DE	23.9	17.5	2.9	6.9	5.9	4.1	1.2
395-3425	30”-36” Level of 17A22	OB	DZ		15.5				4	1.7

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-4724	42”-48” Level of 17A22	CC	DE		15	3		8.9	3.4	0.8
395-4694	42”-48” Level of 17A22	CC	DE		18			8.4	3.1	1.3
395-5713	48”-54” Level of 17A22	OB	DE		17.9	4.7		9.7	4.2	1.4
395-5886	54”-60” Level of 17A22	OB	DC		14.1			7.4	4.5	1.7
395-5766	54”-60” Level of 17A22	CC	CA	55.2	32.7				7.6	12.8
395-5886	54”-60” Level of 17A22	CC	DE		15.9	2.9		5.8	4.1	1
395-1181	0”6” Level of 18A23	OB	DE		11.8			5.5	3.5	1
395-1180	0”6” Level of 18A23	OB	DC		15	4.1		6.8	3.5	1.5
395-1179	0”6” Level of 18A23	OB	DC		14.1	5.2		6.9	3.4	0.8
395-1038	0”6” Level of 18A23	CC	DE		20.1	3.6		9.9	4.2	1.5
395-1036	0”6” Level of 18A23	OB	DE		15			4.5	2.6	0.6
395-1514	6”-12” Level of 18A23	CR	DC		17.6	5.9	7.5	6.9	3.1	1.1
395-1494	6”-12” Level of 18A23	CC	DE	31.1	17.4	2.9	7.9	7	3.1	1.2
395-1493	6”-12” Level of 18A23	CR	DE		17.7			7	3.2	1.4
395-1407	6”-12” Level of 18A23	CR	DE		15.7	3.2		5.9	2.7	0.5
395-2314	12”-18” Level of 18A23	CC	DC		14	2	7.7	6.8	3.4	0.9
395-2313	12”-18” Level of 18A23	OB	DZ		19.7				4.8	3.5
395-2314	12”-18” Level of 18A23	OB	DC	32.7	18.2	5.5		4.9	1.1	1.1
395-2315	12”-18” Level of 18A23	OB	DZ		13.8				3.4	0.9
395-2315	12”-18” Level of 18A23	OB	DZ		15.9				2.6	0.9
395-2749	18”-24” Level of 18A23	OB	DC		15		6.2	5.8	3	0.8
395-2749	18”-24” Level of 18A23	CR	DC		14.1			6.1	3.6	0.9
395-2749	18”-24” Level of 18A23	CR	DZ		9.9				3.1	0.4
395-2780	18”-24” Level of 18A23	OB	DE	26.1	19.3	4.9		8.4	3.7	1.2
395-2412	18”-24” Level of 18A23	OB	DE		13	3.1		4.9	2.8	0.6
395-2412	18”-24” Level of 18A23	CR	DE		18.3			7.8	3.5	1.1
395-2781	18”-24” Level of 18A23	OB	DC	26.1	18.4	5	9.3	7.4	3.4	1.2
395-2749	18”-24” Level of 18A23	OB	DZ		11				3	0.5
395-2777	18”-24” Level of 18A23	CC	DZ	19.4	19.2				3.6	0.8
395-2412	18”-24” Level of 18A23	OB	DZ		15.5				2.8	0.7
395-2749	18”-24” Level of 18A23	CC	DZ		14.3				3.5	1
395-2345	18”-24” Level of 18A23	OB	DE	23	17.7			7	2.4	0.7
395-3245	24”-30” Level of 18A23	OB	DC	27	10.4	4.8	3.7	5.6	2.7	0.7
395-3136	24”-30” Level of 18A23	OB	DE		17			7.6	2.9	1.1
395-3136	24”-30” Level of 18A23	OB	CZ	24.5	12.1			10.2	2.6	0.8
395-3136	24”-30” Level of 18A23	OB	DZ		23.2				4	2.3
395-3136	24”-30” Level of 18A23	OB	DE		20.9				2.7	1

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-3709	30”-36” Level of 18A23	OB	DC		18	5.7		7.6	3.5	0.8
395-4089	30”-36” Level of 18A23	OB	DC		12.4	4.1		6.9	3.1	0.8
395-3413	30”-36” Level of 18A23	OB	DE		14.8	2.8		7.8	3.1	1.1
395-3413	30”-36” Level of 18A23	OB	DE	32.7	12.9			6	2.4	0.9
395-3413	30”-36” Level of 18A23	OB	DE		19.5			7	2.8	0.7
395-3413	30”-36” Level of 18A23	OB	DE		14.2			5.7	3.2	1
395-3710	30”-36” Level of 18A23	CC	DE	30.2	19.7	3.5	7.7	7	2.9	1
395-3707	30”-36” Level of 18A23	CR	DC		15.5	3.2		6.3	3.1	0.7
395-3948	36”-42” Level of 18A23	OB	CA		15				2.9	1
395-4135	36”-42” Level of 18A23	CC	DE		19.1	4.8	7.1	5.9	2.8	1.2
395-4459	36”-42” Level of 18A23	CC	DE	25.6	17.9	3.3		6	3.7	1.3
395-4646	36”-42” Level of 18A23	CR	DC	30.1	14.9	3.8	7.7	8	3.5	1.2
395-4644	36”-42” Level of 18A23	OB	DZ		13.9				2.7	0.7
395-4846	42”-48” Level of 18A23	OB	DE		18.4			9.6	2.4	1.3
395-4849	42”-48” Level of 18A23	CC	CA		15.6				2.6	0.8
395-4849	42”-48” Level of 18A23	OB	DZ	29.7	18.7				3.7	1.5
395-5033	42”-48” Level of 18A23	OB	DC/ DG		17.9			6.2	3.9	1.3
395-4846	42”-48” Level of 18A23	OB	DE		15			6.3	3.7	1.1
395-4849	42”-48” Level of 18A23	OB	DE		16.2	4.2		7.8	3.8	0.9
395-4846	42”-48” Level of 18A23	CC	DE	37.2	19.9				3.7	1.9
395-5378	48”-54” Level of 18A23	OB	DG		15			5.9	3.7	1.3
395-5348	48”-54” Level of 18A23	CR	DE		18.3	3.4		7.7	3.4	1
395-5595	48”-54” Level of 18A23	CR	DZ		12.2			6.3	2.1	0.5
395-5989	54”-60” Level of 18A23	OB	DE		15.7	2.8		7.2	3.3	0.9
395-5988	54”-60” Level of 18A23	OB	DE	32.6	18.3	2	6.3	5.1	3.5	1.6
395-5541	54”-60” Level of 18A23	OB	DE	23.1	17	3.5	7.2	6.5	3.2	0.8
395-5541	54”-60” Level of 18A23	OB	DE		16	3.7		6.9	2.8	0.8
395-5541	54”-60” Level of 18A23	CC	DZ		15.8	3.5		7.7	3.8	1.2
395-5311	60”-66” Level of 18A23	CC	DC		15.7	4.7	7.6	7.8	2.1	0.9
395-3899	60”-66” Level of 18A23	OB	DE		20.2	3.3		8.5	3.5	1.7
395-5965	60”-66” Level of 18A23	CC	DE	24.1	14.8	3.5		5	3.4	0.9
395-1262	12”-18” Level of 19A23	OB	DC		14.5			6.1	3.7	1.2
395-948	12”-18” Level of 19A23	OB	DE		16.4	3.2		7.2	4.1	1
395-1283	12”-18” Level of 19A23	CR	DC	28.6	16.3	4.8	7.8	6.9	3.3	1.3
395-1260	12”-18” Level of 19A23	OB	DE		15.8			6.5	3.8	1.2
395-2466	18”-24” Level of 19A23	CR	DZ	32.6	21.4				4.8	2.7

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-2727	24”-30” Level of 19A23	OB	DC/ DG		13.4	1.1		5.2	2.7	0.8
395-4884	24”-30” Level of 19A23	OB	DE		18				3.6	1
395-2727	24”-30” Level of 19A23	OB	DC		16.8			7.2	4.3	1.5
395-3212	30”-36” Level of 19A23	CC	DE	23.9	18.5	4.4	8	7.2	3	1
395-2724	30”-36” Level of 19A23	CC	DC		16.9			7.5	3.9	1.2
395-4064	36”-42” Level of 19A23	CC	DE		16.2	4.8	9.5	8.4	4.3	1.9
395-5178	36”-42” Level of 19A23	OB	DE		18.6			7.7	3.8	1.2
395-3858	36”-42” Level of 19A23	CC	DE	26.1	19.8	3.6		7.7	3.2	1.1
395-3981	42”-48” Level of 19A23	CR	DE	34.1	17				3.6	1.6
395-4337	48”-54” Level of 19A23	CC	DE	27.6	17.5	2.4		6.3	3.3	1.3
395-220	54”-60” Level of 19A23	OB	DC		14.9			5.8	3.5	1
395-5661	54”-60” Level of 19A23	OB	DC	26.4	15.5	5.8	5.5	6.3	2.9	0.7
395-5257	54”-60” Level of 19A23	CC	DE	25.6	20.2			7.9	4.2	1.5
395-5258	54”-60” Level of 19A23	CC	DZ		13.8				4.1	1.1
395-5945	60”-66” Level of 19A23	CR	DC	29.1	12.2	4.2	6.4	4.9	4.2	1.3
395-5816	60”-66” Level of 19A23	OB	DC	26.8	16	4.2	6.6	5.7	3.2	1
395-5946	60”-66” Level of 19A23	CC	DE	25	16.7	3.2	6.5	4.9	3.5	1
395-5685	66”-72” Level of 19A23	OB	DC		13.4	4.8		4.6	3.3	0.9
395-5685	66”-72” Level of 19A23	CR	DE		20.1			10.2	3.2	1.6
395-6285	66”-72” Level of 20A22	OB	DZ		21.3				3.8	1.8
395-5622	66”-72” Level of 20A23	OB	DC		13.7			5.6	3.2	1
395-5501	13”-19” Level of 4A21	OB	DE		17.4				4.6	1.6
509-2288	0”-24” Level of 5A17	CC	DC		13.2			5.3	3.6	1
509-2832	24”-30” Level of 7A16	CC	DE	26.7	16.9	3.1	6.7	6.2	4	1.3
509-3124	12”-24” Level of 7A20	OB	DG	28.4	18.7	5.3	6.9	4.5	2.9	0.8
509-3123	12”-24” Level of 7A20	OB	CA	23	15				3.6	1
395-5542	54”-60” Level of 18A23	OB	DE		14.8			8.2	2.7	1
509-2901	18”-24” Level of 8A17	OB	CA	36.9	19.9				3.7	2.2
509-2478	0”-24” Level of Test Trenches	OB	DE	33.8				6	4.2	1.3
509-3130	0”-24” Level of NE Trenches	CC	DE	18.4	17.3	2		7	2.6	0.7
509-3155	0”-24” Level of NE Trenches	OB	DE		15.8			6.8	3.5	1
509-3387	Surface Feature	CC	DE		20.1	4.2	7.1	5.9	3.5	1.7
509-3437	18”-24” Level of feature	CC	DE		17.6			9.2	3	1.1
509-3215	18”-24” Level of feature	CC	DE		15.6	1.8		7.2	3.1	0.7
509-3414	18”-24” Level of feature	CR	DC	30	15.2	3.8		8.2	3.4	1.1
509-3416	18”-24” Level of feature	CC	DC		11.7			6.1	2.8	0.8

Table B.5. Continued

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
509-3219	24"-30" Level of feature	OB	DE	29.4	16.7	2.3		7.2	3.3	1.1
509-3331	24"-30" Level of feature	CC	DC		13.4			5.3	3	1.3
509-3454	36"-40" Level of feature	OB	DC		14.7	3.3	5.4	4	33.4	1.1
509-3544	36"-40" Level of feature	OB	DE		18.3	3.1	6.5	5.3	3.1	0.9
509-2699	12"-18" Level of Pit#2	OB	CA		15.4				2.7	0.4
509-2698	12"-18" Level of Pit#2	OB	CA		17.4				3.1	0.9
509-2377	6"-12" Level of 3A19	CR	DE		15.2				4	1.6
509-2400	6"-12" Level of 3A19	CR	DE		16.6			7.4	4.7	1.4
509-2332	6"-12" Level of 3A19	OB	DE		16.2			6.5	2.7	0.8
509-2635	12"-18" Level of 6A18	OB	DE		16.9			7.8	3.8	1
509-2297	6"-12" Level of 4A20	CC	DE		13.5				2.4	0.7
509-2557	6"-12" Level of 4A20	OB	DE		17.1	2.8		8.1	3.4	1.2
509-2299	6"-12" Level of 4A20	OB	DC		13.2	1.3	6.3	9.3	3.1	0.8
509-2548	6"-12" Level of 4A18	OB	DE	30	14.2			4.8	4.2	1.3
509-2949	12"-18" 7A17	CR	DE		15.5	3.6		6.7	3.9	1
395-3108	0"-26" Level of 4A22	CR	DE		18			10.1	3.7	1.2
333-137	G0	OB	DG		12.5	2.2	5.1	3.5	1.2	0.2
333-7120	36"-42" Level of F0/F1	CC	DE	39.4	20.4	4.3		9.7	4.3	2.6
333-7125	36"-42" Level of F0/F1	CR	DE		15.5			7.3	3.5	1.2
333-7000	18"-24" Level of F4/F5	CR	DE	25.7	16.3	3.1		6	3.5	1.1
333-7103	18"-24" Level of F4/F5	CC	DC		14.3	3		6.9	4	0.8
333-7257	30"-36" Level of F4/F5	OB	DG		14.5	1.8		5.3	2.2	1.4
333-7137	30"-36" Level of G2/G3	OB	DC		14.5	2.5	7.7	7.1	3.2	0.9
333-5909	36"-42" Level of G2/G3	OB	DE		20.9	3.2		7.7	3	0.8
333-5905	36"-42" Level of G2/G3	CC	CZ		20.7				4.9	4.1
333-4870	24"-30" Level of G3/G4	CC	DE	34.9	15.9	2.8		6.8	4.7	1.7
395-3765	8"-26" Level of 5A22	CR	DE	22.1	16	4.6		9	3.5	1.2
395-3698	8"-29" Level of 5A23	CC	DC	32.5	14.5	3.7		6.4	5	1.5
395-6496	0"-12" Level of 3A20	OB	DC		13.4			6.6	3.6	1.1
395-6496	0"-12" Level of 3A20	OB	DC		13.4				3.6	1.1
395-6596	72"-78" Level of 18A23	OB	DE		20.6	4.5	7.2	6.5	3.3	1.2
395-6532	78"-84" Level of 18A23	CR	DE		18.1			7.3	3.9	1.2
509-3296	36"-42" Level of Pit#2	CC	DC		13.7			7.8	2.5	1.2
395-507	66"-72" Level of G0/H0	OB	DC		16.5			7.8	3.8	0.9
509-3373	30"-39" Level of Structue 21	CC	DE		17.6			9.4	4.7	1.8
283-2681	24"-36" Level of Structure 26	CC	DC		16.1			6.4	3.5	1.1
283-1927	6"-18" Level of Structure 3	OB	DE		18.8			7.6	4	1.2

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
283-1973	18”-30” Level of Structure 3	OB	DE	30.6	21.9			9	3.8	1.5
283-1974	18”-30” Level of Structure 3	OB	DE	24.3	18.8	3.1		7.4	4.5	1.5
283-2024	18”-30” Level of Structure 3	CR	DC		15.8	4.1		8.9	3.5	0.4
283-2085	24”-36” Level of Structure 3	OB	DC		13.9			6.5	3.9	1.6
283-1316	0”-12” Level of A16	OB	DE	22.6	14.4	3.1		5.7	3.8	0.8
283-959	6”-12” Level of Mound G	CR	DC		17.6	3.3		5.9	3	0.8
333-6609	18”-24” Level of F4	CR	DZ		16.7				4	1.4
333-6606	18”-24” Level of F4	OB	DE		17.8			6.3	4	38.4
509-2221	0”-24” Level of 7A18	OB	CA	33.7	16.9				3.6	1.8
395-5975	66”-72” Level of 18A23	CC	DC		17	3.5	6.7	6.3	5	1.6
509-3311	No Provenience	CC		35.5	19.9				7.9	3.7
356-4291	No Provenience	OB	DE	32.2	16.8	2.7		6.3	3.7	2
356-3975	No Provenience	OB	DE		18.6	4.3	7.6	6.1	3.9	1.1
356-104	No Provenience	OB	DE		13.4			4.1	3.2	1.1
356-2229	No Provenience	CR	DE		18.6	2.4	6	5.2	4.1	1.3
356-5040	No Provenience	CR	DE	30.6	18.5	3.4	7.9	7	3.7	1.4
356-4297	No Provenience	OB	DE	28.5	16	3.8	8.3	7.3	4.1	1.2
356-640	No Provenience	OB	DE		17.7	2.9		6.3	3.9	1.2
356-590	No Provenience	OB	DE		20.3	4.1	8.2	7.2	3.6	1.2
365-2681	No Provenience	OB	DE	28.9	16.1	3.4		7.2	4.2	1.7
356-4234	No Provenience	OB	DE		17.3			8.7	3.8	0.7
356-3688	No Provenience	OB	DE	36.2		3.4	7.9	6.7	4.1	1.8
356-2591	No Provenience	OB	DE	30	19	3		7.6	3.3	1.8
356-1398	No Provenience	OB	DE		13.7			6	3.4	1.3
356-4835	No Provenience	OB	DE		15	4.1		7.5	3.4	1.2
356-3897	No Provenience	CC	DE	25.8	15.8	4.8	7.2	6.3	4.3	2.6
356-475	No Provenience	CC	DE		16.3	4.7		8.2	3.7	1.2
356-2326	No Provenience	OB	DE	31.6	15.1			5.8	3.1	1.2
356-5038	No Provenience	OB	DE	30.7	18				4	1.5
356-3628	No Provenience	OB	DE	36.7	20.5	3.7		6.2	3.7	1.8
356-1273	No Provenience	OB	DE		16.9	3.5		7.3	4.3	0.9
356-3903	No Provenience	OB	DE		15.1			6.5	3.6	1
356-4466	No Provenience	CC	DE		15.1	3.5		5.4	3.5	1
356-802	No Provenience	OB	DE		15.1			7	3.9	1
356-1263	No Provenience	OB	DE	24.3	17.1	4.2		5.6	4.2	1
356-4263	No Provenience	OB	DE		14.6			5.8	3.5	1.5
356-4224	No Provenience	OB	DE	32	16.8	4.1	6.3	7.3	2.9	1.3

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
356-3522	No Provenience	OB	DE		17.6	4.3	9	8.1	3.7	2
356-3987	No Provenience	OB	DE		14			5.6	3.1	0.8
356-1946	No Provenience	OB	DE		17.4			7.8	3.6	1.4
356-1231	No Provenience	OB	DE		14.3			5.1	4.1	1.2
356-3896	No Provenience	OB	DE	30.9	16.3	4.9		8.2	4.4	1.2
356-2372	No Provenience	OB	DE	28.5	13.7	3.1		4.9	3.2	1
356-4664	No Provenience	CC	DE	26.6	14.4	3.4		6.1	4.7	1.8
356-195	No Provenience	OB	DE		13.2	3.3		4.1	3	0.7
356-4351	No Provenience	OB	DE		18.3	4.6		8.8	3.7	1.6
356-2917	No Provenience	CC	DE	29.1	17.2	4	8.4	7.1	3.3	1.3
356-5093	No Provenience	OB	DE		15.1			6	3.2	0.8
356-2543	No Provenience	CC	DE	26.1	14.3	3.7		6.9	3.6	1.1
356-2589	No Provenience	CR	DE	24.2	16.3	3.8		5.3	2.5	0.7
356-430	No Provenience	CC	DE		14.1			7	2.9	0.7
356-3560	No Provenience	CC	DE	27.9	14.7	4.1		5.7	4.7	1.6
356-1861	No Provenience	CR	DE	22.8	21.3	4.1		10	3.2	0.9
356-4577	No Provenience	OB	DC		15.3	3.7	6.4	8.1	3.3	1
356-4571	No Provenience	OB	DC	32.4	12.4	4.2	5.3	5.8	2.9	0.9
356-2663	No Provenience	OB	DC	34.3	13.4	3.1		5.5	3.8	1.1
356-3958	No Provenience	CR	DC	31	15	3.3	5.7	5.3	3.4	1.2
356-4022	No Provenience	OB	DC		16.7	5.7	7	7.6	3.9	1.4
356-2841	No Provenience	OB	DC	29.3		3.7	7.5	7.8	3.2	0.9
356-642	No Provenience	OB	DC	30.3	11.4			6.2	3.7	1
356-2231	No Provenience	CC	DC		13.9	3.4	5.4	4.8	3.9	0.8
356-649	No Provenience	OB	DC		15.3	4.1	5.6	4.1	2.8	0.7
356-3788	No Provenience	CR	DC	26.5	16.2	5.6	6.4	8.6	3.4	1.1
356-2210	No Provenience	CC	DC	26.2		3.7		5.6	3.4	1
356-573	No Provenience	CR	DC	31.3	10.3	5.1		7	4.1	1
356-5363	No Provenience	OB	DC		13.1			5.2	3.3	1.1
356-1009	No Provenience	CC	DC		14.6	3.5	6.9	6.4	3.6	0.7
356-535	No Provenience	CC	DC		18.2	4.3	8.1	6.5	3.9	1.3
356-4352	No Provenience	CC	DC		14.3			8	3.5	1.3
356-5094	No Provenience	OB	DC	31	12.2			4.9	2.9	0.9
356-2924	No Provenience	OB	DC	27.3	12.3	4.7	7.4	9.1	3.1	8
356-3960	No Provenience	OB	DC		12.6	3.5	5.1	4.4	2.7	0.6
356-4854	No Provenience	CC	DC		11.9	2.9		6.4	2.9	0.8
356-3139	No Provenience	OB	DC		13.6	3.6		5.6	3.2	1.1

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
356-3262	No Provenience	OB	DC/ DG	22.8	13.1	4.1	5.9	4.9	3.1	0.6
356-2981	No Provenience	OB	DC/ DG	25.6	15	5.3	9.3	10.4	3.5	1.2
356-3956	No Provenience	OB	DC/ DG	28.2	13.9	4.7		8	3.2	0.9
356-2546	No Provenience	OB	DC/ DG		14.5	4.9	9	9.4	3.5	1.2
356-979	No Provenience	OB	DC/ DG	28.9	15.4	5		7.6	3.2	1.2
356-862	No Provenience	CR	DC/ DG		17.4	4.4		6.6	3.6	1.3
356-811	No Provenience	CR	DC/ DG		15.7	3.4		5.3	3.7	0.7
356-4220	No Provenience	CC	DC/ DG	24.7	17.3	4.3	7.7	5	4.2	1.5
356-4333	No Provenience	OB	DC/ DG	27.1		3.6		5.8	3.5	1
356-4819	No Provenience	OB	DC/ DG	23.8	15.8	4.7		9.5	2.8	0.9
356-5582	No Provenience	OB	DE		17.8			6.8	3.4	1.3
356-423	No Provenience	OB	DE		18.5				2.9	1.1
356-1230	No Provenience	OB	DC		15.8	4.4	7.4	6.2	3.9	1.3
356-280	No Provenience	OB	DE		17.2			8.4	4.1	1.4
356-1801	No Provenience	OB	DE	28	16.2	3.6	6.8	4.7	3.5	1.3
356-3015	No Provenience	OB	DE	25.1	15.6	3.3		5.3	2.8	0.8
356-4913	No Provenience	CC	DE	21.4	16.5	3.6	6.2	5.7	3.9	0.9
356-1266	No Provenience	OB	DE		16.1			6.1	3.8	1.3
356-734	No Provenience	OB	DE	26	17.8	4.2		7.2	3.7	1.1
356-4387	No Provenience	OB	DE	21.9	16.6	3		4.5	3	0.8
356-2525	No Provenience	CC	DE	23.8	18.2	4.5	7.9	6.9	3.6	1.1
356-2649	No Provenience	OB	DC/ DG	25.2	20.4	4.9		8.9	3.2	1.2
356-418	No Provenience	CR	DC/ DG	23.4	17.6	4.2		6.5	3.1	0.8
356-1757	No Provenience	OB	DC/ DG	18.9	14.3	3.5		7.8	3.7	0.7
356-3798	No Provenience	OB	DE		17.2			7.3	3.6	1
356-1275	No Provenience	OB	DE		17.7			9.4	2.9	0.9
356-4221	No Provenience	OB	DE	23.9	15.6	3.6	5.1	4.4	2.9	0.8

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
356-2418	No Provenience	CC	DE	19.3	16.8	1.1		5.8	3.8	0.8
356-5064	No Provenience	OB	DE	31.1	13.3	4.7		4.9	3.4	1
356-1001	No Provenience	CC	DE	26.9	15.4	4.1		5.8	3.9	1.1
356-4834	No Provenience	OB	DE	22.3	12				3.2	0.6
356-457	No Provenience	OB	DE	25.5	19.6	3.3		8.5	3.1	0.9
356-2637	No Provenience	OB	DE	30.5	20.8	4.9		8.9	4.4	2.2
356-4348	No Provenience	CR	DE		21.1	3.7		10.6	3.4	0.9
356-1299	No Provenience	OB	DE		19	2.9	5.9	5.4	3.2	0.9
356-926	No Provenience	CC	DE	23	20.2	4.4	8.1	6.6	3.3	1.2
356-3751	No Provenience	CR	DE	25.1	15.7	4.2		7.4	3.5	1.2
356-396	No Provenience	CC	DE		21.7	4		8.1	3	1.3
356-2177	No Provenience	CC	DE	28.3	20.8	4.2		8.9	4.2	1.4
356-537	No Provenience	CC	DG	21.8	18.2	4	6.4	5.5	3.9	1
356-410	No Provenience	OB	DG		18.7			6.2	3.6	1.1
356-397	No Provenience	CC	DG	21.2	18.7	5.1	8.2	9.5	4.4	1.1
356-5062	No Provenience	OB	DG	22.7	20.1	4.6		7.8	4.1	1.3
356-2066	No Provenience	OB	DG		17.5	2.4		5.9	2.6	0.3
356-4262	No Provenience	CC	CA	33.9	18.6				4.1	2.4
356-2918	No Provenience	CR	CA	29	16.5				4.1	1.4
356-5097	No Provenience	CR	CM	36	19.8				5.2	3.5
356-2774	No Provenience	OB	CA	44.5	16.9				4.2	3.1
356-4464	No Provenience	OB	CA	30.4	25.3				5.6	3.5
356-1249	No Provenience	CC	CZ		21.7	3.9	5.9	5	4.7	4.4
356-232	No Provenience	CC	CZ	31.2	15.2				6.8	3.5
356-2590	No Provenience	OB	DD		14.8	5.6		7.9	3.1	1.1
356-2835	No Provenience	CC	DZ		12.9				3.5	0.8
356-5641	No Provenience	OB	DC		14.7			7	3	1.1
356-634	No Provenience	CC	DC		14.6			5.9	3.7	1.2
356-4301	No Provenience	CR	DC	27.2	13.2	3.6		7.7	3.1	1
356-3829	No Provenience	CC	DC		14.6			7.4	4.3	1.6
356-5209	No Provenience	OB	DD	33.4	12.9	4.4		10.6	3.2	1.3
356-1279	No Provenience	CC	DZ	38.6	11.3				3.2	1.3
356-251	No Provenience	CR	DG		21.7			9	4.5	1.7
356-170	No Provenience	OB	DE	21					3.1	0.6
356-4922	No Provenience	OB	DE		18.6				3.2	1.6
356-4157	No Provenience	OB	DE		15.4				3	0.8
356-373	No Provenience	OB	CA		15.4				3.1	1

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
356-3066	No Provenience	OB	DZ	24.6	14.7	5.5		4.8	4	1
356-5063	No Provenience	OB	DZ	23.9	15.3	4.8		5.4	3.7	1
356-1626	No Provenience	OB	DE		17.5	4.1		6.5	4.2	1.8
356-2549	No Provenience	OB	DZ	24.2	12.4				3.8	0.9
356-494	No Provenience	CC	DE		19.7	4.7		7.1	4.6	1.8
356-829	No Provenience	CR	DE		20	5.4		7.6	4.9	2.3
356-563	No Provenience	CR	DE		19	4.9		6.5	4.8	1.7
356-4836	No Provenience	OB	DE		15.4			8.2	4.2	0.9
356-3329	No Provenience	CC	DE		15.9	3.9		7.3	3.6	1.1
356-2942	No Provenience	OB	DE		14.2			6.7	3.9	0.8
356-5039	No Provenience	OB	DE	27.8	13.6		5.8	4.9	3.5	1.1
356-5360	No Provenience	OB	DC		14.5	6		7.5	14.5	1.5
356-8935	No Provenience	OB	CA	22.9	15.3	4.7		9.3	3.4	1
356-4177	No Provenience	CC	DE		14.7				3	1.3
356-2741	No Provenience	CR	CZ		19.4				5	5.1
356-1235	No Provenience	CD	DZ		14.1				3.8	1.9
356-5092	No Provenience	OB	DZ	59.2	17.1				3	2.3
356-3959	No Provenience	OB	DZ	32.3	14.3				4.7	1.7
356-808	No Provenience	OB	DZ	29.9	18.5			5.8	4.8	1.7
356-3784	No Provenience	CC	DZ	27.2	17.8				2.4	1
356-4833	No Provenience	CR	DZ		15.1				3.2	1.1
356-3274	No Provenience	CR	DZ	30.6	18.4				3.9	1.7
356-707	No Provenience	CC	DZ		15.7				3.6	1.1
356-4575	No Provenience	CC	DZ		14.4				4.2	1.3
356-5095	No Provenience	OB	DZ		13.6				3.1	0.9
356-944	No Provenience	CC	DZ		17.6				3.1	1.2
356-3065	No Provenience	OB	DZ		9.7				2.6	0.6
356-3720	No Provenience	CR	DZ		10				2.2	0.3
356-4561	No Provenience	CC	DZ		21.3				4.2	1.6
356-2664	No Provenience	CR	DZ	22.6	8.9				3.4	0.6
356-3955	No Provenience	CR	DZ	27.4	11.9	3.2		5.8	2.5	0.7
356-2587	No Provenience	CC	DG	22.3	22.1	3.6		6.7	4.7	1.3
356-278	No Provenience	CR	DZ		16.1				2.8	0.7
356-4009	No Provenience	CC	DE	25.2	18.3	3.7	4.8	4	3.7	1.1
356-112	No Provenience	CR	DZ						2.7	0.4
356-3769	No Provenience	OB	DE	25	15.5			10	2.8	1.2
283-1420	No Provenience	OB	DE		16.7			5.7	3.1	1

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
283-1596	No Provenience	OB	DE		20.1	3.4		6	3.5	1.1
283-1999	No Provenience	OB	DE	32.2	15.8	2.4		5.9	2.2	1
283-1998	No Provenience	OB	DE		17.8			8.1	3.2	1.4
283-Y-718	No Provenience	OB	DZ	32.7	13.7	4		4	3.5	1.3
333-11,705	No Provenience	CC	DE		18			9.1	3.4	1.5
333-4643	No Provenience	CR	DE		16.2			8	3.4	0.9
333-8927	No Provenience	CC	DE		13.2	2		5.5	2.8	1
333-5817	No Provenience	OB	DC		12.5			7.8	4.1	1.3
333-9074	No Provenience	OB	DZ		18.5				3.5	0.5
333-Y719	No Provenience	OB	DC		11			4.5	3.4	1.2
333-128	No Provenience	CR	DC		12.7			6.2	3.8	1.3
333-Y720	No Provenience	CR	DE		16.4	2.6		6.5	4	1.3
333-Y721	No Provenience	OB	DE		18.4			6.6	4.1	1.7
333-Y722	No Provenience	OB	DE		16.5			5.6	3	1.4
333-Y723	No Provenience	OB	DE		13.3			8.6	3.5	1.1
333-Y724	No Provenience	OB	CA	28.2	16.5	2.9		12	4.9	2.1
509-3133	No Provenience	OB	DE		17.3	2.6	8	6	4.2	1.5
509-3036	No Provenience	OB	DC		13.6	5		6	3.1	0.8
395-6176	No Provenience	CC	DE		18		7.6	6.1	3	0.9
395-2818	No Provenience	CC	DE		17.4			8.6	4.2	2.1
395-Y-697	No Provenience	OB	DG		12.9	3.6		5.6	3.8	1.2
395-Y-698	No Provenience	OB	DE	30.4	15.1	4		6.7	3.1	1.4
395-Y-699	No Provenience	OB	DE		18.3			8.4	3.5	0.7
395-Y-700	No Provenience	CC	DE	31.4	14.6	3.4		7	3.6	1.3
395-Y-701	No Provenience	OB	DE		17			10.3	3.4	1.8
395-Y-702	No Provenience	OB	DE		13.7			5.8	3.2	0.8
395-Y-703	No Provenience	OB	DE		18.6	3.4		7.8	3.7	1.8
395-Y-704	No Provenience	CC	DE		18.9			9	3.9	2.5
395-Y-705	No Provenience	CC	DE	30.1	16	4.2		5.5	3.1	1
395-Y-706	No Provenience	CR	DE		15.1	2.5		6.1	2.7	0.5
395-Y-707	No Provenience	CC	DE		20.5			7.5	5.7	1.7
395-Y-708	No Provenience	CC	DE		18.1			7.6	4.4	2.1
395-Y-709	No Provenience	OB	DE		11.8	3		6.2	3.1	0.8
395-Y-710	No Provenience	OB	DE		15			7.2	3.8	0.8
395-Y-711	No Provenience	OB	DE		17.4	4.9		8.1	3.7	1.8
395-Y-712	No Provenience	OB	DE		20			9.3	4.3	2.1
395-Y-713	No Provenience	OB	DE	33.9	16.6	4.3		6.9	3.9	1.4

Table B.5. Continued.

Accession	Provenience	Material	Projectile Point Type	Length	Max. Width	Neck Length	Proximal Neck Width	Distal Neck Width	Max. Thickness	Weight
395-Y-714	No Provenience	OB	DE		18			9.9	3.6	1.4
395-Y-715	No Provenience	OB	DE	28.7	16.3	5		9.1	3.7	1.3
395-Y-716	No Provenience	OB	DE		16.2			7.2	3	0.8
395-Y-717	No Provenience	OB	DC		14.3	5.8		7.8	3.9	0.8
356-5448	No Provenience	CD	CM	37.1	18.2				4.7	4.3
356-1802	No Provenience	CC	DG	18.5	16.5	2.8		5.4	1.4	0.9
395 Y-661	No Provenience	OB	DE		13.6				3.7	1.6
395 Y-662	No Provenience	OB	DE		22.3	3		8	4.3	1.5
395 Y-663	No Provenience	OB	DE		19.3			7.8	2.6	1
395 Y-673	No Provenience	CC	DE	21.5	17.3	2.8		8.4	3.3	0.9

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