

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 Summary of Findings

Site evaluation (Phase II) and data recovery (Phase III) at the Frederick Lodge Site Complex consisted of extensive archaeological investigations of a 28-acre parcel in southern New Castle County, Delaware. The Frederick Lodge Site Complex was located in the Coastal Plain uplands near the drainage divide between Blackbird Creek and the Smyrna River watersheds. Generally, this area is characterized by wide, rolling terraces and a series of distinctive topographic features known as bay/basins: broad, closed depressions, some of which are ponded. At the time of the archaeological studies, the Frederick Lodge Site Complex area consisted of a fallow agricultural field. During the site evaluation portion of the investigation, controlled surface collection was conducted to relocate and re-assess the boundaries of the three separate archaeological sites included as part of the Frederick Lodge Site Complex, and to define areas of artifact concentration within those boundaries. Test units (1-m²) were subsequently excavated on systematically positioned transects to locate portions of the site complex containing unplowed deposits and to further investigate artifact concentrations.

The controlled surface collection and test unit excavations showed that artifacts from the major temporal components were distributed across the entire site area, including: the low ridge or central terrace that crossed the middle of the site complex; the landform crests overlooking both bay/basins; and the rims and slopes of both bay/basins. Data recovery operations included block excavations in parts of the site complex that contained the most extensive occupational debris. A multi-disciplinary analytical program was instituted that included integrated archaeological, geoarchaeological, and archaeobotanical analyses.

The archaeological investigations undertaken on behalf of DelDOT at the Frederick Lodge Site Complex recovered valuable information about Delaware's pre-Contact American Indian inhabitants. The adverse effects of the proposed construction were mitigated by the research conducted at the sites that included retrieval of information using specific research questions as a guide to structure the investigations.

8.1.1 Cultural and Environmental Overview

Temporal Components

Middle Archaic bifurcate points were associated with two distinct artifact assemblages that were located on each of the landform crests overlooking the bay/basins: in Block D to the west; and, in Block I to the east. These assemblages contained similar distributions of artifact types and were comprised of relatively high frequencies of flaking debris, limited numbers of projectile points, and very little thermally altered stone. Both assemblages exhibited discrete spatial patterning in the form of single, well-defined concentrations of flaking debris. Flake analyses indicated that knapping activities included the maintenance of bifacial tools and the manufacture of expedient flake tools. Points in the assemblages displayed evidence of heavy use and resharpening. Cutting or scraping tools consisted predominantly of simple modified and unmodified flakes.

The Late Archaic component consisted of a low density distribution of materials that was widely dispersed across the Frederick Lodge landscape. One distinct artifact assemblage was identified in Block H at the toe of the slope leading to the larger bay/basin. Evidence of this discrete Late Archaic component was limited to two distinct clusters of chipped stone tools and debris, mostly consisting of small quartz flakes characteristic of tool resharpening, and a thermally altered stone feature.

Two spatially discrete artifact assemblages and a large pit feature were attributed to the Early/Middle Woodland component. These artifact assemblages occurred in Block D and Block B, on the western crest above the smaller bay/basin. Block D contained Woodland and Archaic deposits that were stratigraphically separate, while Block B contained only Early/Middle Woodland material. Block E contained a large pit feature that might have represented the base of a domestic structure. Few cultural remains were associated with the pit feature.

Common to Blocks B, D, and E were the small, Woodland I Stemmed points that defined the component and its temporal placement. Lithic reduction activities in Blocks B and D were apparently limited to the production of expedient flake tools. The majority of artifacts in Blocks B and D consisted of thermally altered stone that was largely contained within six features, ranging in size from small, compact clusters to dispersed distributions. American Indian activities associated with these features involved indirect heating, such as stone boiling, that occurred in discrete activity areas. Points, flake tools, and other chipped stone debris were generally recovered away from the thermally altered stone concentrations, further suggesting efforts to maintain discrete activity areas.

Fragments of two triangle points indicated a Late Woodland component at the Frederick Lodge Site Complex. Both points were recovered from block excavations in the western part of the site, Blocks B and D, and in contexts otherwise associated with the Early/Middle Woodland period. However, the general absence of Late Woodland artifacts across the Frederick Lodge Site Complex suggests that American Indian use of the landscape in this period was comparatively restricted.

Paleoenvironment

The most prominent topographic features at Frederick Lodge were two large bay/basins, broad depressions common, if unevenly distributed landscape features in the uplands of the Delmarva Peninsula. American Indians were attracted to these distinctive features at varying times during the occupation of the Frederick Lodge Site Complex. A review of research into bay/basin features indicated that the ways these landscape features formed is unclear. However, a growing body of data from the southern Atlantic Coastal Plain suggests that bay/basins underwent significant alterations throughout much of the Holocene. Wave action on pond shorelines and the subsequent aeolian mobilization of exposed sediments during dry periods appear to have contributed substantially to the development of these features. At the Frederick Lodge Site Complex, evidence for the presence of ponded water in the bay/basins and for the occurrence of aeolian activity had significant implications for both American Indian settlement and the preservation of archaeological contexts.

Sedimentological investigations at regional bay/basins indicated that water levels were depressed during the first half of the Holocene, from ca. 11,000 to 6000 years BP, implying that the bay/basin features at Frederick Lodge were similarly dry at that time. American Indians at the Frederick Site Lodge Complex during this era relied on bifurcate points, and they may have focused on more generalized upland forest or sylvan resources than on specialized upland wetlands. Following 6000 years BP, the bay/basins were likely ponded. Evidence was recorded of shoreline sediments, in the form of coarse, reworked sands, adjacent to Late Archaic artifact assemblages at the foot of the larger bay/basin slope. Regional evidence also indicates that water tables rose during this period and that organic-rich sediments accumulated in the bay/basin bottoms. Early/Middle Woodland occupations at Frederick Lodge were scattered along the central terrace and concentrated on the crest above the smaller bay/basin.

Geoarchaeological investigations encountered evidence for aeolian deposition, colluvial soil movement, and erosion and deflation in various parts of the Frederick Lodge landscape. These processes appeared to have been incremental and of low intensity, yet both the Middle Archaic and Woodland occupations were buried by wind-borne sediments. Aeolian deposition on the northeast side of both bay/basins, as recorded in Block D and Block K, created elevated areas that were favored occupation locales. The depositional pattern indicated that bay/basin sediments had been transported by southwest winds, presumably during dry summer months.

Technology and Social Processes

The Middle Archaic component at the Frederick Lodge Site Complex included two discrete assemblages from the early part of the period associated with bifurcate points. Each of these assemblages could represent spatially and temporally restricted events—essentially single occupation episodes. The Middle Archaic occupants of each location practiced a curated lithic tool strategy. Their points consisted of small, shortened blades that had been heavily reworked. Some of the broken points were refurbished, and had smooth-edged tips and serrated proximal edges; these refurbished points were apparently intended for continued use in the tasks for which they had been originally designed. Few other formal tools were found associated with the assemblages, although numerous flake tools were present. Flaking debris were small, indicating the late stages of lithic reduction, possibly associated with the reworking of points.

American Indian groups active at the Frederick Lodge Site Complex during the Middle Archaic clearly collected pebbles and cobbles from the area to make both formal and informal tools, as indicated by size range comparisons between artifacts and samples of local gravels. No intermediate or partially finished tools forms were present, such as would be expected if the full range of lithic manufacture were represented in the assemblages. The bipolar reduction of gravels to produce expedient flake tools was also reflected in the lithic debitage recovered from the Frederick Lodge Site Complex. The actual number of expedient tools was likely higher than those identified during analysis, as recognition of use is challenging—particularly for flakes used a few times before they were discarded. Evidence for usewear was subtle, consisting of minor scalar flaking in most instances. A hammerstone and pestle, recovered from Block I, may have been related to flake tool production or,

alternatively, may have been used for pounding or grinding tasks possibly related to processing local plant materials.

The Late Archaic assemblage from Frederick Lodge was less spatially extensive than the earlier component. Two chipped stone clusters in the Late Archaic component appear to have represented separate activity areas, one of which was associated with a thermally altered stone feature. Artifact frequencies were low enough that it was challenging to make inferences about the activities represented. Primary lithic reduction did not appear to have occurred and tool kits used by the Late Archaic inhabitants of the site complex probably included few lithic implements.

Middle Archaic and Early/Middle Woodland tools consisted mainly of points and expedient flake tools. The points were more often complete and undamaged, showing little heavy use and minimal evidence for resharpening. Assuming that the late stage reduction debris from both components resulted from tool maintenance, the lower ratio of flakes to points in the Early/Middle Woodland assemblage suggested that points from this time period were not curated as consistently. Most points represented a form of *de facto* refuse, to use Schiffer's (1987) term, and were artifacts that were discarded although still usable. Pebble and cobble material was readily available from local sources, and points would have been easily manufactured and easily replaced, without the need for extensive curation. Why this should have been the practice in the Woodland period and not during the Middle Archaic is not clear from a strictly technological perspective. There may have been social or other implications to tool use and discard for Archaic period populations that were not present later in the Woodland period.

The Early/Middle Woodland component at Frederick Lodge was more extensive than either of the earlier components, both in terms of artifact frequency and the spatial extent of the individual artifact assemblages. Thermally altered stone features were particularly common, to the extent that chipped stone was considerably less frequent proportionally. Artifact refitting as well as analysis of the size and fragmentation rates of individual artifacts suggested that at least two of the thermally altered stone features were part of discrete activity areas related to heating or indirect cooking using thermally altered stone: the primary heating features were located in one area, while discard features, where spent stone was disposed of or stored for sorting and possible re-use, were situated several meters away. A possible domestic structure was located near the two thermally altered stone features.

8.2 Evaluation of Field and Analytical Techniques

The archaeological site evaluation (Phase II) and data recovery investigations (Phase III) conducted at the Frederick Lodge Site Complex were large and complex operations. The site evaluation was conducted on a 28-acre parcel, while the subsequent data recovery investigation extended over an 18-acre segment of that area. Studies of the archaeological remains entailed several challenges. Here, we detail how these challenges were met, review the methods and approaches employed, and offer insights for future work that builds on the lessons learned from the current research. The field methods employed during evaluation of the site complex included both controlled surface collection and 1-m² unit excavations at regular intervals across selected parts of the Frederick Lodge Site Complex. Direct

comparisons are drawn between these two field methods in terms of artifact recovery rates and the implications of those rates for providing control measures during site evaluation and data recovery analysis. We then consider the utility of thermally altered stone refitting studies, and the results and interpretation of detailed lithic debitage analysis.

8.2.1 Field Methods

Controlled surface collection and systematic excavations of test units were undertaken as part of the site evaluation of the Frederick Lodge Site Complex. The original survey of the Frederick Lodge Site Complex, conducted in 1984, was based on surface reconnaissance recording three locations defined as discrete prehistoric archaeological sites, designated 7NC-J-97, 7NC-J-98, and 7NC-J-99 (Custer and Bachman 1986a). A limited number of artifacts were reported and site boundaries were broadly interpreted. Additional survey (Phase I) of Frederick Lodge was undertaken in 1987. Surface visibility was limited at that time, and thus the survey relied on systematic shovel testing (Bedell and Jacoby 1998). The subsurface testing was conducted on a 20-m grid across site boundaries as defined in the earlier surface reconnaissance survey. This testing scheme succeeded in re-defining the three separate site locations, although with slightly more limited boundaries.

Controlled Surface Collection

Controlled surface collection was the method selected for the site evaluation (Phase II) as the most appropriate means of assessing horizontal artifact distributions and thereby refining site boundaries (DESHPO 1993b). The Frederick Lodge was situated in an agricultural field that had been plowed numerous times. Plowing impacts near-surface archaeological deposits, one of the results being the moving of buried artifacts in shallow deposits to the surface. The field was fallow at the time of the survey, and permission to re-plow the ground was easily obtained. The complete spatial coverage offered by a controlled surface collection was seen as the most efficient way to identify discrete but potentially widely separated artifact concentrations across the Frederick Lodge Site Complex. Numerous diagnostic artifacts were also recovered from peripheral and isolated contexts, giving temporal resolution to more ephemeral American Indian occupations that might not have been detected in an excavation-driven testing strategy such as additional shovel testing.

Comparison of Surface Collection and Unit Excavation

While surface collection was the main technique used for site definition, test units were excavated to sample subsurface deposits in selected parts of the site. In several areas, this additional sampling was conducted on a grid of sufficient density to allow comparison of artifact recovery rates between the two survey methods.

Prehistoric artifact totals were tallied from corresponding surface collection units (SCU) and 1-m² unit excavations across a 40-x-50-m area in the western part of site complex. The unit proveniences were located in the middle of each SCU (Figure 8-1), and artifact counts from the units represented plow zone contexts only. In general terms, artifact recovery rates were expected to be greater in unit excavations, since the sediments were screened through quarter-inch mesh, enhancing the visibility of small and non-distinctively colored artifacts.

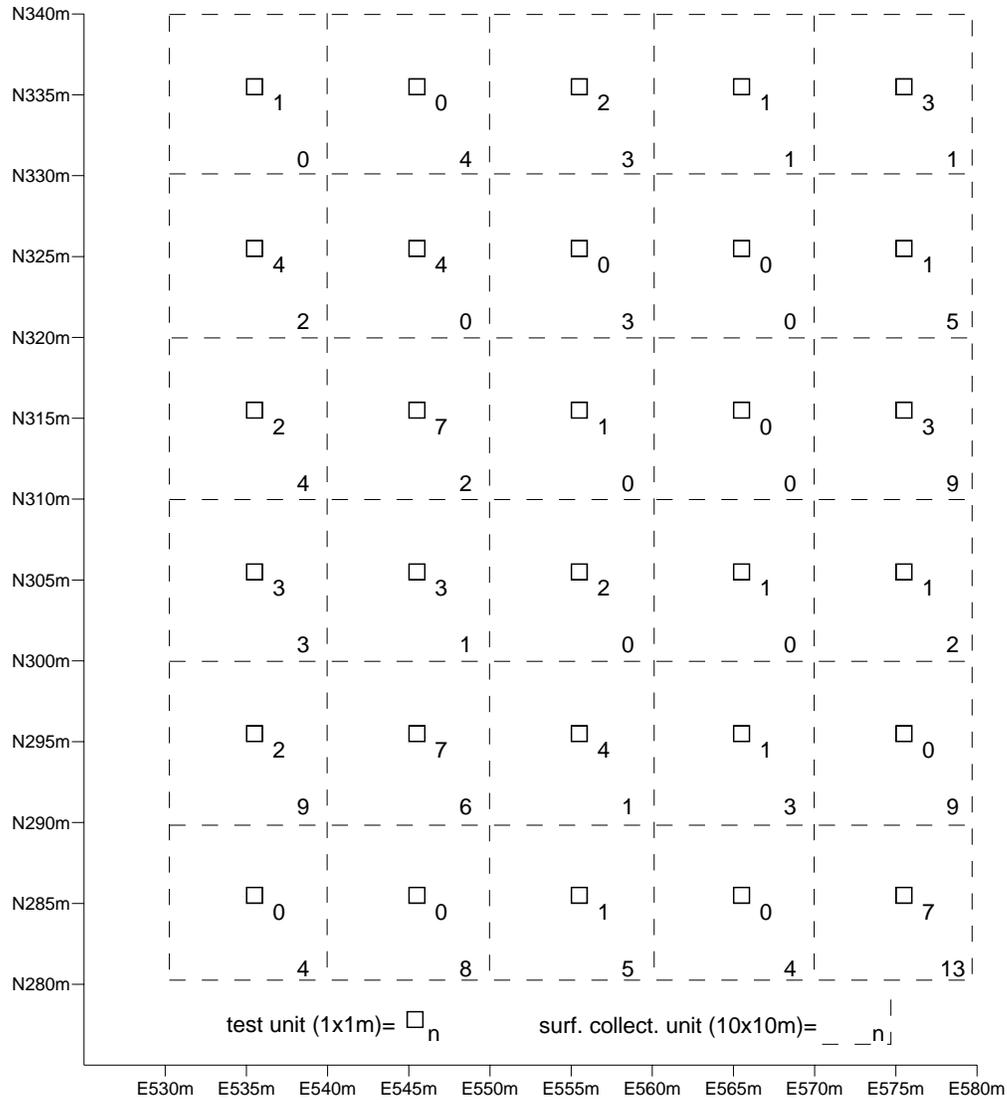


Figure 8-1. Quantitative Comparison of Prehistoric Artifacts Recovered from Selected Surface Collection Units and Test Units.

Absolute numbers in terms of artifact recovery are important in site evaluation, partly from the perspective of artifact density and the implications this has for site size and intensity of occupation. Larger artifact samples from a site are also more likely to be representative of site assemblages, and more likely to contain diagnostic artifacts that may provide insight into specific site activities and the ages of occupation represented. The 30 surface collection units in the Frederick Lodge test sample yielded a total of 102 prehistoric artifacts. The units constituted a one-percent sample of each of the 100-m² SCUs. The plow zone contexts from the corresponding 1-m² units yielded a total of 61 prehistoric artifacts, representing one percent of the plow zone material present on that part of the site complex. The surface collection over the same area exhibited a recovery rate almost twice as great (1.7 times higher) as that represented by the unit excavations.

To assess the qualitative data from the two survey techniques, artifact distribution plots were constructed based on spatial analyses of data from the different proveniences. Although they represented different sized areas, the number of data points in the two distributions (n=30) and their grid-locations were the same. The plots based on these two datasets were broadly similar, although they varied in certain details. For example, both the surface collection data and the test unit data (Figure 8-2) implied that no artifacts were present in the center of the grid, and that few occurred to the north. Similarly, both distributions indicated artifact concentrations in the southeastern corner and along the eastern edge of the grid. In contrast to these corresponding data, the surface collection results indicated a substantial artifact concentration in the southwest corner of the grid, while the test unit results implied a concentration in the west central part of the grid.

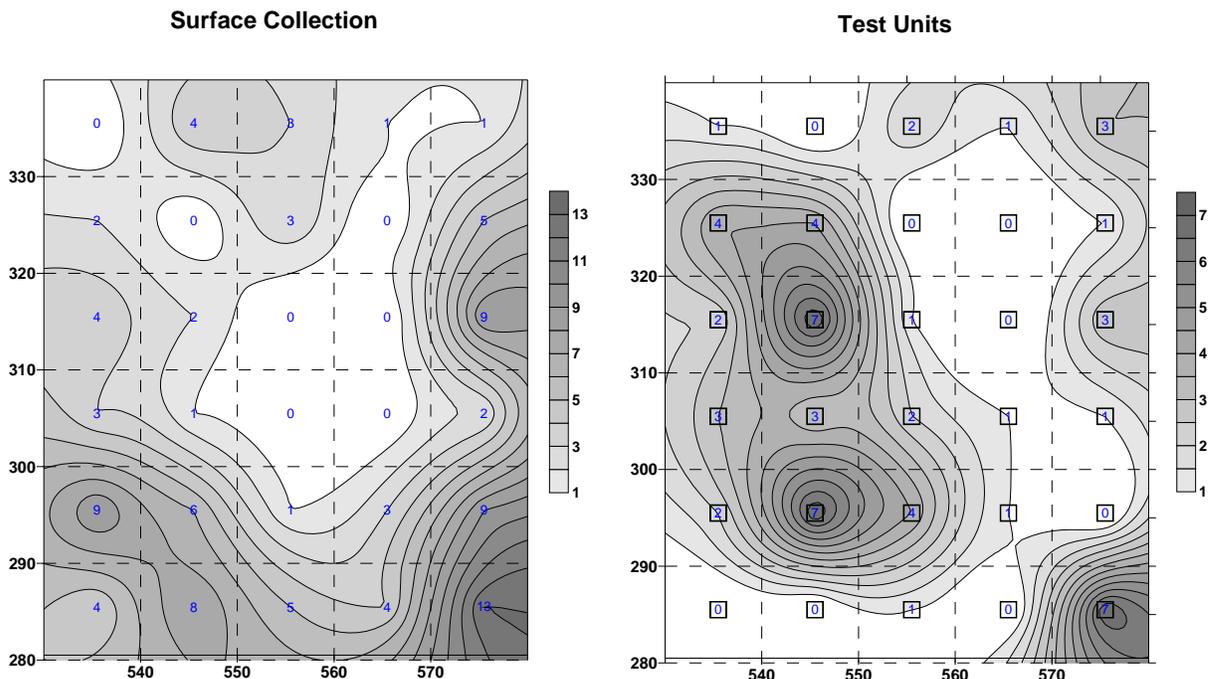


Figure 8-2. Qualitative Comparison of Prehistoric Artifacts Recovered from Selected Surface Collection Units and Test Units.

In the end, the surface survey produced a larger artifact sample than did test unit excavation and with less expenditure of effort. In strictly quantitative terms, it was a more efficient technique for assessing the material remains present at the Frederick Lodge Site Complex. Both procedures recognized similar overall patterning in the artifact distributions, and both identified details within the overall pattern that could be used to assess site significance and to focus subsequent research efforts. The detailed differences observed between the two approaches may be considered one of the inevitable results of sampling (Ragir 1975). The general site boundaries and configuration of the artifact cluster locations defined by the site survey (Phase I) shovel testing (conducted in 1987 on a 20-m grid, Figure 1-2) corresponded well to the core areas of the site complex defined by the controlled surface collection from the site evaluation (Phase II). In contrast, shovel testing was not successful in defining any of the main subsurface artifact deposits on the site complex.

8.2.2 Analytical Methods

Thermally Altered Stone Refitting

Thermally altered stone is a common artifact class on pre-Contact American Indian sites. While attempts have been made to study these artifacts (Cavallo 1987; Latas 1992; Black et al. 1997), the potential they represent for providing significant archaeological information on a routine basis in site analysis remains underdeveloped. As demonstrated at the Frederick Lodge Site Complex, the refitting of thermally altered stone represents a major interpretative tool for analyzing site formation processes, for assessing site integrity, and for reconstructing the activities of people who lived at the site in the past.

Refitting of thermally altered stone and other lithic artifacts is a time-consuming and labor-intensive procedure. The goals of a successful refit study must be clearly defined at the outset. The Frederick Lodge study focused on two sets of features from the Early/Middle Woodland component in the western part of the site complex, with the specific goals of assessing individual feature functions, and of evaluating spatial associations between the features and implications for functional relationships. The study's findings strongly indicated that the features were contemporaneous and functionally inter-related. They appeared to have been part of an organized activity involving indirect heating, in which stone was warmed in hearths in one location, while spent or fragmented stone was discarded in a prescribed location in an adjacent area.

Horizontal refits between fragments of thermally altered stone provided critical information about feature structure. For example, refitting confirmed the formal nature of the tight stone clusters, e.g. Feature 30, and the less formal nature of more dispersed distributions, including Feature 60. As noted above, the study also indicated that Feature 30 and Feature 60 comprised a single functional unit. Vertical refits between feature proveniences and fragments in plow zone contexts helped demonstrate the impact of site formation processes, notably the amount of plow disturbance that was evident in the Woodland levels of Block B.

Flake Analysis

An intensive and detailed analysis was conducted on one of the flake assemblages from Frederick Lodge. The flakes were from the early Middle Archaic artifact assemblage discovered in Block I. In most artifact assemblages occurring on archaeological sites in the Middle Atlantic, the finest temporal resolution that is possible to achieve is relatively general, typically spanning an entire period such as the Late Archaic or Late Woodland. Technological attributes recognized in such assemblages tend to characterize broad trends rather than those associated with specific activities. The artifacts from Block I were recovered from a limited, well-bounded location, were chronologically unmixed, and apparently derived from a single occupation. Two analytical approaches were applied to flaking debris from the early Middle Archaic occupation in Block I: aggregate and individual flake analyses.

Flaking debris from the occupation was found to be most characteristic of the late stages of biface reduction, and more specifically, the resharpening of dulled tool edges and the reworking of broken points. Cortical debitage in the assemblage indicated that local pebble

material had also been reduced in this location. Since manufacturing rejects such as incomplete or broken bifaces were not present in the assemblage, it appeared that most of the primary reduction had been geared toward the manufacture of expedient flake tools.

8.3 Future Directions

In this section we briefly consider the main components of the research design presented in Section 2.0 and expand on our suggestions for future research on sites similar to those documented at the Frederick Lodge Site Complex.

8.3.1 Creating a Chronological Framework

Stratigraphy, temporally diagnostic artifacts, and AMS assays were the three lines of evidence examined to create the chronological framework for the Frederick Lodge Site Complex. Close analysis of stratigraphic associations and diagnostic artifact distributions resulted in the confident isolation of temporal components. Geoarchaeological studies were integral to the stratigraphic analyses of the Frederick Lodge Site Complex, as was the refitting of thermally altered stone. Future studies should emphasize both of these approaches in stratigraphic assessment—geoarchaeological analysis and lithic refitting—when appropriate to the data at hand.

At least four temporal components were identified at the Frederick Site Lodge Complex based on the presence and distribution of temporally diagnostic stone tools. The two most substantial occupations occurred during the early part of the Middle Archaic and the Early/Middle Woodland periods. The Late Archaic and Late Woodland occupations at the Frederick Lodge Site Complex were apparently less intensive. Temporally diagnostic artifacts from the Middle Archaic component consisted of bifurcate and Morrow Mountain II points, distributed across the site complex area. Temporally diagnostic Late Archaic artifacts included Lackawaxen, Bare Island, and Fishtail points. The Early/Middle Woodland component was identified on the basis of two temporally diagnostic point types: Woodland I Stemmed and Piscataway. Woodland I Stemmed points were small and typically manufactured from pebble sources; this type of projectile point is found consistently in Delaware from archaeological contexts dated to the early portions of the Woodland period. Finally, the Late Woodland period was represented by fragments of two triangle points. The utility of temporally diagnostic artifacts increases when they are found in association with other dated items, and future studies should attempt to directly date any temporally diagnostic artifacts found in discrete contexts.

Carbonized organic material suitable for absolute dating was obtained from two sources at the site complex: the flotation of fill from feature contexts, and the flotation of sediments from unit levels. In addition, bulk soil samples were collected from selected proveniences. Three samples from each of these contexts were submitted for AMS dating. The bulk soil samples provided very general dates that appeared to have been younger than expected on the basis of diagnostic artifacts and stratigraphic associations. Nevertheless, the samples supplied important bracketing information for the geoarchaeological study. The remaining six dates, resulting from analyses of organic material in feature or general unit contexts, did not often appear to correlate well with associated artifact or stratigraphic data, being either considerably older or younger than expected. Additional AMS dates from more clearly

defined cultural contexts would have aided the interpretation of the Frederick Lodge Site Complex considerably.

8.3.2 Technology, Materiality and Social Processes

Careful analyses of the manufacture, use, and discard of chipped stone tools and debitage remains an integral aspect of any attempt to ascertain American Indian lifeways at similar sites in Delaware. This was certainly the case for the Frederick Lodge Site Complex, given the lack of ecofacts and ceramic artifacts. The individual and aggregate flake analyses performed equally well in describing the overall character of the assemblage at Frederick Lodge. Aggregate analysis provided reasonably clear identification of flaking material derived from the extremes of reduction sequences. Different knapping activities were distinguishable through examination of flake morphology on a collective or gross level, notably differentiating between the typically large and more angular debris that results from core reduction and the smaller and thinner debris generated from biface thinning and shaping. The examination of individual flakes provided somewhat more detailed information about relationships between particular variables that helped to identify specific activity within the overall reduction sequences. Artifact analyses on this scale of resolution are obviously most appropriate for well-defined assemblages, and clear chronological controls over such assemblages are ideal.

A distinct difference was observed between the Archaic and Woodland period artifact assemblages in terms of the relative emphasis on tool maintenance and curation. Middle Archaic period bifurcate points were either broken or heavily curated and worked down to small sizes. Woodland period points, in contrast, were less heavily used and showed less evidence of resharpening. Extensive analysis of a large sample of flaking debris from one of the Middle Archaic artifact assemblages also demonstrated the relatively narrow range of knapping activities practiced at the site complex during that period—biface sharpening and repair, and flake tool production. Several lines of evidence indicated heavy reliance on locally procured gravels as the source for lithic tools from all periods at Frederick Lodge. Small cortical flakes were common in the artifact assemblages from each identifiable period of site use, and non-local materials were rare. Formal tools were restricted to points and several unifaces that were typically made from cryptocrystalline materials or, occasionally, from quartz. The points appeared to have been used both as projectile tips and as cutting tools. Expedient flake tools, made from cryptocrystalline and quartz pebbles, completed the lithic tool kits. Comparison of the artifact assemblages with gravel samples from nearby locations provided quantifiable evidence that the tools were made from local material.

The refitting of the humble artifact class represented by thermally altered stones was integral to site interpretation as well. We were able to isolate areas of the site complex that contained deposits with discrete artifact assemblages that appeared to have been associated with single occupations. Refitted artifacts represent a direct rather than an inferential form of data. Refits between separate features, for example, demonstrate an immediate, tangible connection between those features. Additionally, excavations of targeted feature locations should be expanded beyond the immediate boundaries of the feature to properly assess feature formation. Refits across large horizontal distances demonstrate artifact movement that may be important in interpreting critical site formation processes. Accurate observations

as to the amount and extent of artifact movement within archaeological deposits can help assess depositional integrity, which is key to evaluating a site's significance and its potential inclusion on the NHRP.

8.3.3 Scales of Social Organization

Individuals are often difficult to discern in the archaeological record, but unique, individual actions sometimes leave material traces. A clear example of an individual's agency from the Frederick Lodge Site Complex consisted of a cobble that had been tested and rejected as inadequate for stone tool production.

The next smallest scale of social organization delineated at the Frederick Lodge Site Complex included temporally discrete activity areas. Distinct temporal components at the Frederick Lodge Site complex consisted of artifact assemblages that were either horizontally separated, with little evidence of overlapping, or were vertically separated in areas where more than one component was present. Vertical separation was due largely to aeolian deposition, providing additional evidence of the burial of site components in upland settings. Clear elements of site structure were identified in several parts of the site complex: lithic workshop areas associated with Archaic period occupations, and a functioning system of inter-related heated rock features dating to the Woodland period. Intrasite spatial analyses are an important tool in defining this level of American Indian social organization and may be tied in with more sophisticated studies, such as the viewshed model presented in Section 7.0.

The Frederick Lodge Site Complex investigations both supported and challenged current understanding of settlement and lifeways in prehistoric Delaware. The Frederick Lodge Site Complex consisted of a series of limited, upland occupations that represented camps inhabited by small, individual groups. The Middle Archaic component indicated that these small sites, with limited artifact assemblages and short-term occupation spans, supported existing models of Archaic period settlement. For the Woodland period component, our findings did not support the conventional model of large riverine base camps and small upland support stations, but suggested the existence of a self-contained occupation in a system that may have been based on a territorially ordered, serial pattern of settlement.

The Middle Archaic components at Frederick Lodge broadly corresponded to accepted settlement models, including very small site size, reliance on expedient cutting tools, and relatively brief occupational episodes. The Middle Archaic populations responsible for bifurcate use at Frederick Lodge resided there at a time when the bay/basins in the area would have been dry. These populations may have directed their attention toward exploiting local forest resources rather than the upland marsh resources that would have been present when the bay/basins were ponded. A broader upland/sylvan orientation for lifeways during this period is suggested by the distribution of similar components with bifurcate points in the interior portions of the Delmarva Peninsula.

Existing settlement models for the early portions of the Woodland period typically present upland sites as short-term resource procurement camps associated with larger, longer-term occupations—often referred to as base camps—located on the middle reaches of main

drainages. Clear and convincing evidence for these hypothetical large base camps has yet to be discovered, raising questions about the validity of the base camp/support camp model in this temporal and geographic context. Settlement of the upland bay/basin landscape in the early part of the Woodland period was interpreted within the context of a geographically bounded territorial model, referred to as the Watershed Range Model. In such a model, settlements would not have been arranged in a vertically stratified hierarchy, but ordered in a horizontally linked, serial pattern. This pattern may have reflected the adoption of prescribed territories as a response to ongoing population growth, while maintaining settlement mobility that reflected continued reliance on wild food sources.

8.3.4 Paleoenvironmental Studies

Wind-blown or aeolian deposits were identified in several locations at the Frederick Lodge Site Complex. Direct evidence was recovered through particle size analysis resulting from the geoarchaeological study. Indirect evidence consisted of buried Archaic and Woodland cultural components on the rims and dune-crests above the bay/basin landscape features. This phenomenon was localized, and distinctly associated with ongoing alteration of the bay/basins during dry periods. Regional models of environmental settings may overlook unique variation on a more localized level, and our findings reinforce the notion that examination of local conditions is critical for properly reconstructing past environment conditions within which people lived, as well as for assessing site integrity.

8.3.5 Landscape Approach: Placing People in their Past Cultural Landscapes

The Frederick Lodge Site Complex consisted of a series of small, upland sites that represented significant American Indian occupations during the Middle Archaic and Early/Middle Woodland periods—and less substantial occupations during other times. Small sites in upland areas remain a valuable part of the archaeological record, and their study should be emphasized in the future. From a practical standpoint, large conflated multi-component sites produce an extensive amount of evidence, but may, in the end, provide relatively less useful data compared with the effort involved in recovery and analysis. Smaller sites with clearly defined individual or horizontally separated components can provide discrete artifact assemblages for study. Adequate testing and evaluation strategies as employed at the Frederick Lodge Site Complex can define the range of temporal components and properly assess the integrity of the depositional contexts. These efforts were an essential element in determining the potential research value of the Frederick Lodge Site Complex.

Archaeological sites in and of themselves—whether small or large—represent only the tangible aspects of the past. This is a past that we can see and touch, quantify, and categorize. Yet, the American Indian inhabitants of the Frederick Lodge Site Complex did not have as their goal the creation of relatively discrete locations characterized by the presence of broken rocks, some used in fire-related activities, and others as formal tools for scraping, carving, or cutting activities. Rather, people came to the Frederick Lodge Site Complex because the landscape had meaning to them, both profane and sacred. The two bay/basin features certainly had resources that drew American Indians to this area over the millennia, but these unique features of the physical landscape may have attracted people for less mundane reasons as well. Certainly, because their lithic technology relied on locally available materials, they could have procured their basic raw materials elsewhere in the

area—as they also did at the nearby Sandom Branch Site Complex. Whether the Frederick Lodge Site Complex was unique compared to other settlements in the region will depend on a broader consideration of both the distribution of settlements over time and a continued focus on unique landscape features. Only then can we understand the social dynamics that tied the local social groups represented in the archaeological record at Frederick Lodge Site Complex to larger scale social processes.

Clearly, the investigation of small upland sites has and can continue to bring the patterns of American Indian land use and lifeways in the region into increasing clarity. Future research should continue to emphasize these sites, but also remain cognizant of the landscape surrounding the sites—in material and immaterial terms.

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