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The study of archaeology in Plains Village sites in the Heart region of North Dakota has languished for more than 50 years. With only two exceptions (Ahler ed. 1997; Ahler, Graham, and Metcalf 2000), studies of any scope and substance involving "modern" recovery and analytic techniques have simply not occurred. Consequently, the Scattered Village project has been conducted within what amounts to a huge vacuum of knowledge and relevant comparative data. While the studies just cited each made significant contributions, our broader knowledge base for the region as a whole has advanced little past the synthesis by Will and Hecker (1944). Will and Hecker drew their conclusions without benefit of radiocarbon dating, screened artifact recovery, or even control of stratigraphy in sites with demonstrably great time depth. Hence, the research that has occurred at Scattered Village must, by necessity, focus on fairly elemental questions such as "who lived there, and when?" On the other hand, research of the scale applied to the site could not help but make huge contributions to the existing information base.

The contributions from the Scattered Village research project occur in several domains, and these domains are of interest to several different audiences. They span a broad gamut from particularistic details of stone and bone technology to more comprehensive models of prehistoric human impact on the local environment as well as information that can be used for public education and interpretation. In the few paragraphs that follow, I will attempt to touch on contributions in several of these areas as well as the original research problems set forth for the project.

A basic question posed at the start of the project was to determine whether or not the location we excavated coincided with "Scattered Village" as documented vaguely by Will and Hecker (1944) and several archaeologists who preceded them. From review of the pottery collections that found their way into the archives of the State Historical Society of North Dakota, that were almost certainly the same ones studied by Will and Hecker, we can say – Yes, the location we excavated is almost certainly the archaeological entity referred to by Will and Hecker in their synthesis of regional village sites. Most of the pottery in the SHSND collections could be lost among our samples, and the two collections appear one and the same.

One small accession lot at the Society, labeled as being from Scattered Village, clearly derives from a component falling chronologically at the early end of the Plains Village period in North Dakota (probably around AD 1200). It is not clear where this pottery sample came from, but it likely represents a site or component that is spatially distinct from Scattered Village as we know it on First Street NE. We definitely saw nothing similar to those sherds in our entire pottery sample. This particular pottery sample at the SHSND is probably mislabeled as to provenience, and it alone likely formed the basis for repeated statements by Will and Hecker (1944) that Scattered Village contained occupations from all known periods of village archaeology in North Dakota.

The review of oral traditions and of other historical documentation about the site leave us with a far more muddled picture regarding the question: Is this Scattered Village? Alfred Bowers (1949) described a site that extended for a great distance along the Heart River, and he discussed Mandan, Awatixa Hidatsa, and Hidatsa-proper traditions that relate to occupations in the general vicinity of where we excavated. Local folklore references a "Crying Hill" Village of the Mandans, and the maps of Lewis and Clark record presently unknown and unrecorded village settlements, not at our Scattered Village site, but at nearby locations just upstream from the mouth of the Heart River. It is fairly clear from our research that we are dealing, in the area we excavated, with but a single ethnic group and single continuous period of occupation by one group of people, rather than a multicomponent settlement as one might predict from the myriad oral traditions. I believe it is likely that one or more additional discrete village settlements (separate from our Scattered Village) exist in nearby areas, that one of these is probably a Mandan site called Crying Hill, that at least one of these is a recently abandoned settlement observed and recorded by William Clark, and that one or more of these may relate to an early settlement attributed by Alfred Bowers, via oral traditions, to the Awatixa Hidatsa subgroup. We have a lot yet to learn about village settlement locations in and around the City of Mandan, North Dakota, and some of this may never be learned due to the land modifications and site destruction that have occurred in the city and in surrounding industrial construction and transportation complexes.

One of our fundamental questions for the project has been to identify who occupied the portion of the village we sampled by excavation, and when. Regarding "who", we have worked hardest to assess the alignment of the village occupants with either the eastern Hidatsas (especially the Hidatsa-proper subgroup, who have oral traditions that describe living at a village where the City of Mandan now lies) or some subgroup of the Mandans whose heartland centered on the confluence of the Heart and Missouri Rivers. For comparative purposes, we have "modern" data sets from only a few documented Hidatsa sites at Knife River, and from a single documented Mandan site at On-A-Slant Village, only 10 km downstream from Scattered Village. We hoped that pottery data would be most informative relative to this question, while researchers contributing to this volume also addressed the same question with several other data sets ranging from cultivated and gathered plant remains to mammal assemblages, stone and bone artifacts, and craniometric data from human skeletal remains.

Each of these approaches has left us with no clear answer regarding the ethnic association of the people who lived at the site. It is not yet clear, based on any source of information, if this community is best labeled "early Mandan" or "early Hidatsa," or either. The studies of artifacts of various kinds tell us, foremost, that the material remains at Scattered Village are fundamentally distinct from assemblages at Slant Village, but are also equally or even more distinct from assemblages from Hidatsa sites at Knife River. Studies of skeletal biology appear to define broad similarities among the Mandan, Hidatsa, and Scattered Village samples, but are hampered by a paucity of well-controlled comparative data. From the perspective of material culture, it appears that the Scattered Villagers were their own people, and effectively constitute an archaeological complex or unit (phase? subphase?) that has not previously been identified in North Dakota. This does not help much, but at least it gives us a grounding for continuing studies in the future.

One conclusion that we can draw with fair certainty is that the occupants of Scattered Village were not newly-arrived immigrants lacking knowledge of the Plains Village lifeway (as could be inferred for Hidatsa-proper peoples when they had just arrived upon migration from the east). Scattered Village was occupied by peoples well adapted to a horticultural, bison-hunting, and gathering subsistence base similar to that used by their Mandan neighbors at On-A-Slant Village. If they were eastern Hidatsa peoples, immigration to the Missouri River valley took place well before Scattered Village was settled.

This brings us to the question of when the site was occupied. All evidence indicates that settlement began just before Euroamerican trade artifacts found their way into the region in the sparsest of numbers, and occupation continued unbroken for several decades and probably a century. We place the occupation period as starting just before AD 1600 and continuing for perhaps a century, but no later than AD 1700. Presence, absence, and density of trade artifacts, with knowledge of comparative data from Hidatsa sites at Knife River, proved most useful in working out this chronology. Chronometric (¹⁴C) dating did not prove particularly informative regarding absolute chronology, despite the great emphasis we placed in this area, other than to confirm that village occupation probably began sometime during the sixteenth century.

Several material and technical studies have provided significant new information. The study of glass trade beads and trade metal artifacts greatly expands detailed information available from components dating to the seventeenth century. This should prove very beneficial for analysis and dating of other undated components with small trade artifact assemblages. The beginning impact of Euroamerican contact on Native technologies is evident in the artifact record. Bone awls were rapidly being supplanted by iron-tipped awls, and metal-bladed knifes were a significant part of technology. By very early in the period of Euroamerican contact, large tools (presumably large iron knives or axes) had found their way into the site, as documented by distinctive fabrication marks on locally made bone implements.

Through our research, we have been able to demonstrate strong linkages between the stone and bone technologies practiced at the site. Similar linkages probably exist in other assemblages and collections from other sites, but none have been recognized so clearly as they have at Scattered Village. The production and use of bipolar cores, wedges, punches, and splinters are a very distinctive part of the site stone technology, and are features that set the village apart from nearby Slant Village and Hidatsa sites at Knife River. Bipolar stone artifacts are directly involved in production of several kinds of bone tools that are well-represented in the site. Stone splinters and pointed pieces are probably the tool of choice for cutting grooves while making preforms for bone awls and antler bracelets. Bipolar punches were used for removing extraneous bone during the manufacture of rib bone pressure flakers and scapula digging tools. Although these bone artifacts could have been manufactured in several different ways, some probably not involving bipolar stone artifacts, the method of choice for Scattered Villagers was one that involved frequent practice of bipolar stone technology. This distinctive combination of bipolar stone working and punch-based bone working should provide an important signature in the material record of the ancestors of Scattered Village residents. Sites sharing this odd suite of technological features are expected to lie within a single technological, and perhaps ethnic, tradition that may someday inform us about the origins of the people who lived at the site.

Studies of plant and animal remains have produced some remarkably parallel results regarding subsistence change at the site. Several data sets document what appears to be a progressive shift through time from greater reliance of first-line resources such as bison and tropical cultigens toward increasing use of second-line faunal and plant resources. This is documented by a shift through time toward greater use of gathered fruits and berries and less emphasis on cultivated corn, beans, and squash. It is also expressed by increasing densities through time for bird remains, fish remains, and freshwater mollusk remains. In the mammal assemblage, a strong shift away from use of bison and toward increased use of a wide array of smaller mammal taxa is documented. These patterns are all the more meaningful because similar temporal trends can be documented in several data sets from nearby Slant Village.

The study of micromammal remains provides the basis for a clear hypothesis, if not explanation, of why subsistence change was happening. The micromammal assemblage for the site as a whole is the most *unbalanced* local fauna (lacking in species diversity) yet studied by Semken, who has analyzed assemblages from many Plains Village sites. Semken concludes that this feature is reminiscent of micromammal relative abundance on badly disturbed ground, for example, on strip mine spoil piles. I have the mental image of a wasteland landscape surrounding Scattered Village due, presumably, to the cumulative effects of long-term human occupation and high human population density at the locality. If this is an accurate picture, one can hypothesize that a continuing process of human aggregation in the Mandan heartland would have, through time, altered both the vegetation and all faunal communities within a sizeable zone around the confluence of the Heart and Missouri Rivers, making this zone progressively less suitable as bison habitat, and forcing a shift away from bison as the dominant faunal resource. This process of aggregation and local environmental degradation likely started in the AD 1400s, at the time very large communities such as Huff Village (32MO11) were first occupied, and continued unabated until the remaining villagers were decimated by disease and driven from their homeland by nomadic peoples in the AD 1700s. Over the course of a couple of centuries, longstanding bison herds likely grew to avoid this dense concentration of human beings as a place on the landscape where attack and predation occurred with certainty.

The Scattered Village project has not yet run its course regarding public education and interpretation. The analytic and technical studies completed so far provide a strong basis for a concerted effort to bring new information full circle to the people of Mandan, North Dakota, and elsewhere who have supported this project through their tax dollars and administrative decisions. I see the possibility of several educational and interpretive products coming from the project. One is in the development of one or more video programs that deal with the project, its history, and what we have learned from it. One such video could be developed as a training/educational device for individuals who work within the complex of local, state, and federal agencies and programs that must wrestle with the regulatory processes for management and treatment of significant cultural resources such as Scattered Village. The Scattered Village project could be presented as a case study in successful data recovery and mitigation, especially in a situation where an unexpected and unavoidable discovery triggered the three-year research endeavor.

A second video could be targeted to more general public audiences, perhaps for classroom use in local and regional schools. This video could focus less on the regulatory aspects of the process, but more on the archaeological methodologies involved as well as the

significant results from the study. A third video product could be much shorter in scope, and might be aimed at tourists passing through the state, focusing on the unusual and remarkable nature of Plains Village and other archaeological resources in the state so well exemplified by Scattered Village. A strong start on the production of all of these video products has been made through the footage and interviews already recorded by video specialist Terry Wiklund of the North Dakota Department of Transportation during fieldwork and early stages of lab work on the project.

A second area of education outreach for the public at large could be achieved through development of internet-based, web page information regarding the site and the project. Such web page development need not be confined to Scattered Village, but the First Street Project could form one component of an integrated set of information about North Dakota archaeology targeted toward broad public consumption. Many elements of the artifact collection and photo coverage from fieldwork lend themselves toward web page presentation, accompanying short, down-loadable topical essays on several of the most interesting aspects and discoveries in the project.

Finally, and most significantly, I believe, the artifacts, materials, and information we have recovered so far from Scattered Village lend themselves in an excellent way to production of museum-type displays. It would be most suitable for such displays, and even a small museum housing those displays, to be based within the City of Mandan, and conceivably within the residential neighborhood now covering the old village. Several topics, using artifacts in the extant collections, could be addressed in those displays. One could focus on pottery, and it could have as its centerpieces several of the reconstructed pots from the site (especially the nearly whole Knife River ware vessel, the boat-shaped vessel, and the highly decorated small jars). A second display or display panel could focus on the production and manufacture of antler bracelets at the site. All stages in the production of these delicate ornaments exist in the artifact collections, and they are highly amenable, with some photographic emphasis, for use in displays. A third display might focus on the interplay we have discovered between bipolar stone technology and the manufacture of scapula hoes and rib tools at the site. Experimentation and replication could figure into this display, as well as the one dealing with antler bracelets. This display could explain and illustrate what we mean by bipolar stone working, and could link the stone artifacts admirably to the bone artifacts found in the site.

Another display could focus on the discovery of the burned earthlodge remains at the site. Burned implements found on the house floor could figure in the display, and its centerpiece would be the grotesquely melted pottery vessels found in Block 8. In addition, another display could focus on trade artifacts at the site. The few simple items found in excavations are hugely significant as examples of the earliest link between Indians and Europeans in the heart of North America. This display could focus on early glass trade beads, metal awls and knife blades, knife handles made for metal blades, and bone tools fabricated with iron knifes and axes, with all of this occurring in North Dakota only three generations after the Spanish began their quest for gold and subjugation of the Tainos in the Caribbean (Rouse 1992).