STRATEGIES AND METHODOLOGIES FOR INVESTIGATING WICKIUP SITES

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Wickiups constructed by Numic peoples of the Intermountain West during the protohistoric and historic periods are an important but increasingly threatened cultural resource. The threats to these fragile structures include intentional and unintentional human destruction as well as natural decay and wildfires. The certainty of eventual destruction or deterioration imparts great urgency to the documentation and investigation of wickiup sites in the region. The loss of important data, however, can be mitigated by investigative techniques that include thorough and rigorous recordation of structural remains, mapping, metal detection, photography, and – in some cases – subsurface data recovery. This paper describes various methods and strategies applicable to both survey and excavation, including structure-focused investigations and, especially, more inclusive landscape approaches.

The purpose of this paper is to explore different options for documenting sites with wooden habitation structures commonly called wickiups. In Colorado, wickiup sites are most commonly, but not exclusively, found on the Western Slope. The vast majority of extant wickiups are in pinyon and juniper woodlands, but some still exist at higher elevations in aspen or spruce-fir forest. I make no claim to possessing special knowledge about wickiup sites nor of the methods used to investigate them, which are essentially the same methods employed on other types of archaeological sites. In fact, much of what I have to say on the matter has already been said, 16 years ago by Doug Scott right here in Grand Junction (Scott 1988). Many points, however, are worth reiterating.

First, I will discuss the various types of features, artifacts, and other cultural manifestations potentially present on wickiup sites. Although a bit tedious, this laundry list portion of the paper is necessary to lay the groundwork for the discussion that follows. The ensuing discussion will focus on what I believe to be some useful methods and strategies for recording wickiup sites, as well as for conducting more extensive types of data recovery. Some of what I will cover is extracted from the regional literature and reflects how archaeologists have tended to treat wickiup sites in the region. Some reflects my own thinking on the subject, based on wickiup sites that I have seen, recorded, or excavated.

What is so unusual about wickiup sites that justifies such a discussion of recording and excavation strategies? To put it simply, late sites with good preservation possess a much richer archaeological record than older site types in the region (see Simms 1989:3). The great advantage and value of Protohistoric and Historic wickiup sites is that, in addition to extant structures, the site

environment and integrity of setting remain largely intact. In other words, the link between the structures and cultural remains and many of the aspects of the landscape with which these materials were originally associated has not been severed by time and geomorphological processes to the degree that it has with older sites. Wickiup sites represent unique opportunities in this regard and that is why they merit unusually thorough recording and data recovery methods.

Wickiup sites will most often be encountered during surface inventories and will only rarely be subjected to data recovery, a fact that underscores the importance of careful and complete non-invasive recording methods. The recent *Aboriginal Wooden Structure Component* form, created by the Dominguez Archaeological Research Group, is a welcome step in the right direction. One of these forms is intended to be completed for each structure on a site, and allows for the detailed documentation of nearly every potentially significant dimension and architectural element of a wickiup or other type of structure. Such data are very important because the structures themselves may not be around much longer (Sanfilippo 1998:82). The information that can be extracted from extant structures now, therefore, can serve as a basis for inferences about structures that have disappeared and whose former presence is evidenced by archaeological traces only (Reed and Metcalf 1999:147).

Even the best form, however, can never fully replace thoughtful, thorough, and meticulous recording methods that seek to identify, describe, and place in their proper context not just the structures or their faint remaining traces, but a host of often very subtle cultural associations. Thus, detailed descriptions should always be made of the relationships between structures and their associations in addition to completing the forms.

Identifying wickiups can be a challenge. Partially intact structures with standing elements or collapsed structures with well-preserved poles in an obvious radial pattern are relatively easy to recognize. All that may be left of highly deteriorated structures, however, are one or two decayed poles on the ground, a pole or two leaning into a tree, or a concentration of weathered juniper splinters. Stone slabs that formerly reinforced the bases of the poles may be present, although in my experience are not common. These materials may be associated with mature foundation (i.e., support) trees and, possibly, features and artifacts. *Context, coupled with pattern recognition, is of key importance*. For example, it may not be justifiable to record one or two juniper poles lying on the ground in a pinyon and juniper woodland with no associated artifacts or features as a wickiup. In contrast, a pattern, repeated several times within a circumscribed area, of a few poles lying conspicuously beneath mature juniper trees, together with a light scatter of artifacts and possibly other features such as long-dead, bark-stripped trees, may very well represent the remains of a

Protohistoric campsite. We must keep in mind that we are much more likely to find collapsed and deteriorated structures than ones with intact elements.

Aside from the physical remains of the domiciles, what are some of the materials, features, and other cultural associations potentially present on wickiup sites? First, wickiup interiors should be examined for hearths as evidenced by fire-cracked rock, charcoal, or ash stains. Concentrations of juniper bark may be present, likely in highly deteriorated condition, representing floor covering, bedding, or clumps of fallen structure closing material (Huscher and Huscher 1939; Buckles 1971; Conner 1988; Greubel 2001; O'Neil 2004; Scott 1988). Artifacts may be visible on the modern ground surface inside wickiups, including flaked and ground lithics, ceramics, metal and glass items, and beads. Finally, there may be hearth furniture such as large flat-topped stones that functioned as pallet stones, expedient tables, or bone-reducing anvils (Baker 1996, 2003; Greubel 2001), an example of which was present inside Structure 1 at the Simpson wickiup site.

The area surrounding the structure should be looked over carefully for hearths or ash dumps, fire-cracked rock, lithic tools and debitage, pottery, concentrations of fragmented burned or unburned bone, and anvils or other hearth furniture. Other types of structural features may be present; the remains of meat drying racks, for example, or small associated structures (e.g., Baker 2003:20; Buckles 1971 645-647). One type of ephemeral structure, sometimes called a "pull-down," consists of a large branch or two pulled down and broken but not detached from the trunk of the tree, to create a simple shade or windbreak. In addition to careful examination of the ground surface inside and surrounding wickiups, the trees, living and dead, in the vicinity of structures should be examined. Tree platforms, used for storage and possibly observation, may be present (Huscher and Huscher 1939).

Trees – especially junipers – may bear the marks of modifications such as branches trimmed off to accommodate a wickiup or to create more headroom within a habitation structure. Another important modification to juniper trees is bark stripping. Juniper bark was used for many things, including structure closing material, floor covering, bedding, and lining for storage pits. It has been hypothesized that the procurement of bark in large quantities sometimes resulted in on-site trees being stripped bare and killed (Cater 2003; Greubel and Cater 2001; Greubel 2001). Clusters of stripped junipers have been identified in association with wickiup remains on the Schmidt and Simpson Wickiup sites near Norwood, Colorado (Greubel 2001; Greubel and Cater 2001).

Clearly there are potentially many more cultural materials and features on a wickiup site than just the structures themselves. By what methods can such a complex of relatively short-lived

cultural associations be documented in order to create a lasting and, above all, useful record should the site never be excavated? It is important to keep in mind that much of the material evidence associated with Protohistoric and Historic occupations is at, near, or above the modern ground surface at these sites, and therefore readily accessible to archaeologists whether they are conducting a survey or extensive data recovery project. Much data can be acquired from a wickiup site through non-destructive techniques.

Detailed mapping is probably the single most important recording method, especially for sites covering large areas. Ethnoarchaeological studies suggest that hunter-gatherer campsites may occupy very large areas (e.g., O'Connell 1987). It is likely that a variety of activities connected with the day-to-day domestic life of a camp were carried out at some distance from the habitation structures. So far away, in fact, that archaeologists might be tempted to record the remains of these activities as separate sites. Anyone who has recorded large lithic scatters in areas of high site density is familiar with the "lumping vs. splitting" dilemma. In the case of large, dispersed wickiup sites, I would argue that more is gained by combining numerous small occupation loci into single large sites, provided they form a relatively discrete macro-cluster on the landscape. By doing so, we are compelled to consider the relationships between clusters of structures and other materials in a way that we might not if the clusters were considered separate sites. Fortunately, GPS technology has vastly simplified the daunting task of mapping large sites in woodland areas where visibility may be limited. Moreover, in keeping with the principle that the modern landscape may retain much of the character of the landscape of two or three centuries past, as many natural features as possible should be mapped, possibly including the larger, older trees but especially trees exhibiting any type of modification.

The large size of some wickiup "villages" may be due to the apparent tendency of some Numic groups to revisit the same locales repeatedly, and to construct new wickiups each time rather than reoccupy the ones from previous years (Simms 1989:28-29). The accretionary nature of some sites can result in misinterpretations regarding group size and length of occupation, as it is possible or even likely that on sites with numerous structures no more than a small number were ever inhabited at one time. Deciphering a palimpsest resulting from a redundant settlement pattern is challenging, requiring the dating of individual structures. As such, it cannot typically be accomplished with survey-level data. Nevertheless, much information can be obtained through careful observation and documentation. For example, the *relative* dating of structures might be accomplished through a systematic effort to rank them according to level of deterioration.

Lithic density mapping might be undertaken on a survey project, if an abundant debitage assemblage makes such an approach worthwhile and time and budget allow. In most cases, the time-consuming nature of this technique is more appropriate for data recovery. It requires the gridding out of a large area encompassing an occupation locus and counting all the lithic flakes and tools in each unit of the grid. Unit size will depend on available time and the size of the area to be gridded, but 2 by 2 m or even larger units will yield useful data. Lithic density mapping can contribute much toward an understanding of site structure on a broad scale, identifying refuse deposits, lithic reduction and other activity areas, and locating low density zones where structures may have stood.

An exploratory technique that is probably more appropriate for data recovery than survey application is metal detection. Metal artifact prospecting should only be conducted within the context of a structured research design, but if all finds are mapped and their depths recorded, a metal detector can be a useful research tool for Historic-era wickiup sites. The recovery of metal artifacts, however, should never be undertaken simply because it is easy to do. Restraint, therefore, should be exercised when recovering artifacts with a metal detector.

Photography is an inexpensive and important method of archaeological documentation in any context, but is especially valuable on wickiup sites (Sanfilippo 1998:82-82). Multiple photographs should be taken of both intact and remnant structures, as well as other features. It would be impossible, I think, to take too many photographs of structures and features that may soon disappear entirely. In addition to standard black and white photography for producing archival photos, the use of a digital camera for easy sharing of the images with other researchers should be considered.

Fine-grained dating of wickiup sites is critical (Reed and Metcalf 1999:151-152). The interpretation of sites may hinge upon, or will certainly benefit enormously from, careful dating that can distinguish between occupations only a few decades or even a few years apart. Moreover, there are important research questions concerning Protohistoric and Historic chronology and the rate of culture change among the Ute during these periods that can only be resolved with fine-grained dating. Dating methods that are especially appropriate include dendrochronology (tree-ring dating), thermoluminescence dating of ceramics, and temporally diagnostic historic artifacts such as gunflints, percussion caps, beads, cone tinklers, and even bottles or cans. Radiocarbon dating should not be abandoned entirely, however. Instead, meticulous attention to context and material is required in order to avoid the “old wood” problem. C-14 dating should be restricted to annual and short-lived plant material and perhaps animal bone collagen, if enough faunal material is recovered.

Wood charcoal, especially pinyon and juniper, should be avoided if possible. If wood charcoal is all that is available, then the smallest diameter twigs or the outermost rings should be selected for dating.

Tree-ring dating should be applied particularly to wickiup poles. Cutting dates will only rarely be obtained, but it may be possible to narrow down the time of the occupation by identifying the earliest possible year that a pole could have been used in a structure. If sapwood is found in the tree-ring sample a cutting date may be estimated to within several decades, which is still better than many radiocarbon dates. If dead, bark-stripped juniper trees are found on wickiup sites they should be tree-ring dated as well, as they may have been killed as a result of procuring bark for structure closing material, floor covering, or bedding. Associating a tree-ring date from a bark-stripped tree with a particular structure on the basis of proximity is problematic (see O'Neil et al. 2004:66), but the dating of numerous bark-stripping events on a site may provide a chronological framework within which discrete construction episodes can be defined. In addition to the archaeological samples, control samples consisting of cores, wedges, or cross-sections should be collected from large living or dead standing pinyon and juniper trees in the area, especially if a tree-ring chronology has not yet been established for the region.

If a wickiup site is to be excavated, blocks should encompass the largest areas feasible. The exposure of large areas surrounding habitation structures offers the best chance for identifying and investigating diverse activity areas and refuse deposits associated with the structures but potentially located some distance away from them (e.g., O'Connell 1987:105-106; Simms 1988:210). Four-hundred square meters – a 20 by 20 m block – were excavated at the Simpson Wickiup site. As a result, numerous extramural features, artifact concentrations, and deposits of faunal refuse were found. The deposits on such sites will typically be shallow; it may be possible to recover all of the materials associated with the occupation in the upper 10 cm of deposits. Moreover, the subsurface potential of exposed or shallowly buried wickiup sites should not be underestimated, although potential may vary across a site area. For example, sediments may be denuded in open areas but cultural materials may be well preserved in the sediment and duff "islands" that have accumulated beneath trees.

In closing, it is well to remember that with this class of sites even a survey project can, in part, serve as data recovery. We should record not just the wickiups and obvious cultural features but any modifications to, or unique characteristics of, the natural environment that may be associated with the occupation. Given the fragility of this type of resource, it is entirely possible that the recordation you perform will be the only work that is ever done on the site prior to its destruction

or total decay. Finally, I am aware that most wickiup sites will be found and recorded during the course of contract surveys rather than as academic or grant projects, and in such cases it may not be possible to remain on sites long enough to collect all the data that is available. Nevertheless, I believe that a few extra hours spent on a wickiup site making that map a little more detailed, or taking a few more pictures, will be time well spent.

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