Hunter-Gatherer Site Function in the Blue Ridge Mountains: An Analysis of Artifacts from the Pryors Camp Site (44NE153)

Kathryn A. Cross
Department of Sociology and Anthropology
James Madison University

Archaeological evidence of Middle Archaic through Early Woodland hunter-gatherer occupation in the Central Blue Ridge Mountains of Virginia breaks traditional settlement models which characterize upland settlements as small and short-term (Nash 2005; Nash 2009). In fact, not only were hunter-gatherer groups occupying mountain gaps for extended periods of time, they were establishing intensively-used base camps and possibly converging with other cultural groups at this significant topographic location. The research discussed here focuses on the Pryors Camp Site (44NE153), located in the Wintergreen Resort community, Nelson County, Virginia (Figure 1). Its focus is to answer questions about the length of occupation of mountain gap sites, cultural periods of occupation, and the pivotal role of mountain sites in hunter-gatherer mobility and social patterns.

Introduction to the Research Problem

Typical mobility models predict that hunter-gatherers spent most of their time in the lowlands and primarily created short term, small camps in mountain settings (Binford 1980). Research in the Central Blue Ridge Mountains of Virginia demonstrates alternative hypotheses for mountain settlement. Work at the Wintergreen Resort (Nash 2005), reveals that the mountains were intensively occupied by extended hunter-gather bands during the Middle Archaic through Early Woodland periods.

Background

Archaeologists have identified a transitional phase during the Early and Middle Archaic when hunter-gatherers began to use the Blue Ridge Mountains more frequently, especially in mountain gaps near water sources (Barber et. al 2003). Other archaeologists studying the Blue Ridge (Hoffman and Foss 1980) developed a hierarchical model for understanding hunter-gatherer groups who seasonally focused their subsistence efforts in the mountains during the Middle and Late Archaic. As with the archaeological literature throughout the Appalachians (Sullivan and Prezzano 1999), however, the focus of these studies was site location and not social organization or activity that would shed light on the duration of mountain occupation and its relationship to mobility patterning. The Wintergreen Archaeological Survey, on-going since 2003, provides data that allow us to consider these larger issues in hunter-gatherer research (Figure 2). A focus on lithic studies, in particular, provides necessary clues to site function and activity areas. A number of lithic assemblages from Wintergreen sites are large and contain a wide range of tool types that are amenable to analyses from which larger behavioral patterns are inferred. Studies by Andrefsky (2005), Kelly (1983, 1995) and other archaeologists have shown that lithic assemblage diversity is an important factor that reveals residential mobility and behavioral patterning. Their studies demonstrate that lithic tool diversity and frequency have an

inverse relationship with amount of mobility by hunter-gatherer groups. In other words, lithic assemblages are a legitimate subject for analysis of behavioral patterns at hunter-gatherer sites.

For example, one of the characteristics of several Wintergreen sites (44NE153, 44NE154) is the intensive use of Antietam quartzite that is not available on the mountain. In fact, its closest source is over five miles to the west (Figure 3). Yet, the artifact assemblages contain large numbers of primary flakes, the likes of which are typically found at quarry sites (Nash 2005). Clarkson (2008) proposes the idea of "provisioning individuals" versus "provisioning places." He states that hunter-gatherers who came into areas with little knowledge of resources or raw material availability would carry tool kits consisting of portable, easily maintained formal tools. In contrast, hunter-gatherers who understood their landscapes, predictably moving between places, would supply those locations with raw material for expedient tool making (Clarkson 2008). The hypothesis of "provisioning places" may explain the lithic patterning seen at Wintergreen, especially the Pryors Camp Site (44NE153).

Pryors Camp: Previous Research

Previous research (Nash 2005) at the Pryors Camp Site focused on boundary definition and the establishment of periods of occupation and site function for this mountain basin site, which extends across 3.6 acres along a relict channel of Stony Creek. Today the site is divided by seven lot boundaries in a residential development along Devils Knob Golf Course (Figure 4). General surface survey and test excavations in 2003 uncovered 3,000 lithic artifacts. The research revealed that surface artifacts were exposed due to the processes of cryoturbation and erosion, but that intact cultural levels exist to a depth of over one foot. Thus, surface survey was determined to be an appropriate indication of site components. The continuing effects of erosion on the site are evident in the short term: in October 2010, only three months after the intensive surface survey, two dozen artifacts eroded onto the surface due to summer rains.

Pryors Camp is a multi-component site marked by diagnostic projectile points from the Early Archaic through the Late Woodland. The longevity of use is seen in forty-two diagnostic projectile points collected from the seven-lots during the 2003 surface survey (Nash 2005). The most frequent point types, Savannah River, Brewerton, and Holmes, are associated with Late Archaic cultural traditions.

Based on the 2003 survey, 44NE153 is identified as a large base camp with overlapping occupations and evidence of social aggregation. As Nash notes, "The sheer bulk of quartzite in the assemblage, coupled with elevation, point to great effort on the part of the site's occupants to bring lithic raw materials to the basin" (2005:92). The site appears to fit Clarkson's model of a 'provisioned place' where site occupants were creating a micro-quarry by stockpiling quartzite in the form of large flakes and early stage bifaces.

Research Methodology: 2010 Survey

Further research at 44NE153 was undertaken in June 2010 in order to answer questions about the duration of site occupation and the variety of site functions. A close-interval systematic surface survey was completed by JMU Anthropology students and Archaeological Society of Virginia (ASV) Certification Program students (Figure 5). Two central lots (C and D) were selected for this survey protocol due to the recovery of 71% of artifacts and 60% of projectile

points in the Pryors Camp assemblage in 2003; these lots had the least amount of surface obstructions. The survey area encompassed .18 acres. A baseline was laid along the 250 degree azimuth off magnetic north, bisecting the length of the backyards. Thirty-six collecting units were laid out on ten foot perpendiculars. The width of the units varied because of the irregular boundaries of the visible area. Once the units were established, each was intensively surveyed and every surface artifact collected; those embedded in the humus were left in place. A field map was generated to display boundaries of the survey and general artifact concentrations. Artifacts were processed at JMU.

Only lithic artifacts were recovered from the summer 2010 surface collection; these were analyzed according to several attributes, including raw material type, cortex stage, reduction stage, completeness, and tool type (Table 1). The analysis focused on conventionally-identified tool types, including evidence of expedient production versus formal production. Expedient tools are tools "made with little or no production effort" (Andrefsky 2005) and are represented in the assemblage by modified flakes.

Results

2,804 lithic artifacts were collected during the 2010 surface collection of 44NE153. An analysis of raw material distribution demonstrates a heavy reliance on quartzite, but with a more localized use of lithic materials from further distances. Quartzite comprised 90.10% (n=2,526), quartz comprised 9.13% (n=256), and chert comprised only 0.68% (n=19) of the assemblage (Figure 6). Other raw materials include chalcedony, mylonite, and basalt breccias; together these comprise only .01% (n=3) of the total. Quartzite was distributed across the site, whereas quartz, recovered in less frequency across the site, was most highly concentrated in a fifty-foot area on the eastern side (Figure 7). Chert was concentrated in a thirty-foot area, also on the eastern side. The distribution of raw material suggests that different parts of the site were associated with movement to and from different areas. For example, the source of the quartzite was most likely the Back Creek/Torry Ridge area to the west, while the source of the quartz was probably the Rockfish Valley to the east, with chert coming from the Shenandoah Valley.

Furthermore, the types and distributions of tools in the assemblage provide insight into site function and activities at 44NE153. Tools comprise a remarkable 36.9% of the assemblage. Of these, over 95% are expedient flake tools. The cutting edge was the most frequently identified tool across the survey area accounting, for 54.1% of the tool assemblage (Figure 8). These expedient tools were distributed from Units 1 and 2 westward to Units 25 and 26, a distance of 130 feet; they were much less frequent in the units adjacent to a relict stream channel marked today by large greenstone cobbles. Scrapers (30.4% of the tool assemblage) were distributed from Units 1 and 2 westward to Units 21 and 22, a distance of 110 feet, overlapping the cutting edge distribution and decreasing in frequency near the old stream bed (Figure 9). Multi-tools (5.7% of the tool assemblage) were discovered in small concentrations in Units 1 through 9, a distance of 50 feet, and in Units 13 to 17, a distance of 30 feet (Figure 10). Gravers (4.7% of the tool assemblage) were clustered in Units 14, 15, 16, 17, 20, and 22, a distance of 50 feet (Figure 11). Finally, spokeshaves and perforators comprised only a small amount (3.8%) of the lithic assemblage (Figure 12). There is a small concentration of spokeshaves in Unit 3 to Unit 6, an area of ca. 20 feet Perforators are found in Units 12 and 16. Bifacial tools and biface fragments, including the three projectile points, reveal no clear pattern.

The diagnostic artifacts recovered in the 2010 survey expand on earlier site descriptions by providing evidence of Early Archaic occupation. A single Palmer Corner-Notched proximal fragment was recovered from Unit 20, in the core area of the site identified by Nash (2005). A quartzite Halifax Side-Notched proximal/midsection and a quartzite Piscataway point support the Middle Archaic and Early Woodland occupations previously described for the site.

While vegetation patterns impeded surface visibility in portions of the study area, the distribution of tool types suggests activity areas. The percentage and distribution of cutting edges and scrapers suggests a focus of these activities in the eastern and central portion of the study area (Figure 13). Within this larger space, cutting edges were focused in a 1600 square-foot area adjacent to the relict stream channel. Scrapers were concentrated in a 500 square-foot area, again adjacent to the relict stream channel. The distribution of multi-tools suggests three activity areas, each measuring 200-300 square-feet (Figure 14). There may have been a 500 square-foot activity area for graving, located in a narrow band adjacent to the relict stream channel (Figure 15). The small percentage of spokeshaves and perforators indicate that these activities were not as important, although a possible 500 square-foot spokeshave activity area was discovered in Lot C. Similarly, a small perforator activity area was discovered in Lot C, in an area measuring 450 square feet.

The wide variety of tool types indicates an overall base camp function for 44NE153, supporting the earlier site interpretation. The analysis demonstrates that systematic surface collection can assist archaeologists in refining the understanding of such a large mountain site by identifying activity areas that may be specific to extended seasonal occupations.

Summary

The data obtained from the lithic assemblage of the 2010 surface survey of 44NE153 address the initial questions about the length of site occupation, activity areas, and site function which provide insight in to behavioral and mobility patterning. The large number of quartzite artifacts supports Nash's micro-quarry hypothesis, which matches Clarkson's "provisioning of places" hypothesis. This is also seen in the dominance of expedient tools over formal tools, the former supporting extended site occupation in a place where raw material was expected. The concentrated areas of quartz and chert are indicative of activity areas associated with groups who moved to the site from a specific location, and with further analysis may be taken as evidence of chipping clusters.

The combination of a variety of tools supports the interpretation of a base camp that may have been occupied during multiple seasons. The discovery of a Palmer Corner-Notched projectile point demonstrates that this pattern had its roots in the Early Archaic. The concentration of artifacts and tools in Lot C during the Archaic and Woodland periods points to a core area of a much larger site. Surface distributions of tools clearly indicate areas of interest that will be used to focus further work at the site. Ultimately Early Archaic through Early Woodland hunter-gatherer bands were not simply moving into the mountains to quickly obtain resources. They were extending their stays in large camps like 44NE153 and taking advantage of the rich variety of resources that mountain gap settings have to offer.

The questions put forth by this project, which is part of the author's undergraduate honors thesis, are important to archaeological research about hunter-gatherer life ways. Testing

traditional models and asking different questions about hunter-gatherer mobility reveal that there is more to these models. Now, archaeologists can better understand mobility models and are provided with another option that explains hunter-gatherer relationships with their landscapes, especially in regard to mountain settings.

Appendix I
Table 1. Tool Type Criteria

Cutting Edge	A flake with a very acute or sharply angled edge showing jagged use wear.
Graver	A flake tool with a chiseled edge produced by the removal of two flakes or spalls at right angles to one another to create a very fine sharp and durable edge.
Perforator	A flake tool with a large chiseled edge that is reinforced with fine flaking.
Scraper	A flake tool that has a retouched edge angle of approximately 60 to 90 degrees.
Spokeshave	A flake tool with a semi-circular (concave) cutting edge, often with a steep scraper-like edge angle.
Multi-tool	A composite flake tool with edges representative of different types of use.

Figure 1. Location Map: Wintergreen and the Pryors Camp Site (44NE153)

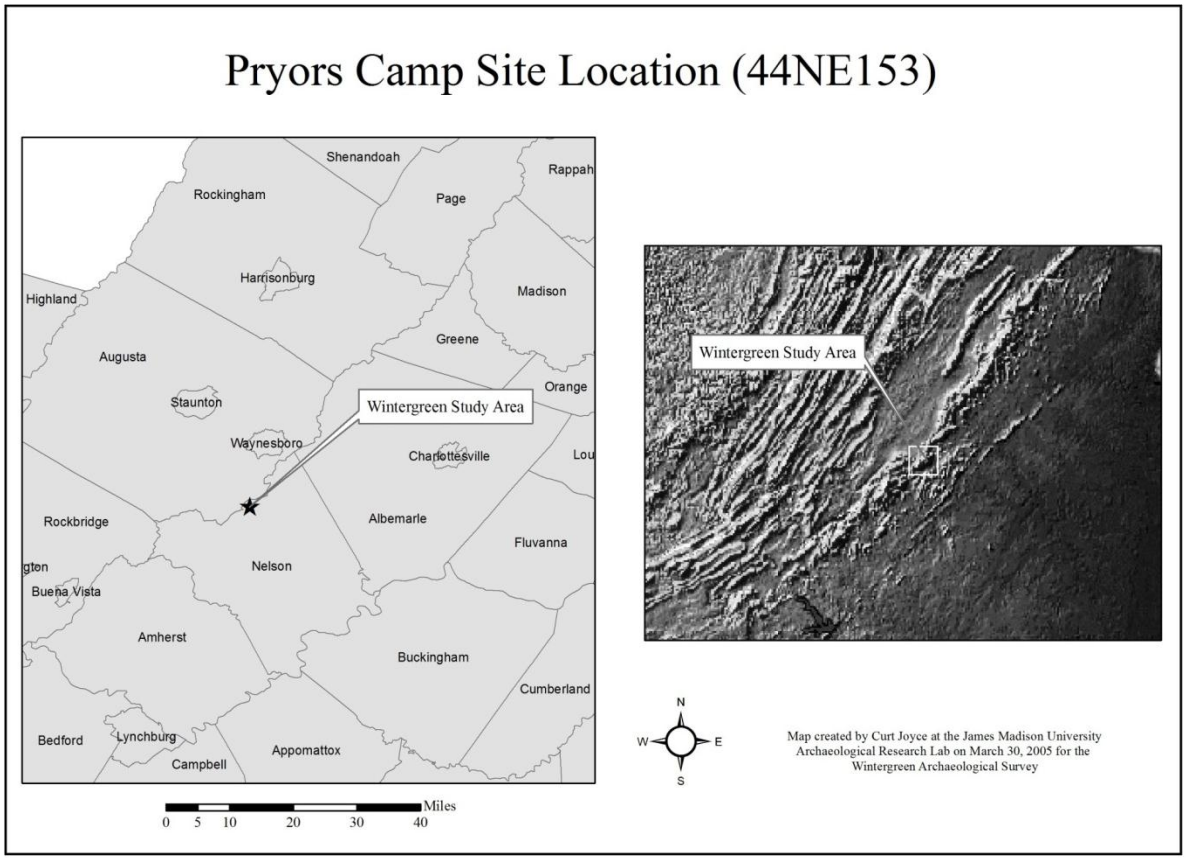


Figure 2. W.A.S. Sites

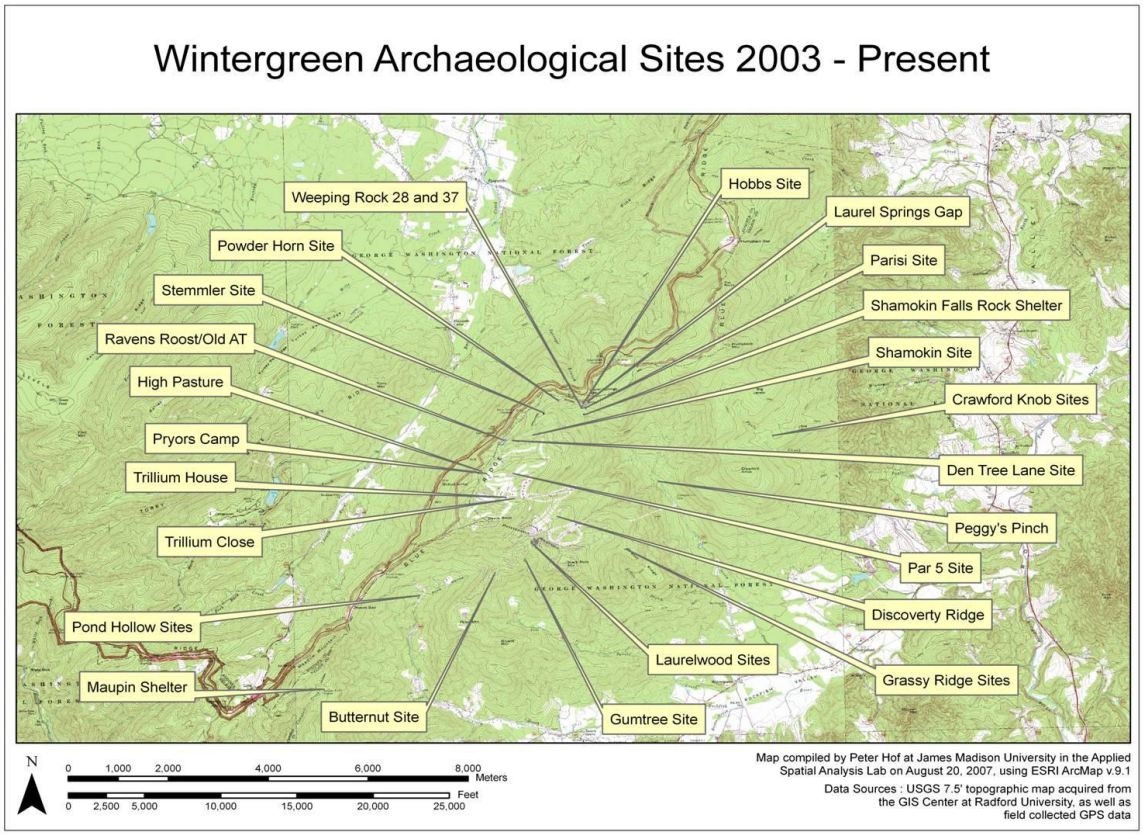


Figure 3. Quartzite Quarries in Relation to the Pryors Camp Site (44NE153)

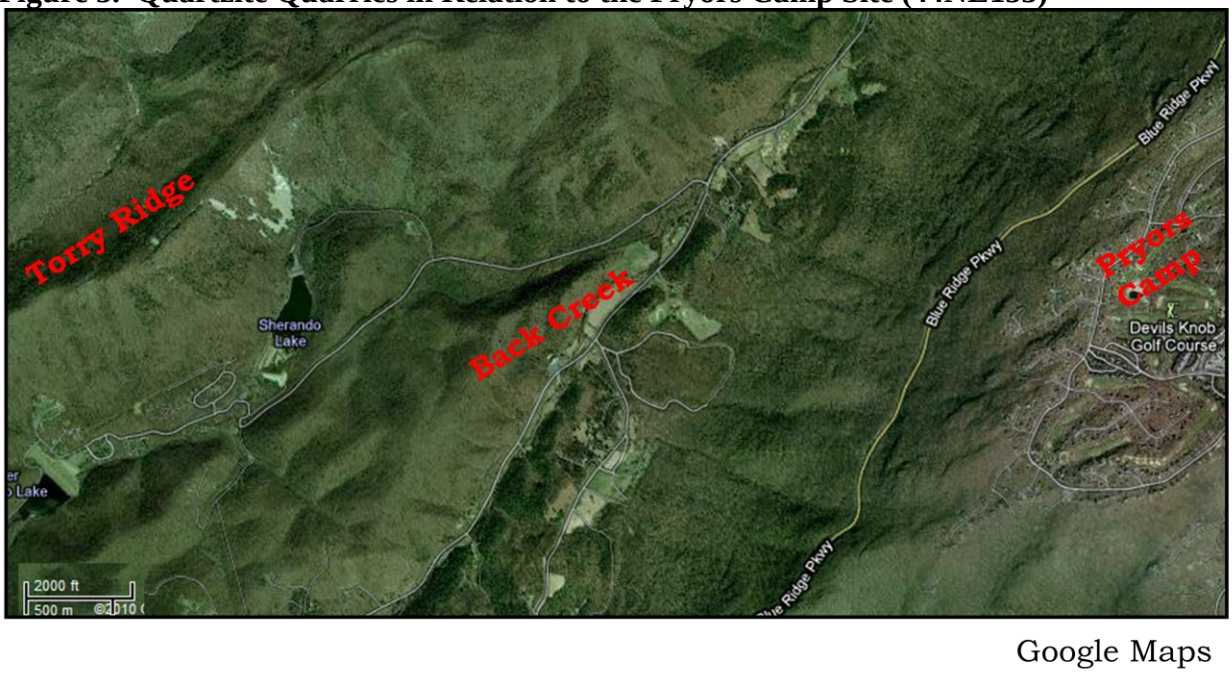


Figure 4. Pryors Camp 2003 Site Boundary

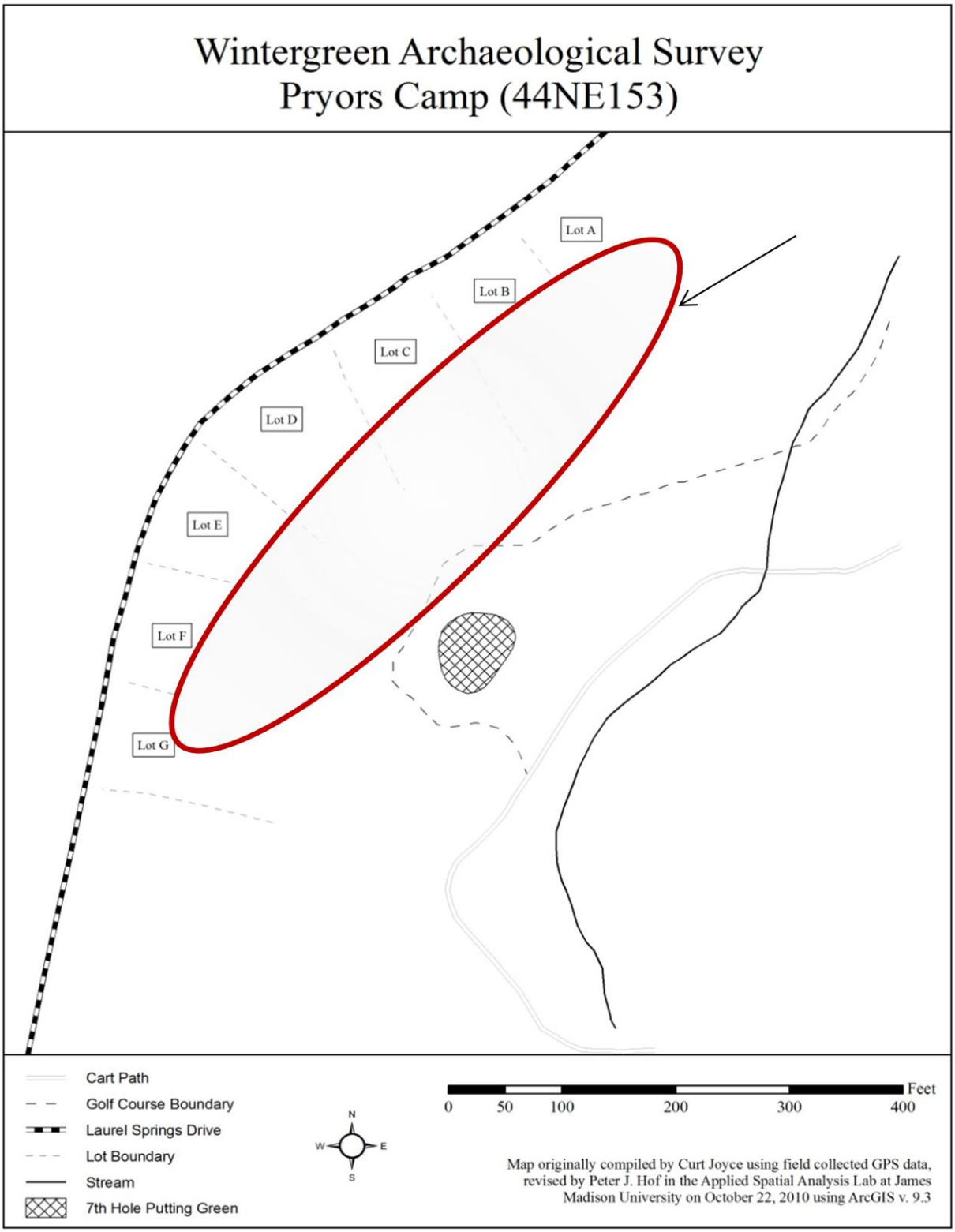


Figure 5. Pryors Camp 2010 Survey Grid

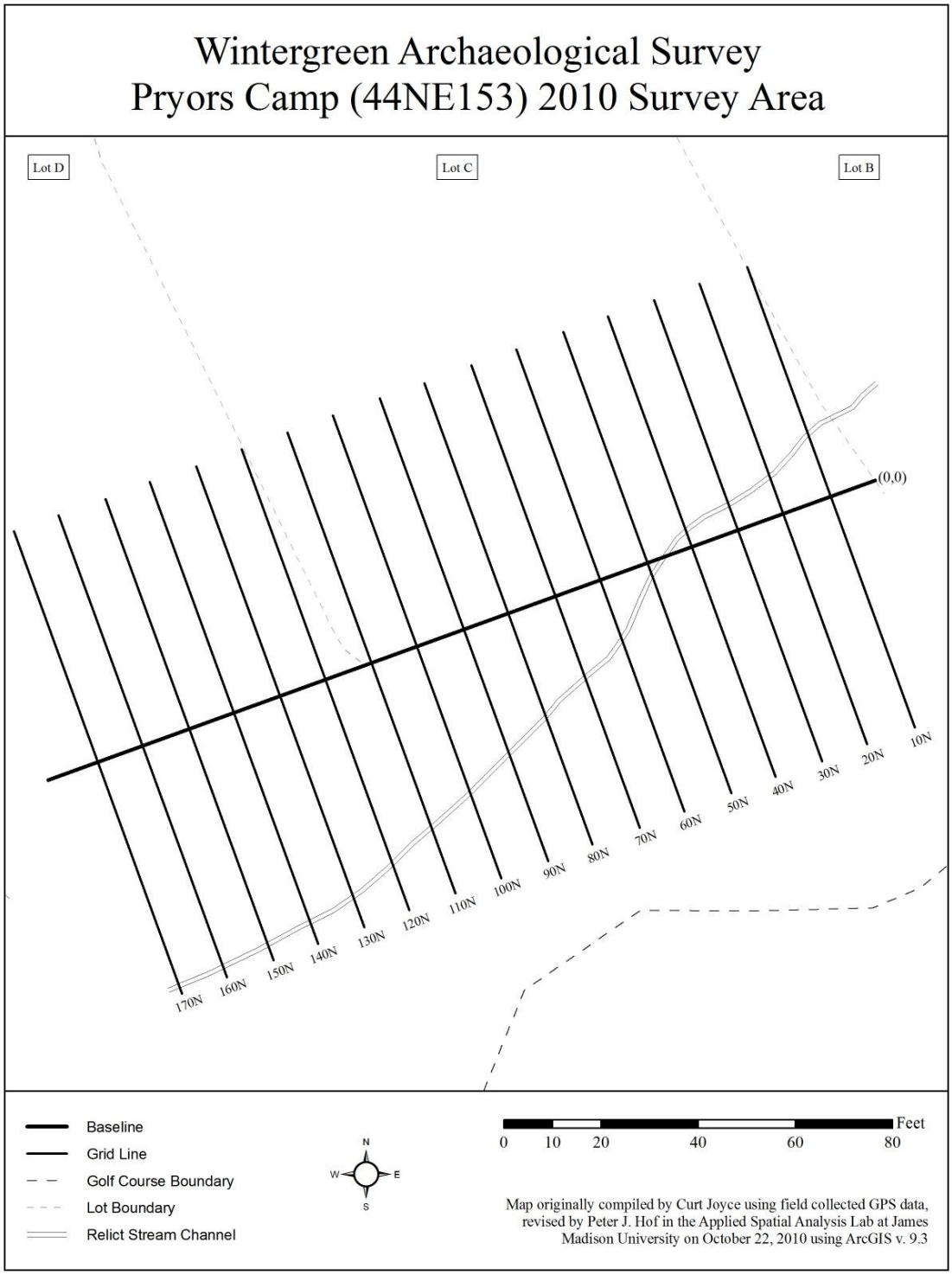


Figure 6. Pryors Camp 2010 Survey: Raw Material Percentages

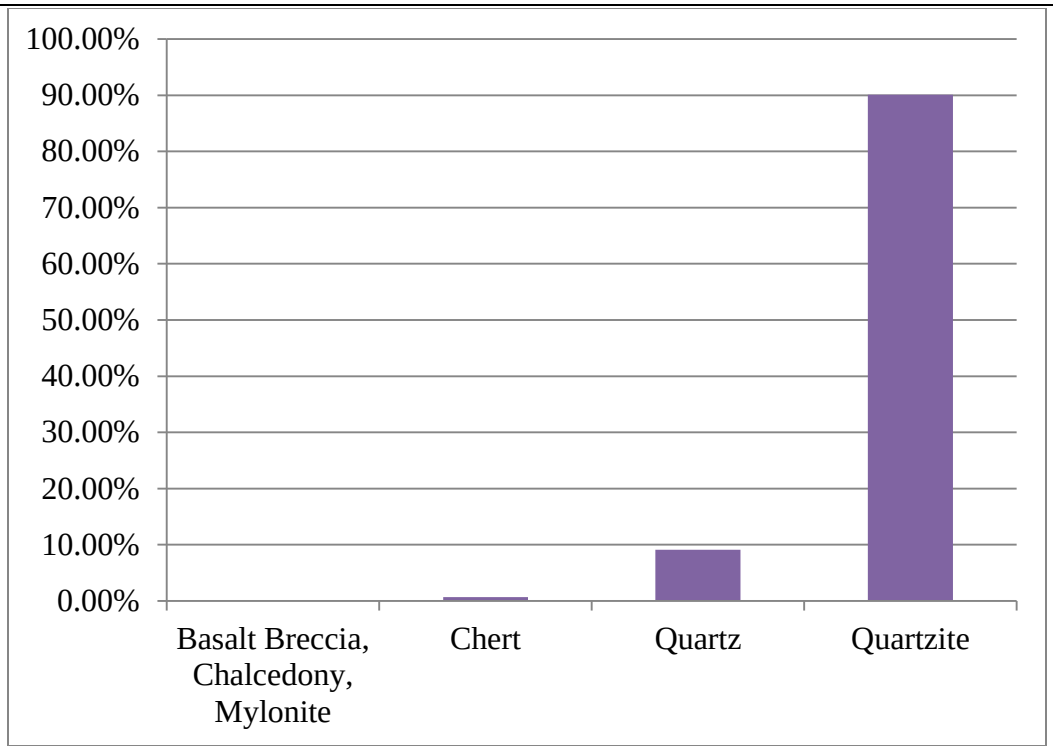


Figure 7. Pryors Camp 2010 Survey: Raw Material Distribution

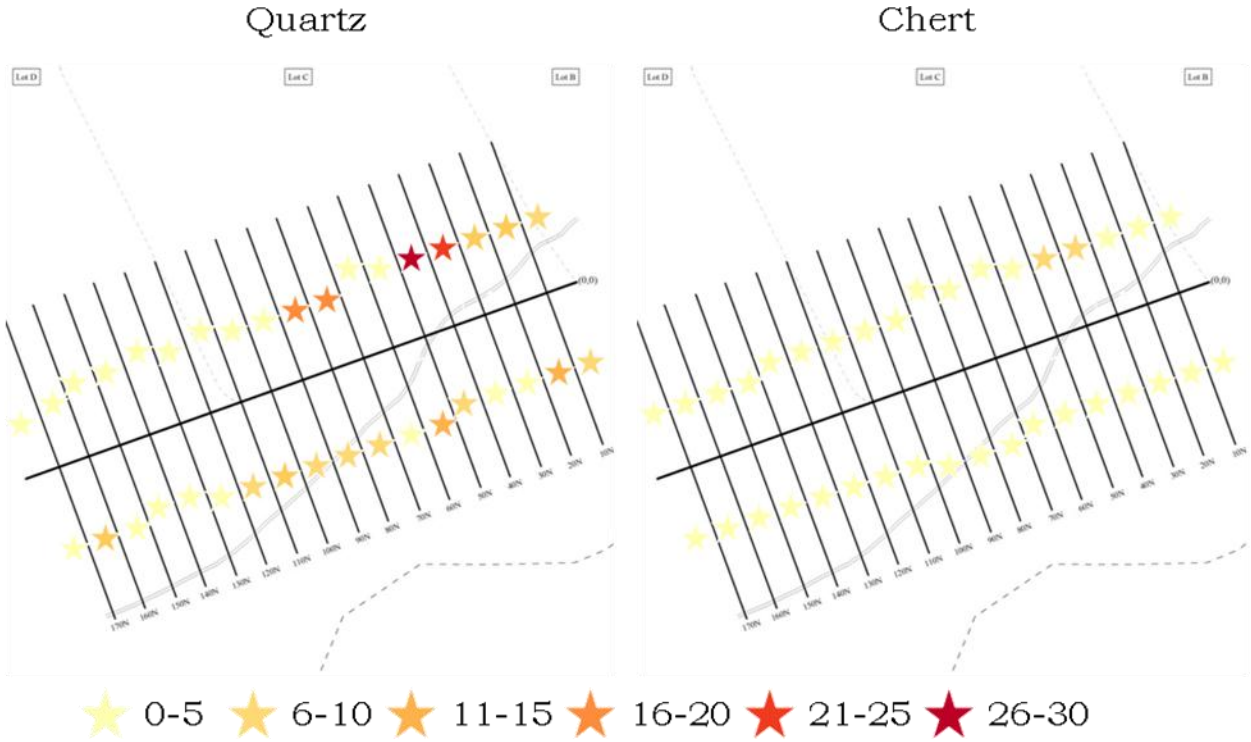


Figure 8. Pryors Camp 2010 Survey: Distribution of Cutting Edges

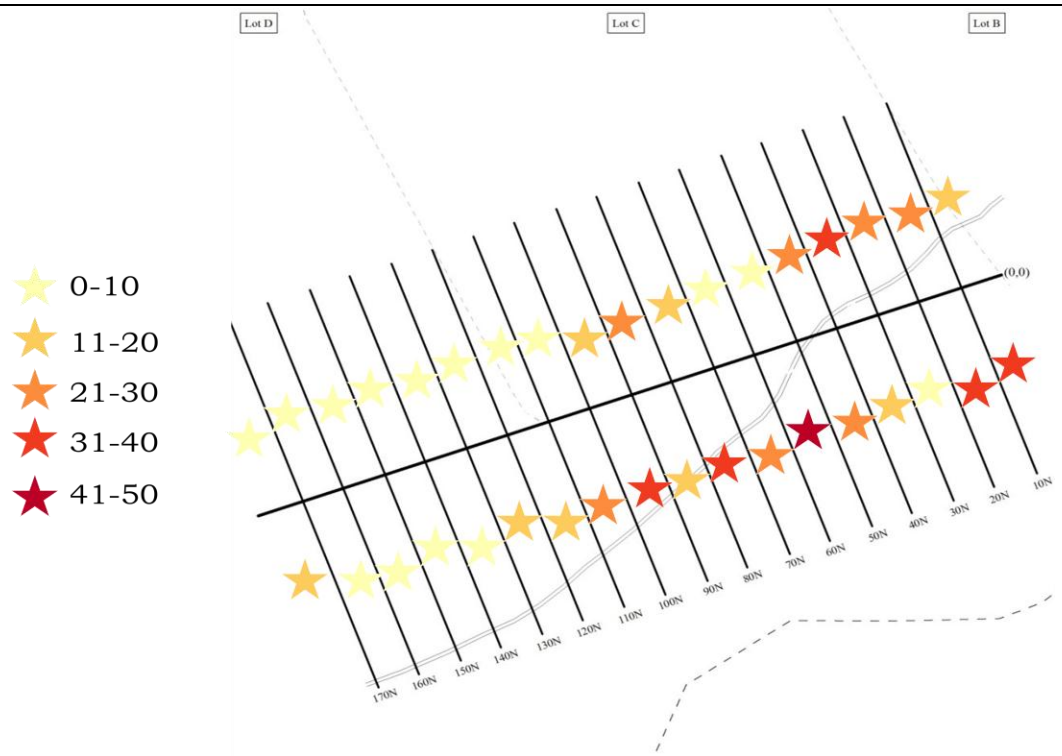


Figure 9. Pryors Camp 2010 Survey: Distribution of Scrapers

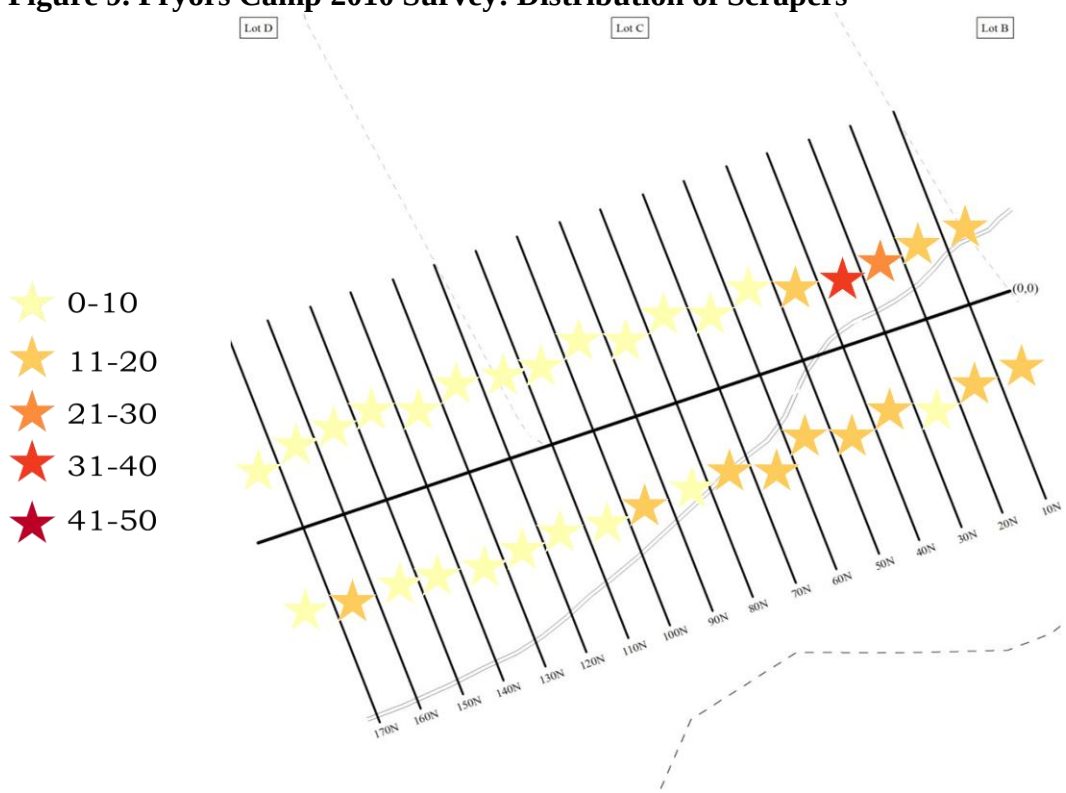


Figure 10. Pryors Camp 2010 Survey: Distribution of Multi-tools

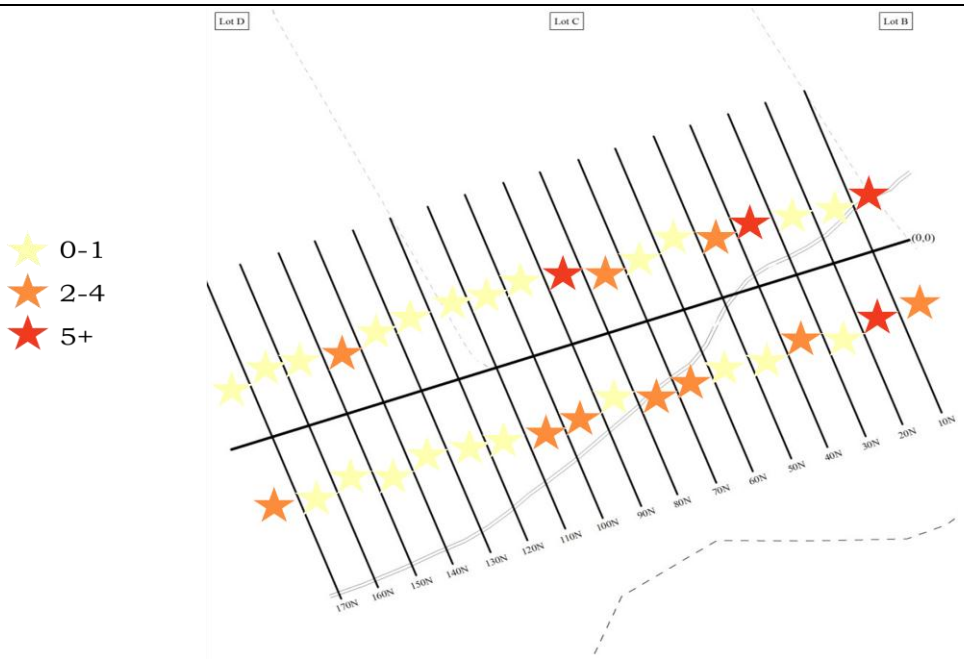


Figure 11. Pryors Camp 2010 Survey: Distribution of Gravers

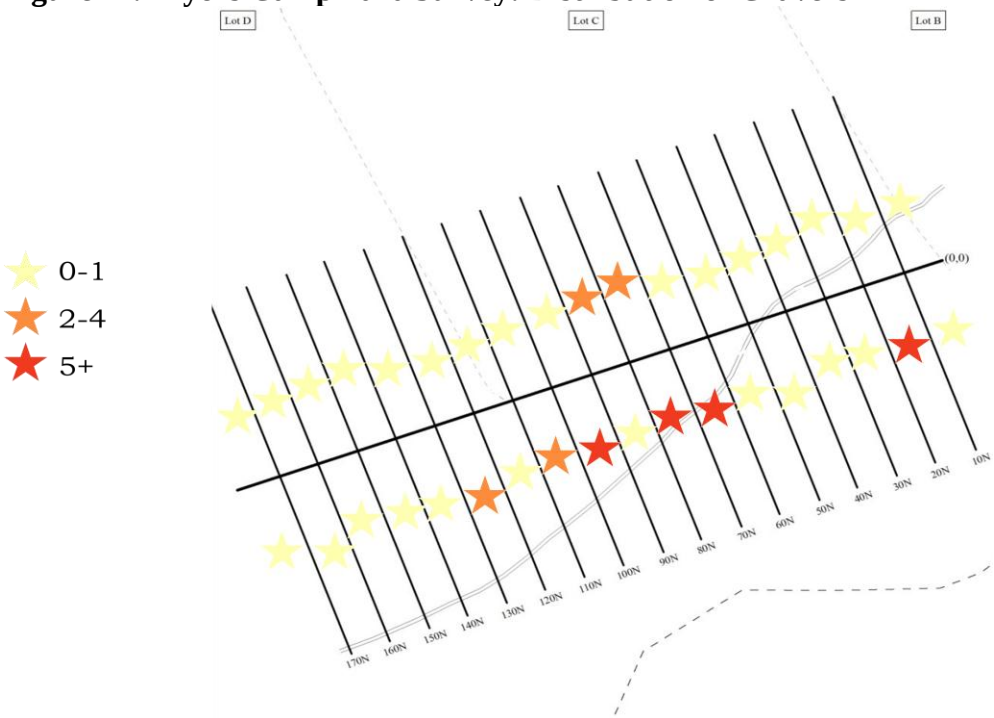


Figure 12. Pryors Camp 2010 Survey: Distribution of Gravers

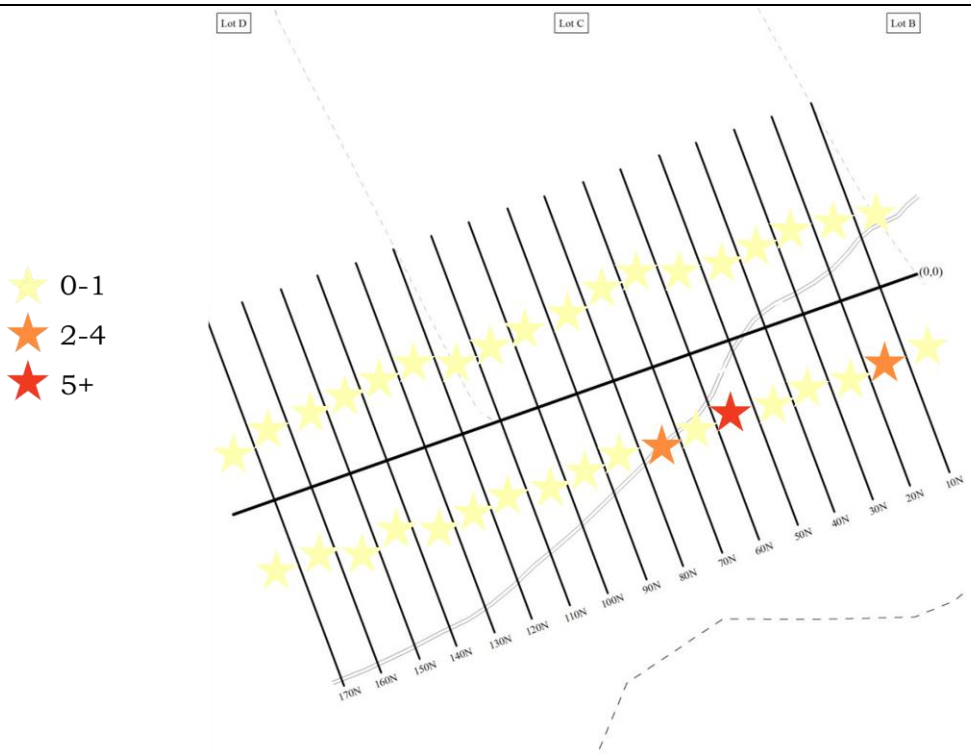


Figure 13. Pryors Camp 2010 Survey: Cutting Edge and Scraper Activity Areas

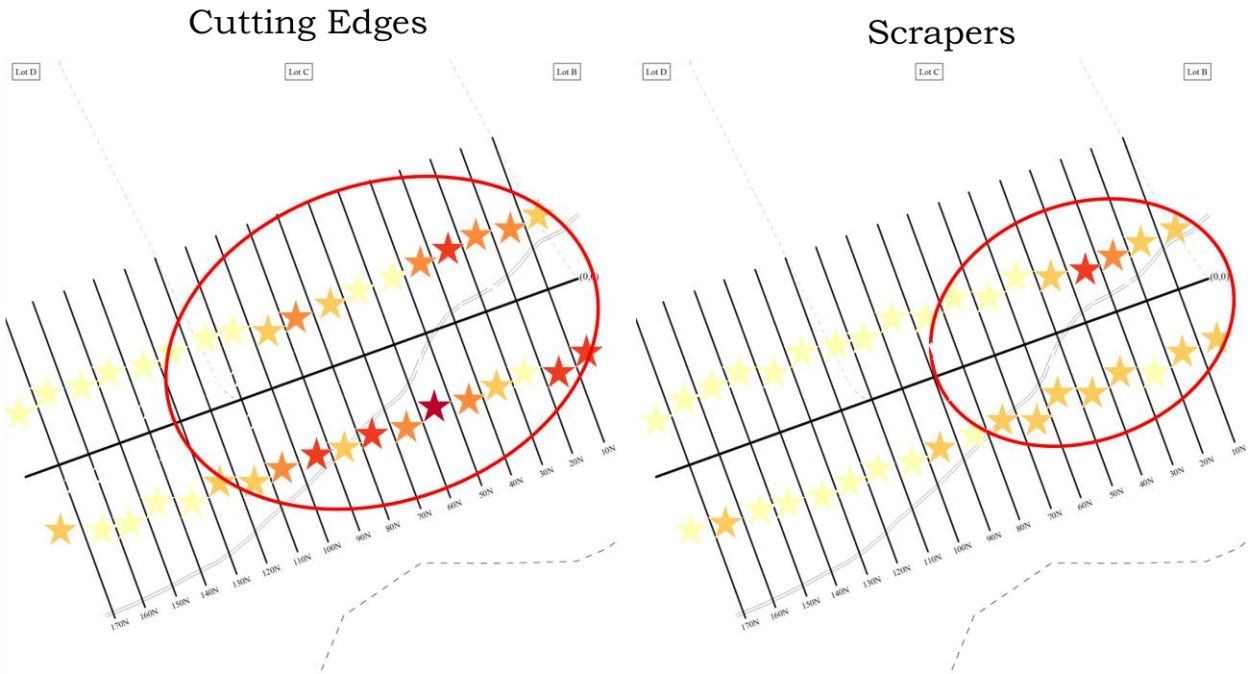


Figure 14. Pryors Camp 2010 Survey: Multi-tool Activity Areas

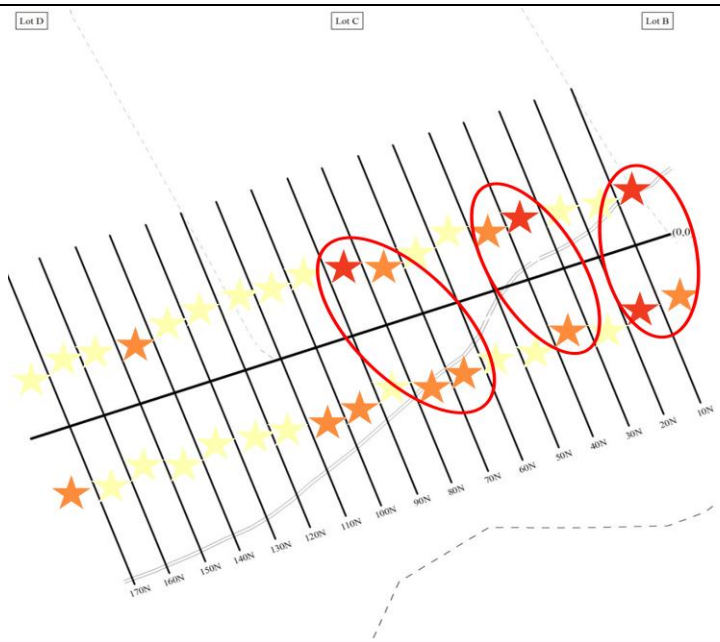
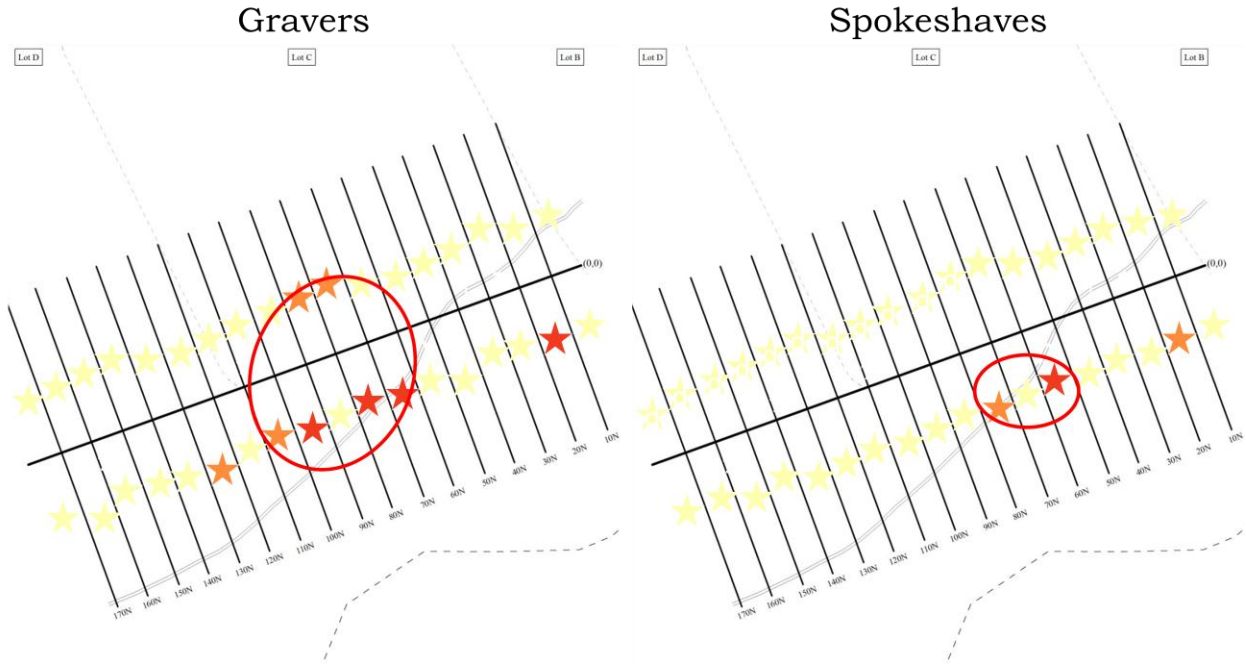


Figure 15. Pryors Camp 2010 Survey: Graver and Spokeshave Activity Areas



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