SPRACKLEN (33GR1585): NEW INSIGHTS INTO SHORT-TERM MIDDLE WOODLAND SITES IN THE UPLANDS

G. Logan Miller and Tyler R. E. Heneghan

Abstract

This paper is a summary of recent fieldwork and analysis at Spracklen (33GR1585), a small upland site in Greene County, southwest Ohio. Diagnostic artifacts and radiocarbon dates indicate that the site was occupied sporadically from the Late Archaic through Late Prehistoric periods. The main occupation—indicated by dozens of bladelets, several bladelet cores, and a high percentage of non-local chert debitage—is consistent with Middle Woodland Hopewell remains. The feature, chipped stone, and FCR assemblages indicate that the site was occupied for short periods. Comparison with similar sites throughout the region illustrates similarities and new insights into the variation present in this upland logistical camp.

Introduction

In this paper, we present the results of surface collection, geophysical survey, unit excavation, and laboratory analysis of a small upland site in Greene County, southwest Ohio. The Spracklen site (33GR1585) is a multicomponent, upland lithic scatter far from major waterways. Diagnostic artifacts and radiocarbon dates indicate site occupation occurred sporadically from the Late Archaic through Late Prehistoric periods. However, the vast majority of diagnostic artifacts—including dozens of bladelets, several bladelet cores, and a high percentage of non-local chert debitage—are consistent with a Middle Woodland Hopewell occupation. Thus, while the site provides information on land use and resource extraction for a wide period of prehistory, Spracklen represents a particularly intriguing example of a Middle Woodland, upland short-term special purpose site. Archaeologists know relatively little about these short-term sites and they are often simply labeled "logistical," "extractive," or "specialized" camps in settlement models (e.g., Dancey and Pacheco 1997; Pacheco and Dancey 2006; Ruby, Carr, and Charles 2005). Research at a number of these sites in Illinois (see papers in Yingst 1990a), however, highlights the diversity of activities and land use strategies represented. We assume that a similar level of diversity is present in Ohio and Spracklen offers a unique opportunity to provide further understanding of the issue.

Site Setting

Site 33GR1585 is located in the uplands on the till plains of southwest Ohio, approximately 4 km south of the Pollock and Bull earthworks (Figure 1). The site is on the south facing slope of a slight

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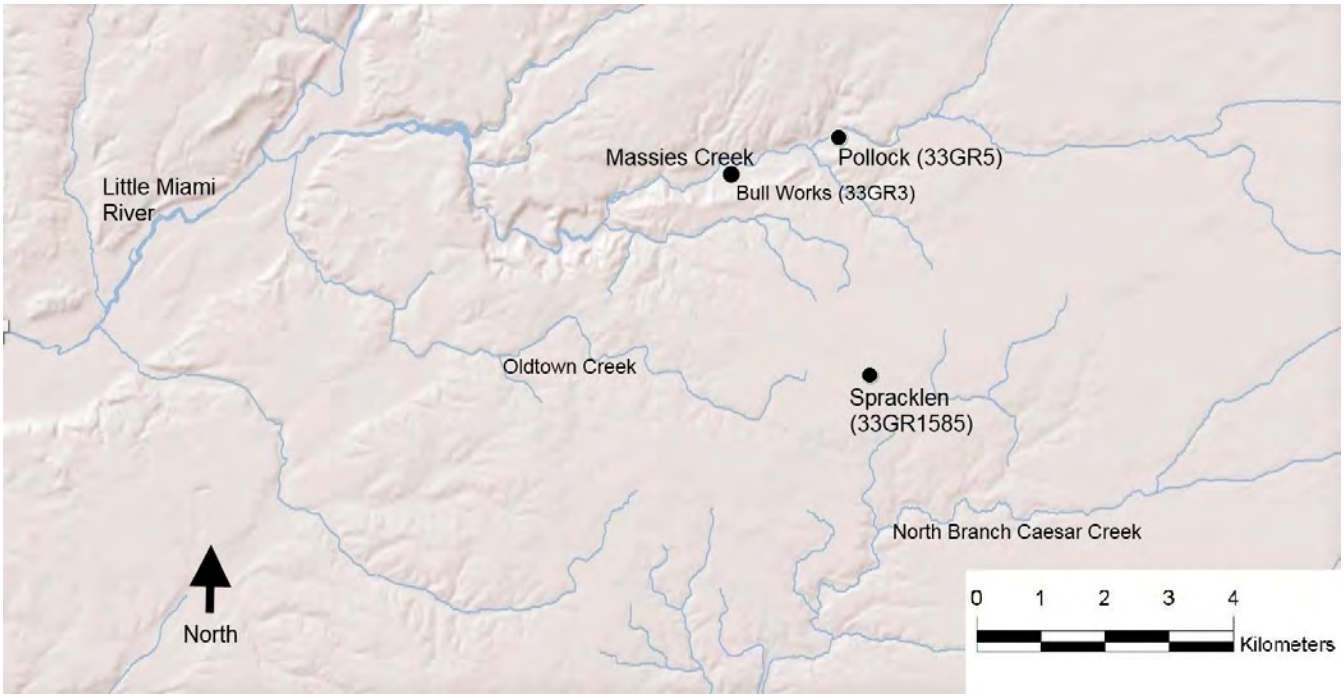

Figure 1. Location of Spracklen, and other sites mentioned in the text, in Greene County, Ohio.

rise among Wisconsinan ground moraine. Soils in the site area are Xenia silt loam and Birkbeck silt loam. The site lies near the boundary of the Little Miami and Caesar Creek (tributary of the Little Miami) watersheds, though it is within the Caesar Creek watershed. The Little Miami River is approximately 11 km to the west. The closest modern water source is an un-named ephemeral tributary of the North Branch of Caesar Creek approximately 780 m to the east. However, examination of the 1917 USGS topographic quad map for Xenia, Ohio indicates that the origin points of Oldtown Creek, a tributary of the Little Miami River, and an unnamed tributary of Massie's Creek were within at least 200 m of the site before early historic period agricultural alterations to the landscape.

History of Investigations

A Wright State University Field School in Archaeology, under the direction of Robert Riordan, first recorded 33GR1585 in 2003 during surface survey of an agricultural field. Surveyors recovered 162 lithic artifacts within an area measuring approximately 70 m north-south by 30 m east-west. The artifact assemblage consisted of Hopewell bladelets of Indiana Hornstone (i.e., Harrison County, Wyandotte) (*n*=4), Upper Mercer (*n*=1), and Flint Ridge (*n*=1) chert. A bladelet core fragment of black Knox chert was also recovered. Other diagnostic artifacts include a Kirk Corner Notched point of Flint Ridge chert and a Madison triangular point base of heat treated Delaware chert. Other recovered tools include an early stage biface and a large retouched flake. Over 100 pieces of chert debitage were also recovered. Most of the materials were blue/gray cherts like Indiana Hornstone, Upper Mercer, and Delaware. Some Flint Ridge and local chert debitage was also recovered. Numerous pieces of fire-cracked rock (FCR) were observed in the field but not collected. It is worth noting that two additional sites (33GR1586 and 1587) containing Hopewell bladelets were also recorded in the same portion of the field.

Over the course of two days in April 2015, Miller relocated the site using Riordan's field maps, identifying a concentration of lithic debris within a fairly extensive low density lithic scatter

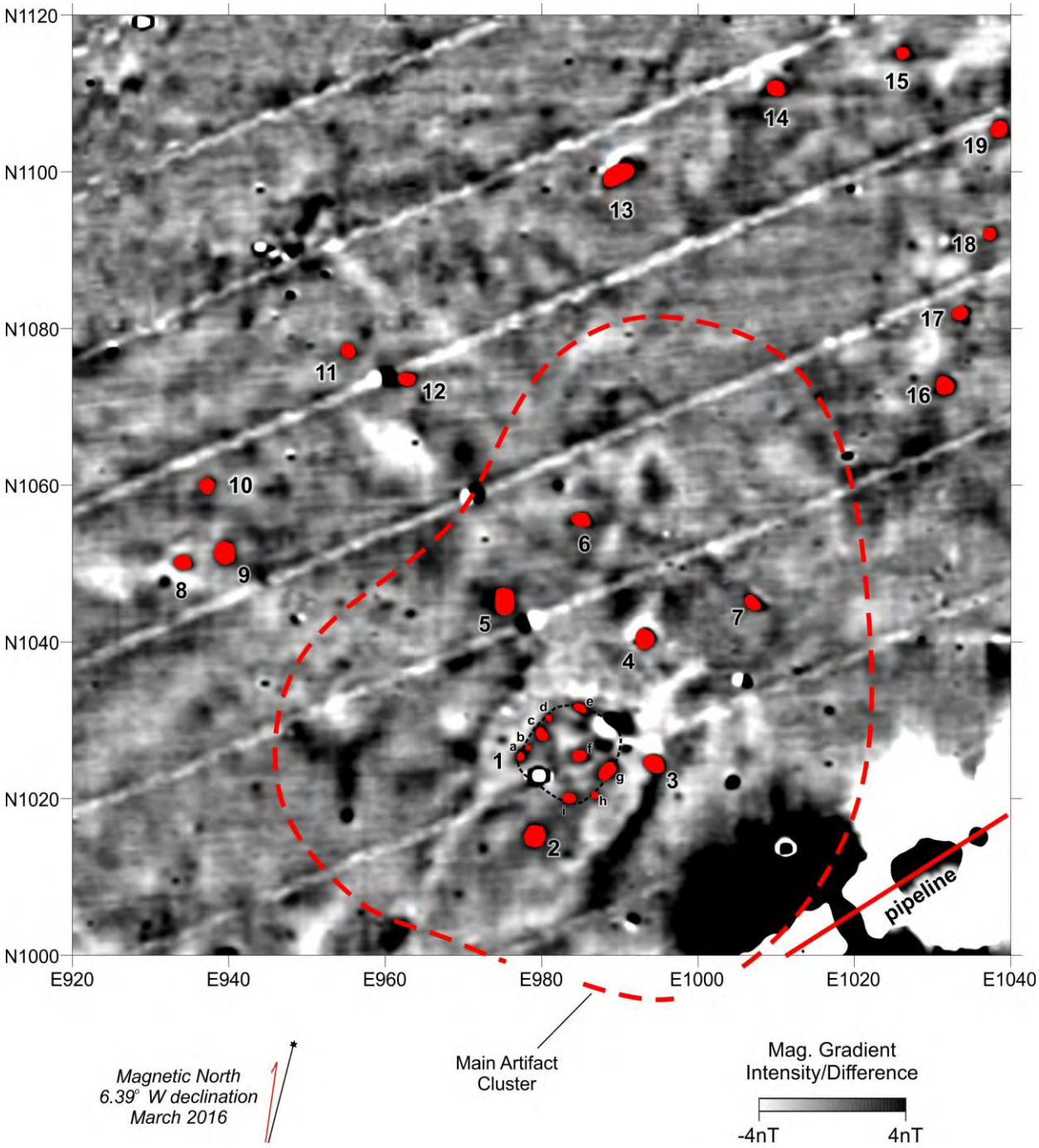

Figure 2. Magnetic gradiometer data and interpretation of potential features at Spracklen. Image adapted from Burks (2016: Figures 3 and 5).

in the southwest portion of the field. After visually identifying the area of the site with the highest artifact density, artifacts were collected and mapped using a hand-held GPS device to record their location. The recovered artifact assemblage included 12 bladelets or bladelet fragments in addition to two bladelet core fragments. A Trimble point, five non-diagnostic bifaces, six cores, and 178 flakes were also recovered. The locations of 50 pieces of FCR were plotted and a sample of six was collected.

Geophysical Survey

Through funds from an Ohio Archaeological Council Patricia Essenpreis Memorial Grant, Dr. Jarrod Burks of Ohio Valley Archaeology, Inc. was brought out to conduct a magnetic gradiometer and magnetic susceptibility survey of 33GR1585 in March 2016 (Burks 2016). The goal of the geophysical survey was to identify intact subsurface features associated with the surface lithic scatter. Using the magnetic gradiometer data, Burks identified 27 anomalies of potential archaeological interest over a 3.6 acre area (Figure 2). Burks interpreted nine of these anomalies as related to a potential structure approximately 11 meters in length. In the magnetic susceptibility data, Burks (2016:9-11) notes two trends. The first is east to west bands of alternating high and low readings. Burks (2016:11) notes "they probably are related to the plow or some other agricultural implement that has brought more subsoil to the surface in some rows but not others." The susceptibility readings also increase from south to north following the natural slight rise in topography. He interprets this as either evidence for increasing amounts of midden or movement of topsoil through plowing or erosion.

Excavations

In 2016, a total of 61 m^2 were excavated into sterile subsoil (Figure 3). This included the excavation of 15 2x2 m units and one 1x1 m unit. Units were placed to ground-truth geophysical anomalies. Prior to unit placement, possible pit features were systematically cored at the center of each anomaly as well as 30, 60, and 90 cm in each cardinal direction down to about 90 cm below surface using an Oakfield soil corer. Two anomalies (2 and 7, see Figure 2) contained evidence of cultural activity, in the form of charcoal or artifacts in the core. Soil cores over the other anomalies yielded evidence of a natural soil profile with an approximately 30 cm thick Ap horizon over an approximately 30 cm clay subsoil horizon and a clay and gravel substratum. Whether soil cores were positive or not, we placed excavation units over all geophysical anomalies identified in association with the main artifact cluster at the site (Figure 3). Time did not allow testing of anomalies (8-16) outside of this area. Additionally, 46 30 x 30 cm shovel tests were conducted, largely to explore potential buried midden identified by the magnetic susceptibility data. No midden soils were identified and all profiles adhered to the natural soil profiles of the landform.

Plowzone soils in each unit were removed via hand excavation. All soil was screened through ¼ inch mesh.

Features

No evidence for a structure, Middle Woodland or otherwise, was identified at Spracklen. One prehistoric pit feature (Feature 3) was identified (Figure 4). The feature measures 232 cm by 118 cm. The orientation of this oval shaped feature corresponds closely with Burks' anomaly 7, which the excavation units were placed to investigate. Zone I consists of a dark (10YR2/2), charcoal rich silty loam that extends approximately 28 cm below the plowzone. Zone II is an apron of ash-filled silty loam that rings this charcoal-rich Zone I area. Beneath the charcoal-rich zone I is Zone III, a deeper basin of yellow brown (10YR5/6) clayey soil mottled with charcoal flecks and some larger chunks of charcoal as deep as 55 cm below the plowzone. The presence of the ashy Zone II around the charcoal rich Zone I indicates that some burning occurred in situ in the pit. Three AMS radiocarbon dates were obtained on charcoal recovered during flotation of soil samples from Feature 3 (Table 1). The dates are widely separated in age but do follow the stratigraphic profile with the sample from Zone III oldest and Zone I most recent. Collectively, the AMS dates indicate that the pit was either repeatedly reused over a relatively long period or that some of the fill is contaminated with older or younger charcoal.

Marjorie Schroeder of the Illinois State Museum performed flotation and botanical analysis of four 10 liter soil samples taken from Feature 3. Seven nutshell fragments >2 mm were identified. These included four Hickory nutshell fragments,

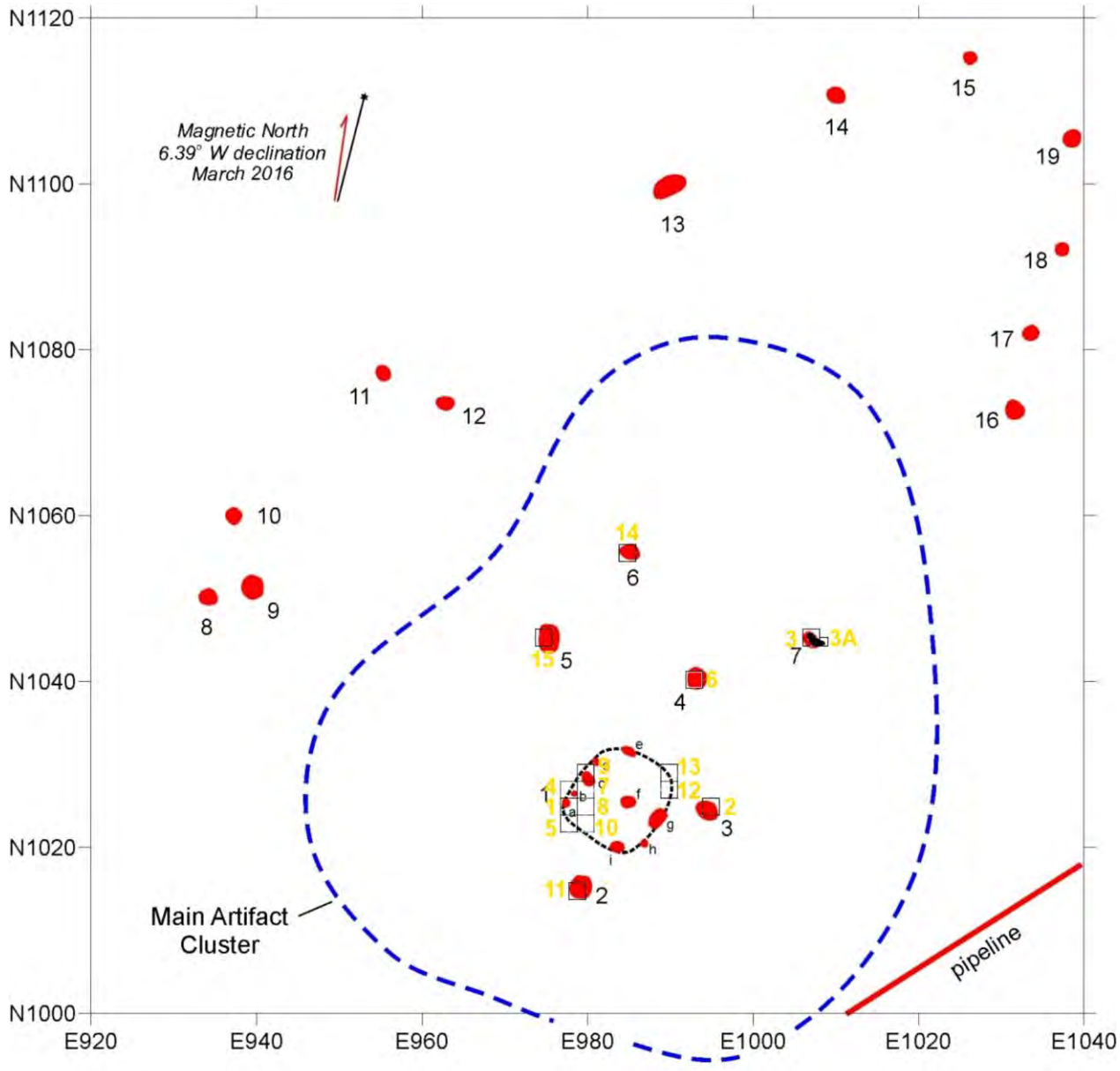

Figure 3. Location of excavation units in relation to Burks' interpretation of the geophysics, black numbers represent magnetic anomalies and yellow numbers are excavation units.

two Black Walnut shell fragments, and one unidentifiable *Juglandaceae* fragment. Identifiable seeds include one from the *Datura* family, one sedge (*Carex*), and two from the *Rubus* family, which includes raspberries and blackberries. Clearly, no tropical cultigens or Eastern Agricultural Complex seeds were identified.

No diagnostic artifacts were recovered in the feature fill. Artifacts recovered included flakes and a small amount of FCR (*n*=22). Six bladelet fragments and two blade core fragments were recovered in the plowzone above the feature along with flakes and FCR.

All sub-plowzone soil anomalies containing charcoal and/or artifacts were assigned feature numbers. After mapping each feature in plan view, each was bisected to provide a profile view of the "feature." The vast majority of "features" were

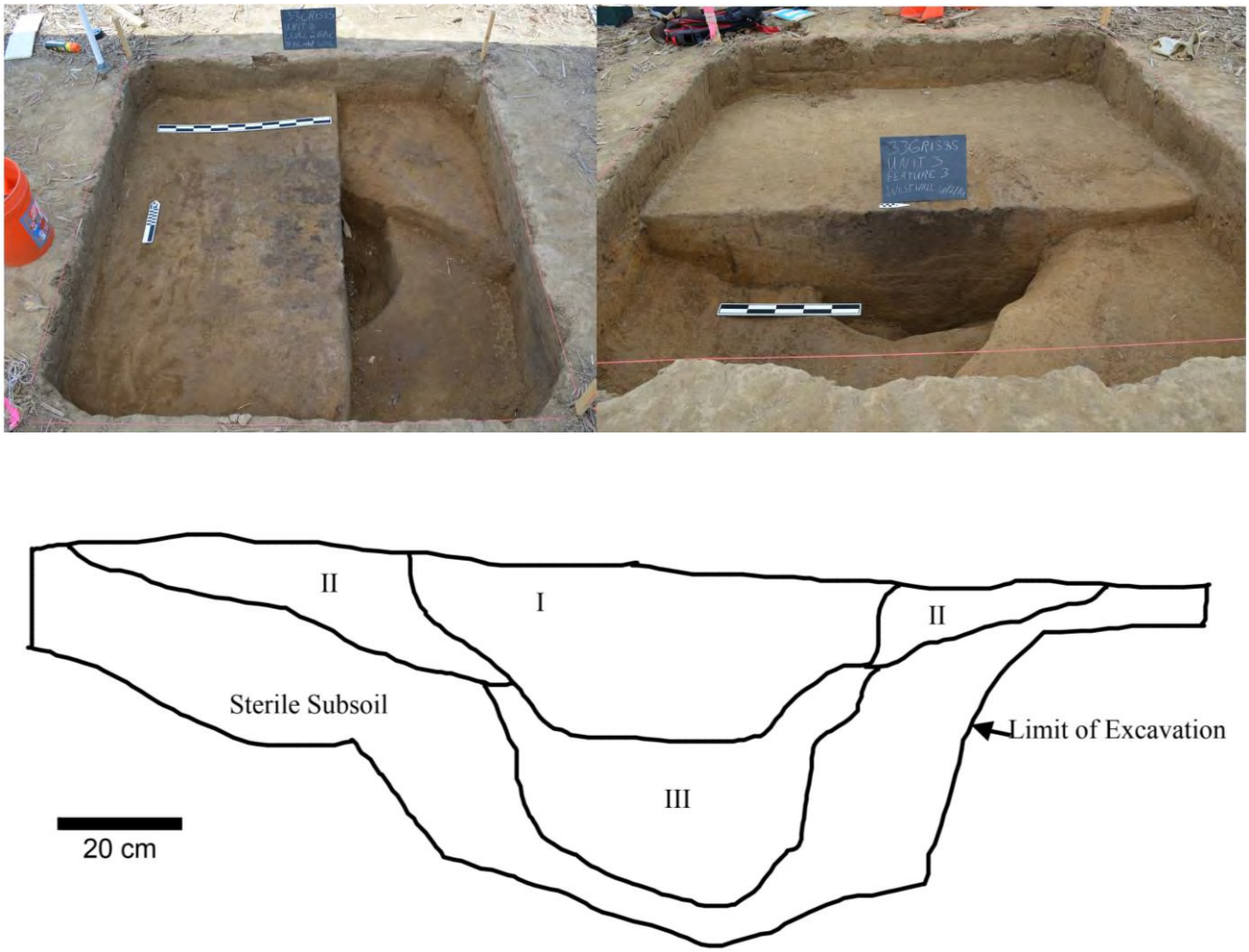

Figure 4. Feature 3 in plan view under excavation (upper left), photographed in profile (upper right), and the profile drawing (bottom). See text for descriptions of Zones I-III.

highly irregular in profile in spite of the fact that they contained visible charcoal. Still, time and budget allowed soil samples from each anomaly to be collected and processed. Wood charcoal was the dominant item recovered from these soil samples. Six of the 13 non-feature anomaly samples contained wood fragments identifiable to family or higher. The identifiable wood fragments from each sample could all be attributed to a single type. In other words, it is possible that each of these natural features could represent a single tree, root, or log. Schroeder identified the charcoal in two anomalies as *Quercus* (white group), while one anomaly each contained *Quercus* (red group), *Quercus* (red or white), *Juglans* (Black Walnut or Butternut), and *Carya* (hickories). Based on their irregular shapes, the presence of a single species of wood charcoal in all samples, and an early historic period radiocarbon date obtained on wood charcoal from one of these samples (Table 1), these anomalies likely relate to the initial clearing of the field for agriculture. They can shed light on the potential resources available in this area of the landscape. While it is not possible to say for certain that the same vegetation existed in this area for thousands of years, it is likely that the presence of acorns, hickory nuts, and walnuts played a role in attracting people to this spot.

Artifact Analysis

Debitage

Debitage from Spracklen reflects a heavy reliance on non-local cherts from Indiana and central Ohio. Of 3,679 pieces of debitage examined, 2,560 (70%) were from the Indiana Hornstone outcrops in southern Indiana. Other sources in the assemblage are Flint Ridge (*n*=117, 3%), Upper Mercer (*n*=103, 3%), and Delaware (*n*=94, 2%). The local chert is visually consistent with Cedarville-Guelph. With outcrops in Greene, Logan, Clark, and Champaign Counties, this medium-grained chert often contains quartz inclusions, cavities, and larger fossils (DeRegnaucourt and Georgiady 1998). Its natural color is mottled or banded gray but it is often heat treated to produce shades of pink. Over 400 pieces (11%) were from chert visually consistent with the local Cedarville Guelph source. The remaining 397 pieces (11%) were unidentifiable, but likely constitute both local and non-local chert types.

We utilized Sullivan and Rozen's (1985) categorization method to facilitate comparison with the debitage collected from the Fort Ancient Earthworks (Connolly 1991, 1997). This approach limits subjective functional interpretations of debitage. Instead, a three-step dichotomous key (see Sullivan and Rozen 1985:759), each step with two attribute choices, provides an objective way to place the debitage into four unique categories.

The first step of the analysis requires the user to identify a single interior surface (Sullivan and Rozen 1985). If zero or multiple interior surfaces are identified, then the item is labeled as debris or lithic shatter. Step two attempts to identify a point of applied force on the debitage in question. Debitage without a striking platform is identified as a flake fragment. The final step distinguishes complete flakes from broken flakes through the identification of complete margins on either side of the debitage. From here, the debitage has been placed into four unique and user-interpretation free categories with analysis conducted on the complete flakes.

At Spracklen, just over 4% of the assemblage was categorized as debris, 65% flake fragments, 23% broken flakes, and 8% complete flakes. Sullivan and Rosen (1985) argue that assemblages dominated by broken flakes and flake fragments are the result of tool manufacture. However, the recovery context of the Spracklen assemblage (i.e., plowzone) likely contributed substantially to the fragmentation of the Spracklen assemblage.

The complete flakes underwent further analysis to calculate their relative thickness ($\frac{length+width}{thickness}$). Following Sullivan and Rosen (1985) and Connolly (1997), we compared median relative thickness against median complete flake thickness and median complete flake weight (as proxies for flake size) for each of the chert types present at Spracklen (Table 2). Utilizing the median value limits the impact of outliers on the results, particularly with small sample sizes. Sullivan and Rozen (1985:765) used this method to characterize debitage resulting from unintensive

Table 1. AMS radiocarbon dates from Spracklen.

ISGS #	Context	Material	$\delta^{13}C$	±	^{14}C yr BP	±
A4066	Feature 3 Zone I	Black Walnut nutshell	-23.4	1.6	575	15
A4067	Feature 3 Zone III	Oak charcoal	-29.0	1.3	1185	15
A4068	Feature 3 Zone II	Hickory nutshell	-26.1	1.3	915	15
A4069	Unit 11 – "Feature" 10 South 1/2	Oak charcoal	-25.0	1.5	285	15

Table 2. Complete Flake data from Spracklen.

Raw Material[a]	*N*	Median Relative Thickness	Median Weight (g)	Median Thickness (mm)
Local	57	7.6	0.6	3.6
Indiana Hornstone	200	10.5	0.2	2.2
Flint Ridge	13	10.8	0.2	1.9
Unknown	29	9.0	0.2	2.4

[a] Upper Mercer (N=3) and Delaware (N=3) not included due to low sample size.

and intensive core reduction as well as tool manufacture. In contrast to core reduction, the complete flakes resulting from tool manufacture should be longer and thinner thus exhibiting an overall increase in relative thickness along with a decrease in weight and thickness.

The values from Spracklen do not correlate with the core reduction or tool manufacturing dichotomy identified by Sullivan and Rozen (1985) or Connolly (1997) when comparing median relative thickness to median thickness or median weight (Table 2). Instead, the debitage from Spracklen exemplifies a third signature, tool resharpening. Recall from above that low relative thickness values should reflect core reduction. A distinguishing feature of the Spracklen complete flake assemblage is that the median relative thickness values are substantially lower than any values reported by Connolly (1997). However, Sullivan and Rosen's conceptualization of core reduction assumes a corresponding increase in overall flake size as measured by thickness or weight. For example, Sullivan and Rosen (1985:Figure 5) recorded median thickness of about 6.5 mm for flakes with a median relative thickness around nine. However, the median thickness and median weight values from Spracklen are nearly identical to the values obtained by Connolly at most areas within Fort Ancient. When combined, the relative thickness, thickness, and weight values reflect small thin flakes at Spracklen. The reason these do not correlate with Sullivan and Rosen's values relates to the inability of their chosen proxy measures of flake size (weight and thickness) to account for changes in flake length or width. In other words, the three basic measures of flake form are length, width, and thickness. Changes in flake size can occur with changes in any or all of these measures. The Spracklen complete flakes are nearly identical in thickness, but with a lower relative thickness value than the Fort Ancient flakes. This suggests that reduction in the length and/or width account for this difference. When we substituted weight for thickness to account for flake size, the same patterns were found (Table 2). Falling outside of those signatures for core reduction and tool manufacture described by Sullivan and Rosen (1985), the complete flakes from Spracklen provide the signature for tool resharpening events. Short and/or narrow flakes that are also exceedingly thin are produced when retouching or resharpening the edges of already finished bifacial tools. In summary, especially in reference to non-local cherts, the general lithic strategy at the site consisted of retouching already finished tools, presumably before their transport away from the site, as few finished bifaces were recovered.

An additional line of evidence supporting the dominance of bifacial resharpening at Spracklen is the recovery of 21 biface margin removal flakes. Margin removal flakes are actually fragments of a bifacial edge produced when the knapper makes a mistake in applied force or striking position in an attempt to rejuvenate a bifacial edge. These margin removal flakes are almost exclusively composed of non-local cherts including Indiana Hornstone (n=11), Upper Mercer (n=6), and Flint Ridge (n=2), with Delaware (n=1) and Cedarville-Guelph (n=1) also represented.

Bifaces

Two notched bifaces were recovered during excavation (Figure 5). One is the base of a small side notched point made from a fossiliferous heat treated chert. The other is a larger side notched, or possibly eared, point made from a waxy, buff colored chert. The tip of this point is missing and a break along the base prevents confidently assigning this to a type. Thirteen additional bifaces and biface fragments were recovered during excavation (Figure 6). Several of these (3174, 685, 303, 3882, 4124, 1389) are thin with fine flaking along the margins and may therefore represent fragments of finished hafted bifaces. Most of these appear to be manufactured from high quality nonlocal chert (Indiana Hornstone and Flint Ridge), while two appear to be lower quality, presumably more local, chert. Fragments of two bifacial scrapers (3175, 1192) manufactured from Indiana Hornstone chert were also recovered. Four large, thick, early stage bifaces made from local chert were also recovered (687, 304, 2609, 2610).

Figure 5. Notched bifaces recovered from Spracklen. From left to right: Trimble point from surface collection, side-notched base from Unit 4, side-notched point from Unit 7.

Bladelets

Fifty-four Hopewell bladelets and bladelet fragments were recovered from the surface and excavated contexts at Spracklen (Figure 7). The mean maximum width and thickness of the bladelets (maximum width mean = 10.3 mm, SD = 3.3 mm; maximum mean thickness mean = 3.1 mm, SD = 1.3 mm) falls within the range seen at other Ohio Hopewell sites (e.g., Greber et al. 1981). Bladelets were manufactured from Indiana Hornstone (79%), Flint Ridge (14%), and Upper Mercer (4%) flint. One complete blade core rejuvenation flake of Indiana Hornstone chert (689) was recovered. Rejuvenation flakes are removed from a blade core when the platform angle becomes too steep to remove additional blades. This means that even though this rejuvenation flake is small (22.1mm maximum length) the flintknapper desired to remove additional blades from the equally small core.

Two complete bladelet cores and seven core fragments were recovered at Spracklen (Figure 7). The complete cores are small and at, or near, exhaustion. Both complete cores are made from Indiana Hornstone with one a haystack type (2611) and the other tabular (7.1), following the terminology of Greber et al. (1981). Blade core fragments were made from Indiana Hornstone (n=4), Upper Mercer (n=2), and Flint Ridge (n=1) flint.

Groundstone

Two groundstone celts were recovered from Spracklen (Figure 8). One is a complete specimen found only a few centimeters below the surface in Unit 8. This small specimen (81.1 mm length, 34.9 mm width, 16.4 mm thickness) was manufactured by minimal modification on one end of a small river cobble. Another celt fragment was discovered on the surface while shovel testing on the north side of the site. This represents about 1/4 of a larger implement and appears to be the blunt proximal end of a celt.

Fire-Cracked Rock

After chipped stone debitage, fire-cracked rock (FCR) was the most abundant material recovered from Spracklen. While exact proportions of

Figure 6. Bifaces recovered from Spracklen. Top row, from left: 3175, 3174, 31.1, 687, 685; Middle row, from left: 303, 304, 3882, 4124, 2609; Bottom row, from left: 2610, 1192, 1389.

each material have not been tabulated, metamorphic/igneous materials dominate the FCR assemblage at Spracklen while a distant minority of the assemblage is sandstone. The raw material for the FCR was likely collected from streams or glacial till in the immediate vicinity. The mean mass of the 541 pieces of FCR recovered from Spracklen is 20.4 g. However, the median mass of FCR is only 10.4 g. Only 16 specimens weighed more than 100 g while 62.1% of the assemblage (n=336) weighed less than 15 g. In other words, the pieces of FCR recovered from Spracklen are exceedingly small.

Due to the paucity of features, and considering the evidence from chipped stone debitage, the exhausted nature of the FCR assemblage at Spracklen is more likely the result of site reuse than intensive occupation. Like all lithic tools, FCR is a reductive technology that eventually reaches a point of exhaustion in which a piece becomes too small to efficiently perform its intended function (Brink and Dawe 2003; Graesch et al. 2014). The function of heated rock is to retain heat and save on fuel resources as a result. In general, FCR fractures more, and therefore becomes smaller, the more times it is heated and cooled (Graesch et al. 2014). Unlike curated lithic tools, FCR is often included as de facto refuse upon site abandonment because it is rarely transported from site to site (Brink and Dawe 2003). Thus, previously occupied sites can become sources of FCR. If a site like Spracklen is reoccupied, larger pieces

Figure 7. Bladelets and bladelet cores from Spracklen. Top row, from left: 1390, 1197, 1198, 1199, 3885; 2nd row, from left: 4520, 2617, 2619, 3592, 3593; 3rd row, from left: 3594, 3595, 12.2, 1196, 689; Bottom row, from left: 2611, 2612, 7.1.

are more likely to be reused, in turn becoming smaller pieces. Obviously, we cannot directly attribute the FCR to the Middle Woodland occupation. The point is that the FCR reflects repeated, short-term use of the site, similar to the pattern observed in other lines of evidence. We assume this characterized the Middle Woodland occupation as well.

Pottery

Twelve pottery fragments were recovered from four different 2x2 m units at Spracklen. They were recovered in the plowzone and are thus heavily weathered. Each sherd is grit tempered. They all appear to be undecorated body sherds. The average thickness of the assemblage is 6.3 mm. The thickness values fall within the range of Middle to Late Woodland pottery within the Ohio Valley.

In summary, the site setting, lithic assemblage, and paucity of features indicate that Spracklen was occupied for relatively brief periods. The amount of material, diagnostic artifacts from multiple temporal periods, and depleted nature of the FCR assemblage indicate that people returned to Spracklen many times in the past. Occupants largely brought finished bifacial tools to the site, where they resharpened these and replenished their toolkits with some implements made from local materials while on-site. During the Middle Woodland period, bladelets were also manufactured and presumably used at Spracklen. Some heavy duty woodworking is suggested by the presence of ground stone celts. The eroded nature of the ceramic assemblage suggests that pottery was more prevalent than the ceramic assemblage currently demonstrates. The environmental setting indicates that people were probably drawn to this upland location to hunt and/or harvest nuts. The high percentage of non-local chert and Hopewell bladelets suggests that site use was most intensive during the Middle Woodland.

Comparison

In this section, we focus on the Middle Woodland component as several lines of evidence (diagnostic artifacts and the high percentage of non-local chert) suggest this was the major occupation at the site. Spracklen provides an integral piece to studies of Hopewell settlement patterns because small upland sites have received substantially less attention than the massive mound and earthwork centers, or even floodplain hamlets (Dancey and Pacheco 1997; Pacheco and Dancey 2006; Ruby et al. 2005). We compare the findings from Spracklen with other sites in Ohio, particularly the Miami Valley, with special emphasis on sites in similar settings, in order to identify other

Figure 8. Groundstone celt (left) and celt fragment (right) from Spracklen.

sites with evidence of repeated, short-term occupations with a heavy reliance on non-local chert and bladelets.

The occupants of Spracklen relied predominantly on non-local cherts (78% of total assemblage), with Indiana Hornstone constituting nearly 70% of the debitage recovered. These results are similar to those found at the Fort Ancient Earthworks, where the people left behind predominately non-local cherts of Indiana Hornstone and Flint Ridge (see Connolly 1991, 1997; Miller 2014, 2015). However, a much wider range of lithic materials has been recovered from Fort Ancient, likely because Fort Ancient served as a regional trading hub and ceremonial complex resulting from the congregation of Hopewell from various areas, while Spracklen was occupied for a short period of time by a small number of individuals.

Comparison of Spracklen with the nearby Pollock Works illustrates major differences in chert sources between the sites. O'Sheal's (2007) analysis of a sample from Pollock identified only one example of Indiana Hornstone, while the non-local assemblage was predominately Upper Mercer (23% of total assemblage) and Flint Ridge (14% of total assemblage). With the sites in close proximity, the exploitation of similar chert materials would be expected. Several possibilities may account for these differences. The differences between Spracklen and Pollock could indicate differences in the timing of occupation at the two sites. Additionally, with much of Pollock unexcavated, it is possible that a cache of Indiana Hornstone has not been located. Alternatively, O'Sheal (2007) classified over 34% of the Pollock assemblage as an unknown chert type and thus it is possible that Indiana Hornstone artifacts could be present but unidentified.

Jonah's Run (33WA82) is perhaps the most widely discussed Ohio Hopewell logistical site (e.g., Dancey and Pacheco 1997 and Pacheco and Dancey 2006). Located on a terrace overlooking Caesar Creek, the site is interpreted as a hunting camp due to the high proportion of retouched tools and utilized flakes in comparison to low numbers of lithic debitage and pottery fragments. Several bladelets were also recovered from the surface and in excavations at Jonah's Run. Spracklen contains convincing evidence of stone tool retouch, minimal evidence of pottery, along with numerous bladelets. Neither site contained pit features while

several postmolds were identified at Jonah's Run. The lack of bladelet cores at Jonah's Run does not indicate on-site bladelet production. Further direct comparison of the assemblages from the two sites is problematic because investigators did not screen most of the plowzone at Jonah's Run. Unfortunately, no chert sourcing data are available from Jonah's Run.

Closer to Spracklen in Greene County, 33GR924 yielded a Hopewell bladelet and several dozen Middle/Late Woodland ceramic sherds at the base of an upland slope about 1 km from the Wright Brothers Mounds (33GR30), overlooking the Mad River (Klinge and Schwartz 2011). Excavation of over 86 m^2 at 33GR924 failed to identify any subsurface features. Artifact density at the site was low with no 1x1m unit containing more than 30 artifacts. While some Flint Ridge chert was recovered, the majority of chipped stone material was identified as Columbus/Delaware or local glacial till (Klinge and Schwartz 2011). In comparison, Spracklen contained a much higher density of artifacts as well as a higher percentage of non-local cherts and bladelets in the assemblage.

Further south along the Little Miami River in Warren County, Bailey (33WA797) is a blufftop site that overlooks the river about 1 km to the west. The multicomponent site has been interpreted as another short-term camp due to the presence of a small number of pottery fragments (McGraw Plain and McGraw Cordmarked) and FCR but with no structural remains, pits, or midden (Klinge et al. 2008). A few Hopewell bladelets were recovered from the site, including two of Indiana Hornstone chert, along with some non-local chert flakes. However, the vast majority of lithics were manufactured from unidentified, probably local, chert (Klinge et al. 2008).

In summary, Spracklen shares some characteristics with other short-term Middle Woodland upland sites in southwest Ohio, namely the presence of bladelets and lack of pit features or midden. Jonah's Run and Spracklen may represent variations on the same theme as upland logistical sites. However, none of the sites reviewed above replicate the preponderance of non-local chert and bladelet technology observed at Spracklen. Whether this is a reflection of prehistoric reality or differences in archaeological recovery methods is difficult to evaluate without further evidence. Regardless, assemblages dominated by non-local chert and evidence for bladelet production are typically associated with "specialized" camps (Coughlin and Seeman 1997; Pacheco 2010:41; Prufer 1967:289). However, these sites tend to be directly adjacent to earthworks as Coughlin and Seeman (1997) and Prufer (1967) documented at Liberty and Cowan (2006) notes for Fort Ancient. While the distance from Spracklen to Bull or Pollock is only four kilometers, this is still several orders of magnitude greater than the distance from most other specialized camps to their respective earthworks. Similarly, there is no evidence for craft production or other activities directly associated with ceremonial production or preparation at Spracklen. However, not all specialized camps are directly associated with earthworks. Pacheco (1997) interprets portions of Murphy IV, about 3 km from the Newark earthworks, as specialized due to the surface collection of Indiana Hornstone bladelets (Pacheco 1997). The distance to an earthwork is comparable for the two sites yet Murphy IV is on an outwash terrace and Spracklen is farther into the uplands. While greater amounts of bladelet debris was recovered from Murphy IV on the surface, the lack of subsurface investigations make further comparison with Spracklen difficult.

Substantially more investigations targeted short-term Middle Woodland upland sites in Illinois, along the Illinois River and in the American Bottom, especially (see papers in Yingst 1990a). Any direct comparison between sites in Ohio and Illinois is hampered by the different cultural and geographic settings. However, our attempt here is to examine similarities in the general pattern at Spracklen of repeated, short-term occupations with a heavy reliance on non-local chert and bladelets. Massie and Archie, along the bluffs of the Illinois River in west central Illinois, were initially thought to be short-term hunting camps. However, excavations revealed evidence of a Middle Woodland structure at Massie, as well as numerous pit features; a wide range of artifact

types at both sites suggests that these sites were more intensively occupied than Spracklen (Farnsworth and Koski 1985).

Elsewhere in Illinois, bladelets are rare at Eagle and Rogers Lake (Wagner 1990), Widman (Wolforth et al. 1990), Point Shoal (Yingst 1990b), and Coldfoot (Katz 1990). Additionally, while some non-local chert (such as Burlington or Cobden) was identified in these assemblages, at no site did artifacts of non-local chert constitute a majority of the assemblage. Blades do form a major portion of the toolkit at specialized ritual camps, such as Napoleon Hollow (Odell 1994; Wiant and McGimsey 1986), in the Illinois River valley. However, Spracklen does not possess the telltale signs of ritual staging such as other exotics (i.e., copper, mica, etc.), specialized deposition of refuse, mortuary preparation, or close proximity to mound or earthwork centers. In summary, the patterns observed at Spracklen are not observed at any of the investigated Middle Woodland sites in Illinois.

Conclusion

In conclusion, the Middle Woodland component at Spracklen is a short-term upland logistical camp, similar in some ways to Jonah's Run. We assume that people were drawn to the site throughout time to exploit upland resources in the area. During the Middle Woodland, it is tempting to note the presence of earthworks such as Pollock and Bull in the vicinity as further reason for the site's occupation (Riordan 2010). The predominance of non-local chert and bladelets at Spracklen point to Hopewell connections. Larger earthworks and nearby sites of the Miami and Scioto valleys often contain a high percentage of non-local chert artifacts. However, the pattern at Spracklen is different from the sample examined from the closest earthwork, Pollock (O'Sheal 2007). In terms of non-earthwork sites, Spracklen is most similar to other examples of upland logistical sites such as Jonah's Run and not specialized camps or ritual staging areas. The lack of absolute dates from the Middle Woodland period, and the paucity of intact features, inhibit our ability to provide further comparisons with other sites. Perhaps further research will help to clarify how Spracklen relates to other small Middle Woodland upland lithic scatters in the area and how it falls into current conceptions of Hopewell settlement and ceremonialism in Ohio.

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