

The Yellowbush Creek Camp Site (33Ms29), A Late Archaic Maple Creek phase site in Southern Ohio

By: Craig S. Keener, Kevin Nye, and Joshua Niedermier
Professional Archaeological Services Team

Introduction

The purpose of this presentation is to summarize some of the recent findings at the Yellowbush Creek Camp site (33Ms29) located on a terrace beside the Ohio River near the Village of Racine in Meigs County, Ohio (Figure 1). The dominant component at the site is a significant late Late Archaic deposit associated with the Maple Creek phase that has a two-sigma calibrated date range between 1916 B.C. and 1267 B.C. A secondary Late Woodland to Late Prehistoric component is also present. Before turning to the findings at 33Ms29 a historical perspective of Maple Creek phase is provided below.

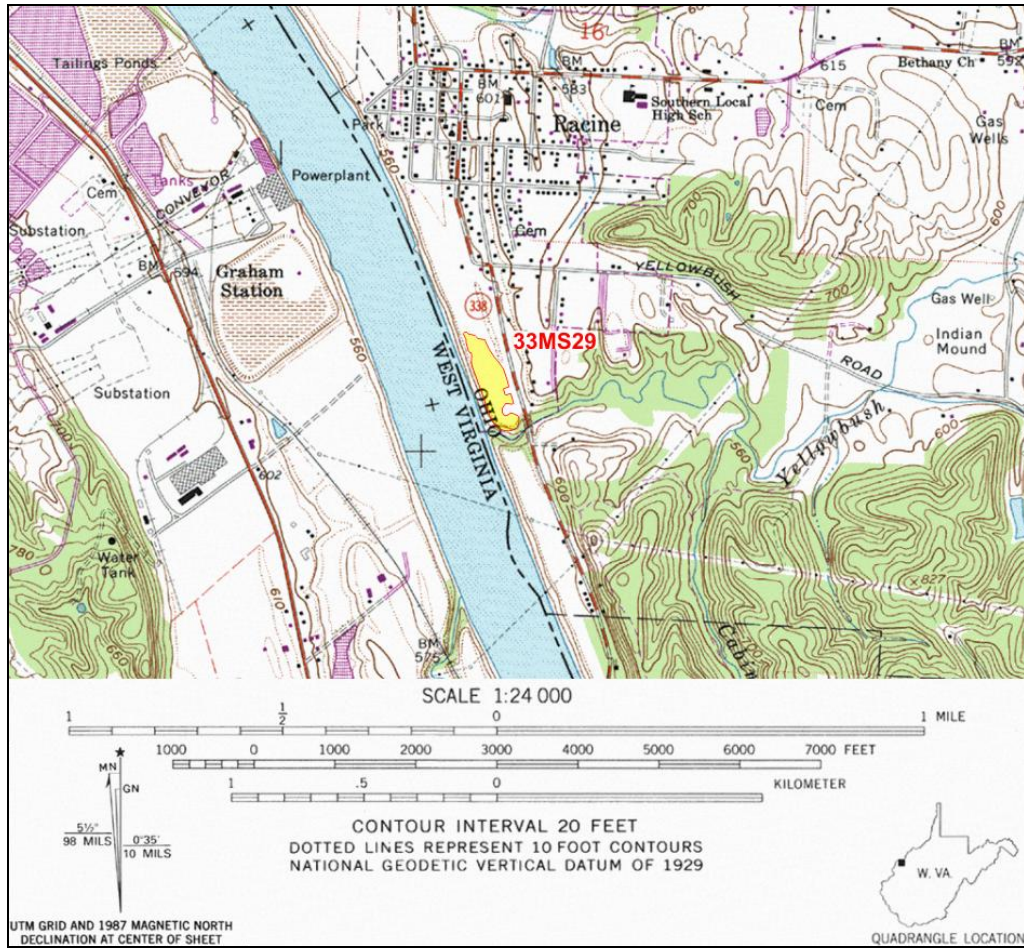


Figure 1. Location of 33Ms29 on the USGS 1968 (PR 1987) New Haven Quadrangle, W.Va.-OH, 7.5 Minute Series (Topographic) map.

The Maple Creek Phase

The Maple Creek phase, centered in southwest Ohio, was first defined by Vickery (1976, 1980) as a regional manifestation of Winters's (1969) Riverton Culture. Winters's model is based on Late Archaic settlement patterns along the Wabash Valley of east central Illinois that date between 1590 B.C. and 1160 B.C. Using radiocarbon dates from the Maple Creek site (33Ct52) and temporally diagnostic artifacts such as Merom-Trimble points Vickery placed the date range of the Maple Creek phase between 1700 B.C. and 1000 B.C. In addition to the Merom-Trimble point styles, McWhinney points were also common. A chipped flint microtool industry dominated by drills, gravers, and microperforators, not on true blades, represents the flint assemblages of this phase. Manos are also present, but other ground stones are more uncommon, although celts are more frequent than axes. Atlatl parts and bell pestles are absent or very rare (Vickery 1980: 28).

Vickery (1980, 2008) suggests that the Maple Creek settlement system is based on large base camps in riverine settings and smaller camps (ancillary camps) in the surrounding uplands. The base camp makes up the bulk of the excavated information associated with this phase, based on findings at the Maple Creek site and Logan (33Ct30). These large sized camps, which typically contain middens, burials, structure/habitation areas, and numerous pit features, are situated along the valley floors of major drainages. Vickery (1980) has suggested two types of base camps a "regional" and "local" type, both of which are located along the valley floors of major rivers. The main difference between these two is size as the regional base camp represents an aggregation of many bands coming together for a semi-permanent (six months or longer) camp. The local base camp is associated with a single band, is occupied on a seasonal basis, and is likely of shorter duration than the regional type (Vickery 1980:54-55; 2008:23). Ancillary sites were not extensively studied, but Vickery suggests that these sites may represent "stations" that involved a variety of extractive activities that were conducted so as to support the primary base camps (Vickery 2008:23).

Vickery did not clearly define the extent of the geographic range of the Maple Creek phase. His work was focused on two base camp sites, Maple Creek and Logan, both situated along the Ohio River valley in Clermont County, Ohio. Two other sites, Sandy Ridge (33Ct34) and the Butler site (33Ha249), are mentioned as probable Maple Creek base camps, both situated along the Ohio River and containing midden deposits and high artifact densities (Vickery 1980). The above site locations clearly place the Maple Creek phase in southwest Ohio along the Ohio River (see Figure 2). Vickery (1980) indicated that Maple Creek sites appeared confined to the Ohio River Valley in an east to west distribution with little to no extension into the interiors of Ohio or Kentucky. Recently, Vickery (2008) has suggested an east to west movement of Maple Creek populations, perhaps from the southwest Virginia area. Consequently, Maple Creek sites to the east of southwest Ohio should exhibit older dates.

The unclear boundary of the Maple Creek phase highlights the problem of how archaeology defines cultural assemblages through space and time. The geographical expression of a "phase" is relatively easy to define at its core (e.g. in Clermont and Hamilton counties of Ohio), but as one moves away from this area into the periphery where the placement of a boundary for a phase becomes much more complex and difficult. Sites situated along the periphery can exhibit somewhat different tool assemblages when compared with those sites in

the core due to overlap and/or direct exchange with adjacent neighboring cultural phases. The lack of any defined borders for the Maple Creek phase, which was directly related to the limited amount of Maple Creek sites identified and excavated by 1980, has resulted in the continued revision of the regional expression of this phase over the past 30 years as new data has been discovered.

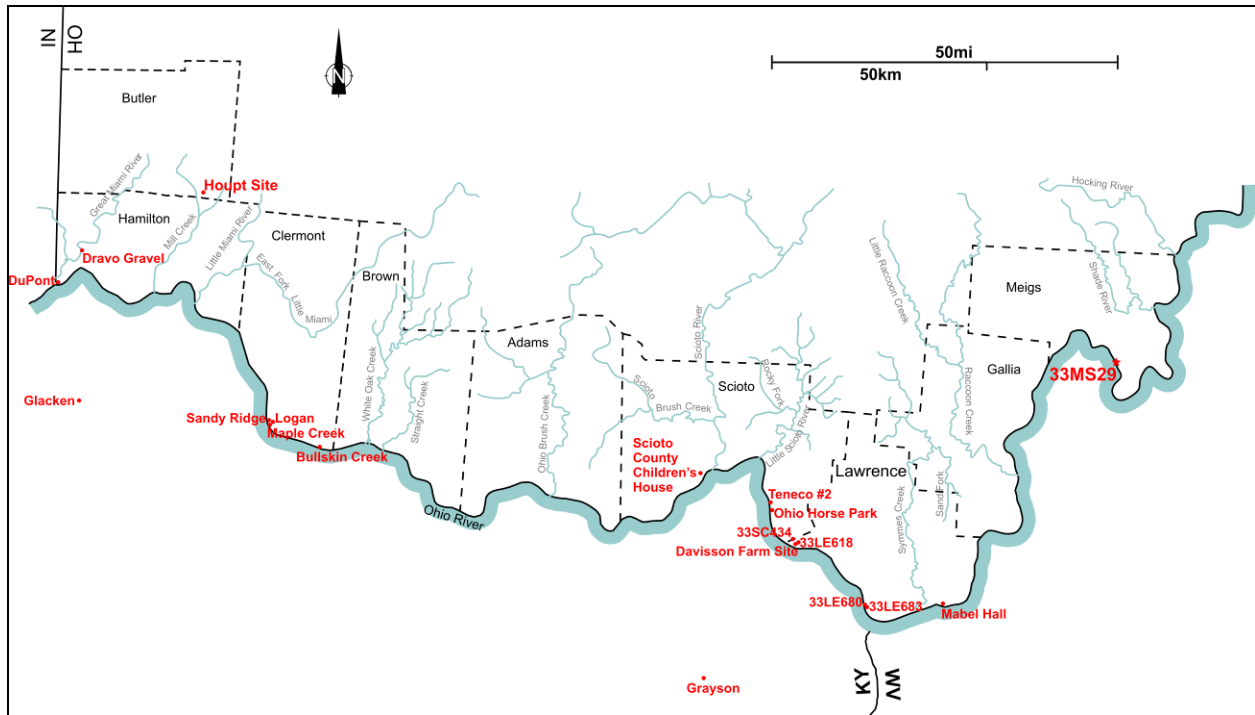


Figure 2. View of significant Maple Creek phase and late Late Archaic sites in southern Ohio and in northeastern Kentucky.

In the mid-1980s to early 1990s additional Maple Creek sites were found in Kentucky, and which were situated further to the west in Boone and Carroll counties (e.g. the Glacken site [15Be272][Boisvert 1986] and Hayes site [15Cl67][Hall 2005]), into the interior south of the Ohio River Valley (e.g. Pine Crest Shelter [15Le70][O’Steen et al. 1991], Skidmore Shelter [15Po17][Cowan 1976]), and to the east, most notably with the intensive excavations at the Grayson site (15Cr73) in Carter County, Kentucky (Ledbetter and O’Steen 1992; Clay 2009). Grayson (see Figure 2), one of the better excavated sites, is a multi-component Late Archaic (Maple Creek phase), Terminal Archaic (Cogswell phase), and late Late Woodland site. The Maple Creek component contained a midden, numerous features, which included many large storage pits, hearths, earth ovens, roasting pits, post molds, a cache, and two burials. Two semi-circular structures were identified, one of which contained an interior hearth. A total of 33 Merom-Trimble points, and one McWhinney point were recovered. Radiocarbon dates from two features containing Merom-Trimble points yielded uncalibrated dates of 1611 B.C. +/- 86 years, and 1460 B.C. +/- 142 years (Ledbetter and O’Steen 1992). Grayson was interpreted as a small base camp, occupied during the fall and winter, which was re-used multiple times. The findings at Grayson and Glacken (also interpreted as a base camp) challenge the perception that large Maple Creek base camps were confined to the Ohio River, as both of these sites are located along upland tributaries of the Ohio River (Boisvert 1986; Ledbetter and O’Steen 1992).

In Ohio the Houpt site (33Bu477) was intensively excavated in 1994 and was interpreted as a small upland encampment associated with the Maple Creek phase (Duerksen and Doershuk 1994, 1998). Two features containing Merom-Trimble style points were dated to 1520 B.C. and 1150 B.C. (calibrated). Duerksen and Doershuk interpreted the site as a small short term extraction camp focused on hunting activities which would fit the definition of Vickery's "ancillary" camp. Located on a hummock along the Mill Creek valley, a secondary tributary of the Ohio River, the site is important as it demonstrates use of the interior during the Maple Creek phase. Small Maple Creek phase-related ancillary sites in the uplands/interior, away from the Ohio River, are still understudied. Duerksen and Doershuk's (1998) work represents the lone publication on this particular site type in Ohio.

In the 2000s new information would be obtained further to the east on the Ohio side of the Ohio River at Davisson Farm (33Le619), 33Le680, and Yellowbush Creek (33Ms29) (Figure 1) (Brown 2009; Keener 2003; Keener and Pecora 2003; Keener et al. 2010; Purtill 2002, 2008, 2009; Purtill and Norr 2001). All three sites are located along the valley floor of the Ohio River and represent late Late Archaic occupations and potential Maple Creek phase sites. At Davisson Farm, interpreted as a base camp, most of the dated features (a total of five) had two sigma calibrated ranges that fell between 1900 B.C. to 1140 B.C. (Purtill 2008). Site 33Le680, was interpreted as a series of short term field camp occupations which contained six dated features with two sigma calibrated ranges that fell between 1690 to 900 B.C. (Purtill 2002; Keener et al. 2010). These two sites, while containing numerous features, did not have middens, burials or formal structures, although some evidence of auxiliary structures, such as wind breaks, and the possible presence of lean-to structures were evident.

While Merom-Trimble points were found at both Davisson Farm and 33Le680, they were found in small numbers. At Davisson Farm four Merom-Trimble points were recovered in contrast to 21 Brewerton points. The low percentage of Merom-Trimble points at the site appears to be one of the key reasons why Purtill (2008) does not place the site into Maple Creek, but rather chooses not to ascribe the site to any particular phase. Site 33Le680 also has a limited Merom-Trimble assemblage with only one point recovered, but overall there were few diagnostic projectile points obtained at the site. Three Brewertons and one Buck Creek Barbed represent the extent of the Late Archaic point assemblage. A flint micro-tool assemblage, however, is present at the site with modified flakes, scrapers, and drill being manufactured from small flint cobbles acquired from the nearby Ohio River. Only a limited ground stone tool assemblage was recovered with celts more abundant than stone axes. Interpreted as a field camp, it was suggested that the site represented a short term hunting site that was used multiple times (Keener et al. 2010). As a field camp, 33Le680 probably best equates with Vickery's (1980) description of an "ancillary" site, a site that would be a subsidiary to an associated base camp in the local region, such as Grayson. Contrary to Vickery's suggestion (1980, 2008) that ancillary sites are located in the uplands, 33Le680 is situated in the bottomland of the Ohio River. If small hunting and gathering camps are radiating outward from established base camps then their location in the broad resource rich bottomlands along the Ohio River should be just as common.

The findings prior and during the excavations at 33Ms29 have extended the Maple Creek phase to the west (Carroll County, Kentucky) and east (to the confluence of the Big Sandy and Ohio Rivers), and into the interior away from the Ohio River valley. Site 33Ms29 provides

strong evidence that the Maple Creek phase extends further to the east along the Ohio River, as it lies approximately 80 km (50 mi) upstream from the Big Sandy confluence. The following summary details the findings at 33Ms29 and how it fits into the existing Maple Creek settlement model.

Investigation History at 33Ms29

Site 33Ms29 was first identified by Claude White in 1978 during a Phase I Cultural Resource Management (CRM) survey for a nearby sewer line in the Village of Racine based on local informant testimony and the collection of a small amount of flint debitage (n=6) from the surface (White 1978). The site was located outside White's survey area and, consequently, was not rigorously tested nor evaluated. It was considered small in size and limited to the southern end of the field it was located in, near the confluence of Yellowbush Creek and the Ohio River. The Ohio Department of Natural Resources (ODNR) obtained ownership of the field containing 33Ms29 in 1999 in order to develop a boat ramp and parking lot area to access the Ohio River. To fulfill Section 106 requirements, a CRM survey was conducted on the 8.9 ha (22 acre) parcel of land. The Phase I survey (Keener 2003) was performed by Professional Archaeological Services Team (PAST) in 2003. Testing found that 33Ms29 was much larger and extensive than what had previously been recorded, discovering that the site stretched the length of the field and roughly measured 345m (1,132ft) long by 97.5m (320ft) wide with a total area of 26,325m² (283,369ft²) (Figure 3). Testing recovered a large number of prehistoric artifacts (n=510) that included a small assemblage of plain and cordmarked pottery sherds (n=22). Test unit excavations and bucket auger sampling found artifact deposits extending 1 m below surface and a possible feature location (Keener 2003). The site was considered potentially eligible to the National Register of Historic Places (NRHP) and was recommended for further work.

Due to the large size of the site, there was little ODNR could do to avoid impacting it with the proposed boat ramp; however, they wanted to continue with the project and to ascertain where the main deposits of the site were located. The Phase II assessment, consequently, had two goals: 1) to determine if the site was eligible, and 2) to better understand the parameters of the deposit (Keener and Pecora 2003). Geophysical survey and hand testing at first were focused on the boat ramp and access area which was originally proposed to be placed in the central portion of the field, and which also represented the center of the site (see delineated area in Figure 3). Test units (1m² and .25m² in size) were positioned at probable cultural anomalies and within high artifact density locations. Hand excavations quickly found significant deposits that included 14 prehistoric features and the presence of a 50 cm (19.6in) thick midden that was evident between 30 cm to 80 cm (11.8in to 31.5in) below surface. The midden contained FCR with small amounts of fragmentary burned bone, debitage, and pottery. Pit features and posts were found throughout the midden matrix at different levels. Besides the features identified by the hand testing, the initial geophysical survey indicated numerous other potential cultural anomalies including possible post formations indicative of structures. Radiocarbon dates from two features (see Table 1) which contained pottery, yielded two-sigma calibrated date ranges

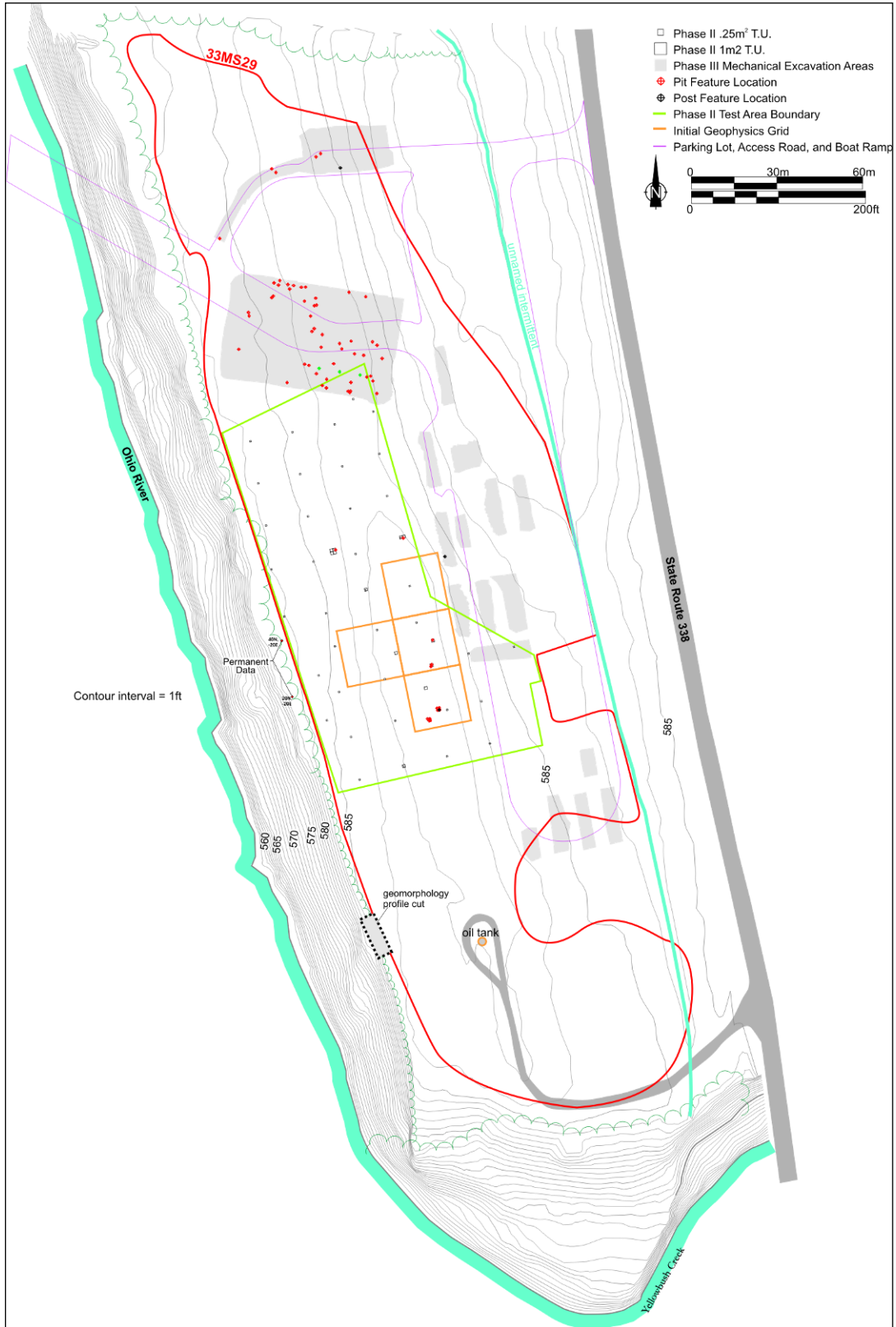


Figure 3. Topographic map of 33MS29 showing site boundary, Phase II test units, Phase III block removal areas, and features.



Figure 4. Geophysical survey data from 33MS29 showing potential cultural anomalies (Burks and Keener 2004).

between 1690 to 1290 B.C. indicating a late Late Archaic association (Keener and Pecora 2003). Numerous tools and diagnostic artifacts were recovered that included six Merom style points, four found in midden context. The site was determined eligible to the NRHP.

With particularly dense deposits in the center of the site ODNR decided to expand geophysical testing to cover most of the remaining portions of the site to help assist possible revisions to the construction plans. In all a total of 20,600 m² (221,744ft²) of the site area was examined with a gradiometer. Figure 4 shows the results of this survey, which found extensive evidence of potential cultural anomalies. A total of 245 anomalies, shown in red on Figure 4, were considered possible prehistoric pits, while four probable post mold cluster areas suggested the potential for structures (Burks and Keener 2004). Numerous other cultural anomalies were not marked. The data indicated extensive occupation, with anomalies (presumed features) overlapping anomalies along the landform, particularly in the central and southern portions of 33Ms29. Based on this information ODNR decided to move the boat ramp and access area to the northern end of the site where there were significantly fewer features. In addition to the lower number of features it was felt the midden deposit at the northern end of the site was less substantial. Parking was positioned in the eastern half of the field in a swale and along the eastern edge of the site where artifact densities were low. The final plans for the boat ramp project area are shown on Figure 3.

Obviously, most Phase III archaeological investigations where a site will be fully impacted by a project would target the core area of a site. But since ODNR was able to change their construction plans and avoid the heart of the site, only the peripheral areas of 33Ms29 were investigated. The central and southern portions of the site were to be left untouched and preserved. Consequently, the midden area was not revisited and only the limited amount of testing conducted in the Phase II and geophysical survey of this area serve as a representative sample. This aside the Phase III involved 5,709 m² (61,453ft²) of mechanical soil removal, representing roughly 21.7% of the site area (Figure 5). While a midden was not found in these areas 55 additional prehistoric features and 12 historic features were identified (Brown 2009).

Summation of the Findings at 33Ms29

The Phase I-III investigations at 33Ms29 confirmed a dominant Late Archaic Maple Creek Phase component and secondary Late Woodland to Late Prehistoric component (Brown 2009; Keener 2003; Keener and Pecora 2003). The Late Archaic component was found to horizontally encompass the entire site area, while vertically was found from the surface to depths of 1m (3.3ft). The Late Woodland to Late Prehistoric component was mainly confined to the plow zone, and was more concentrated in the northern end of 33Ms29. In all a total of 16,735 prehistoric artifacts were recovered that included 13,505 FCR, 2,943 debitage, 76 formed artifacts (e.g. cores, blanks, biface fragments), 126 tools, and 85 pottery fragments. Artifacts were obtained from the surface to depths of 1m, and were particularly concentrated within a midden that ranged from 30 cm to 80 cm below surface in the central and southern portions of the site. Radiocarbon dates taken from features inside the midden, as well as diagnostic projectile points acquired from midden indicate the creation of this deposit during the late Late Archaic period, between 1900 and 1270 B.C. (Table 1).



Figure 5. View of initial mechanical soil removal during Phase III at 33Ms29 (Brown 2009). Photo courtesy of EMH&T.

Table 1. Radiometric dates from 33Ms29

Feature No.	Beta#/Lab#	Conventional Radiocarbon Age	Calibrated Date ¹ (68.2% probability)	Calibrated Date ² (95.4% probability)
53	UTCAG08-035V2	3430 +/-70 BP	1876-1639 cal BC	1916-1534 cal BC
18	179833	3250 +/- 70 BP	1610-1440 cal BC	1690-1400 cal BC
100	UTCAG08-034V1	3160 +/- 70 BP	1514-1322 cal BC	1608-1267 cal BC
16	179832	3170 +/- 70 BP	1510-1390 cal BC	1600-1290 cal BC
46	UTCAG08-032V2	1360 +/- 70 BP	608-766 cal BC	546-860 cal AD

UTCAG = University of Tennessee Center for Archaeometry and Geochronology

1 = 1 Sigma calibrated

2 = 2 Sigma calibrated

The Flint Assemblage, Formed Artifacts, and Tools

The flint debitage from 33Ms29 that could be technologically assigned to a particular reduction category contained a high percentage of initial reduction flakes (55%) followed by bifacial thinning flakes (45%). The higher ratio of initial reduction flakes corresponds to the presumption that most of the flint brought into the site was coming from the nearby Ohio River in cobble form. Analysis of the flint assemblage found that 92% of the flint debitage with cortex

exhibited a water worn surface indicative of a cobble taken from a stream or riverbed. FCR recovered from the site also showed a similar result with those pieces containing the original external surface exhibiting a water worn cobble form (Keener 2003; Keener and Pecora 2003). The bifacial thinning flake assemblage and extensive amount of broken flake and shatter debris (n=1,391) indicate that flint cobbles underwent all stages of reduction with the goal being the production of tools. Non-tool formed artifacts were limited to cores (n=26) and biface fragments (n=50). The biface fragments represented non-descript pieces that could not be assigned to a particular form. No blanks or pre-forms were recovered suggesting a focus on making tools for immediate use. Brown (2009) noted that the Merom-Trimble points appeared to be made from flakes, most likely large interior flakes. A flake to point progression that bypasses the blank/pre-form stage may be the result of utilization of small river cobbles whether by choice or necessity.

The tool assemblage at 33Ms29 is extensive with 126 items recovered. Table 2 lists the 13 different types of tools found at the site. The most numerous flint produced tools were projectile points, followed by modified flakes. The vast majority of the points found at 33Ms29 are Merom Cluster types (see Table 3 and Figure 6), indicating that flint reduction trajectories were probably tailored to the creation of this specific projectile point style. Vickery (1980, 2008) has indicated the Merom-Trimble points were not used as projectile points, but rather exclusively as tools for scraping, cutting and chiseling purposes. If this is the case these points along with the modified flakes, scrapers, and flint awl/gravers recovered at 33Ms29 were likely utilized in meat and/or hide processing activities.

Table 2. Tool assemblage at 33Ms29

Tool Type	n
Modified flakes	28
Drills	2
Scrapers	4
Awls/gravers	5
Projectile point	65
Hammerstone	3
Pitted stone	6
Axe	1
Celt	1
Worked stone	2
Cupstones	5
Gorget	1
Worked Slate	2
Game Ball	1
Total:	126

The projectile point assemblage at 33Ms29 contained 33 points that were considered temporally diagnostic (Table 3). These are representative of seven point types: Matanzas, Lamoka, Brewerton side notched, Merom/Trimble, Adena Stemmed, Jack's Reef, and Triangular

cluster. The majority of these points (n= 27) are Late Archaic in age and of these are dominated by Merom Cluster types (n= 24, 72.7% of the point assemblage). Figure 6 shows a representative sample of the Merom assemblage at 33Ms29. Merom Cluster points were recovered in six feature contexts, two of which had late Late Archaic radiocarbon dates (Table 1). Vickery (1980, 2008) has noted that Meroms, along with McWhinney points, are the defining point styles for the Maple Creek phase. No McWhinney points have been recovered at 33Ms29. McWhinney points also tend to be lacking or absent at other eastern Maple Creek sites (e.g. 33Le680 and Grayson) (Keener et al. 2010; Ledbetter and O’Steen 1992).

Table 3. Projectile point list, typology and age range for 33Ms29

Description	n	Temporal Period	Time Range*
Matanzas Cluster	1	Late Archaic	3,700 B.C. to 2,000 B.C.
Lamoka	1	Late Archaic	3,500 B.C. to 2,500 B.C.
Brewerton Side Notched	1	Late Archaic	2,980 B.C. to 1,723 B.C.
Merom Cluster	24	Late Archaic: Riverton Culture	1,600 B.C. to 800 B.C.
Adena Stemmed	1	Early Woodland	800 B.C. to 300 B.C.
Jack’s Reef	1	Late Woodland	A.D. 500 to A.D. 1,000
Triangular Cluster	4	Late Woodland to Late Prehistoric	A.D. 800 to Historic

*Justice (1987)

The groundstone tool assemblage is of moderate size (n= 22). The most common items were pitted stones (n=6), followed by cupstones (n=5) (see Figure 7). The cupstones are probably related to nut processing. An ethnobotanical analysis of nine prehistoric feature locations by Annette Erickson of Hocking College found hickory and/or walnut nutshell evident in eight of the feature samples (Brown 2009). Additional ground stone items recovered included several hammerstones, an axe, celt, gorget, game ball, and several worked pieces of slate and stone.

Pottery Assemblage

Pottery (n=85) fragments were found across the length of 33Ms29 within the plow zone, midden layer, and three of the features in the central portion of the site (Features 3, 16, and 18) (Figure 8) (Brown 2009; Keener 2003; Keener and Pecora 2003). All but one of the pieces were small body sherd fragments. The lone exception was a very small and deteriorated rim piece. The assemblage, excluding sherdlets and exfoliated pieces, included 20 cordmarked sherds with grit temper, 47 plain surfaced sherds with grit temper including one with incised decoration, and a single plain surfaced sherd with grit/grog temper. Grit size ranged from 0.43 to 2.0 mm. The average thickness of cord-marked pieces is 5.9 mm with a range of 3.4 mm to 8.1 mm. The plain smooth variety possessed an average thickness of 7.3 mm with a range of 3.8 mm to 10.6 mm. Measurable pieces from the plow zone were thinner on average (mean thickness = 6.1 mm) versus those found in the lower level midden (mean thickness = 6.8 mm). Pottery found in three features located in the midden, possessed thickness ranges of 8.9 mm to 10.5 mm (Keener and Pecora 2003).

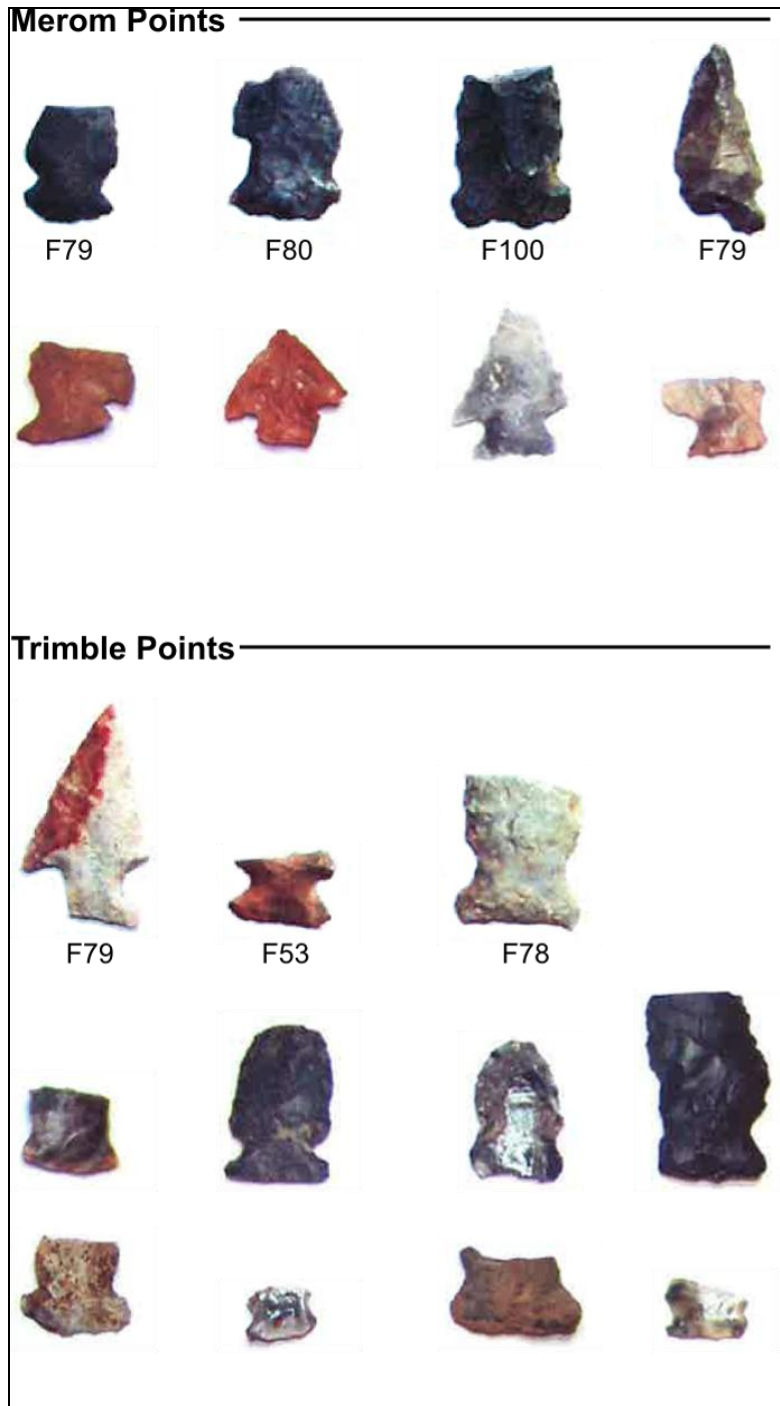


Figure 6. View of a selection of the Merom/Trimble assemblage at 33Ms29 (Brown 2009).



Figure 7. View of two cupstones found at 33Ms29 (Brown 2009; Keener and Pecora 2003).

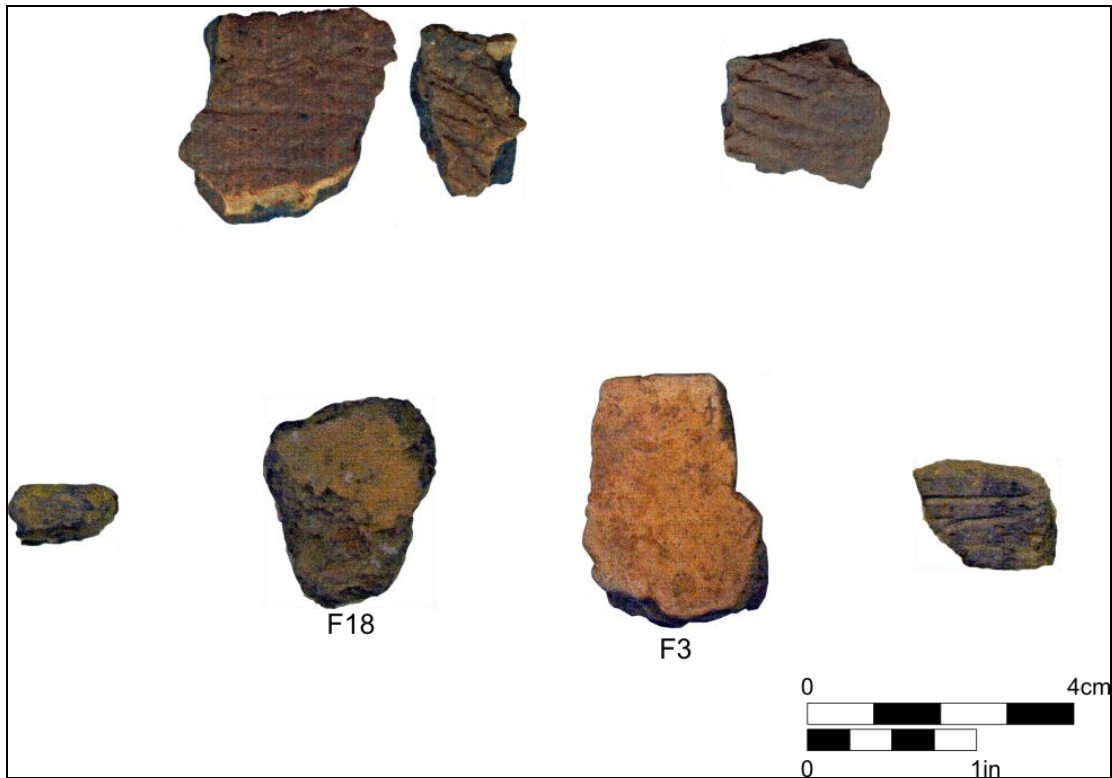


Figure 8. View of grit-tempered cordmarked and plain-surfaced pottery from 33Ms29 (Brown 2009; Keener 2003; Keener and Pecora 2003).

Due to the fragmentary and dispersed nature of the assemblage, no attempt was made to ascertain the minimum number of vessels present, nor was the assemblage associated with a particular pottery style. It is likely that a good portion of the pottery found in the plow zone is Late Woodland in origin. Those pieces recovered in dated feature context (Features 16 and 18) were firmly placed into the late Late Archaic with Sigma 2 calibrated dates ranging from 1690 to 1290 B.C. (Table 1) (Keener and Pecora 2003). These early ceramic dates are part of a growing number of reported pre-1000 BC Late Archaic sites containing pottery (see Table 15.2 in Purtil 2009). Early thick walled ceramic types in Ohio include Fayette Thick (Griffin 1943; Tune 1985), Dominion Thick (Cramer 1989, 2008) and Leimbach (Keener et al. 2009; Shane 1975, Stothers and Abel 1993, 2008). In general, early dated ceramics along the Ohio River have been associated with Fayette Thick. Pottery is rarely reported at Maple Creek phase sites; however, at Maple Creek (33CT52) a small assemblage of “thick, coarsely tempered ware,” plain surfaced sherds were recovered from horizons 1 and 2 which were dated to the late Late Archaic (1,700 to 1000 BC) (Vickery 2008:18).



Figure 9. View of profile of Feature 53, a flat bottom pit (Brown 2009). Photo courtesy of EMH&T.

Features

In all a total of 76 prehistoric features (62 pits, 7 posts, 7 undetermined [not excavated]) were identified during the investigations at 33Ms29 (Figure 3), of which 69 were fully or partially excavated. Pits found at the site were categorized into small and large basin or flat bottom shaped forms (see Table 4). Basin shaped pits were the most common profile shape and probably represent hearths. Flat bottom pits (Figure 9), often termed earth ovens, were likely used for cooking/roasting activities (Keener et al. 2010; Heyman et al. 2005; Shott et al. 1989; Wandsnider 1997). Several of the flat bottom pits (n=6) were lined by burnt clay and/or contained burnt bone (unidentifiable) and burnt clay fragments within their respective feature matrixes.

Table 4. Pit feature types and attributes recorded at 33MS29.

Site#	# of Pits	Pit Shape	Max. Length/ Diameter Range (cm)	Depth Avg./ SD (cm)
33MS29	62	15 large basin	95 to 132	17.1/9.7
		10 large flat bottom	91 to 163	27.2/8.1
		24 small basin	31 to 88	13.1/10.0
		13 small flat bottom	29 to 87	28.9/16.2

Few post mold features (n=2) were found during the Phase III excavations (Brown 2009), even though in the central portion of the site five post stains were identified in the limited Phase II test units (Keener and Pecora 2003). This discrepancy may be related to the fact that Phase III excavations were focused in the northern area of 33Ms29 where there were low artifact densities, no midden, and a lower potential for subsurface features. Four post molds found in the Phase II were located in close proximity to one another near several pits (n=6). These posts may suggest the presence of some type of structure/enclosure in this area such as a wind break or more formal semi-circular structure such as those identified at Grayson (Clay 2009; Ledbetter and O’Steen

1992). This is also supported by the geophysical data, which has a cluster of features at this location that may be indicative of a structure (see Figure 4, southern most possible structure location) (Burks and Keener 2004). The geophysical data also indicated several other possible structure locations based on circular or arc shaped anomaly patterns. Most of these are located in the central portion of the site in the midden. Ground truthing of these possible structures, however, has not been completed to verify this.

While the Phase III investigation did not find any distinct structure pattern it did uncover numerous pits (see Figure 10). Brown (2009) had indicated a possible structure/habitation area which was devoid of features yet was bordered by a broad arc of pits.

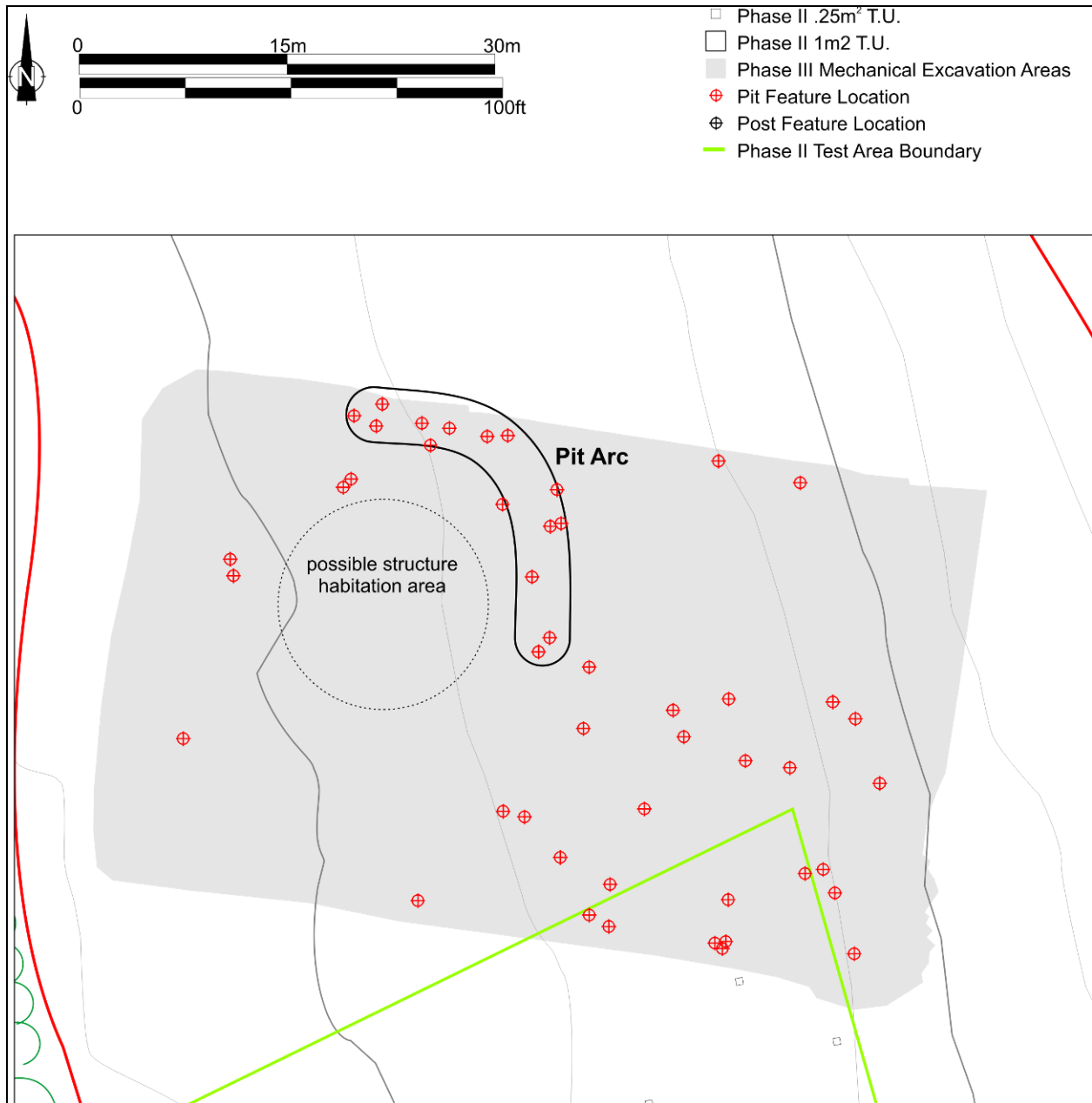


Figure 10. View of potential pit arc and possible structure area at 33Ms29.

Faunal and Floral Data

Fragmentary burnt bone was found throughout the midden deposit and in several pit contexts. None of this material was identifiable. Late Archaic and Maple Creek sites with recorded faunal material typically contain a large percentage of deer and elk remains, between 70 to 87% of the faunal assemblage (Vickery 1980, 2008). Bone tool assemblages are also found at these sites such as bone fishhooks, needles, perforators, awls, flutes, drilled teeth, antler scrapers, and turtle carapace containers (Vickery 1980). A few (n=3) turtle carapace fragments were recovered from Feature 18 in the midden area of 33Ms29 (Keener and Pecora 2003). The lack of well preserved faunal remains is likely associated with the acidic soil properties evident at the site (Brown 2009). Other notable eastern Maple Creek sites lack faunal remains due to poor preservation such as 33Le680 (Keener et al. 2010) and Grayson (Ledbetter and O'Steen 1992).

Floral remains were dominated by nutshell, exclusively hickory and walnut (Brown 2009; Keener and Pecora 2003). A total of 521 nutshell fragments were recovered that included hickory (n=133, 6.5g), walnut (n=89, 4g), and walnut family (n=299, 39g). The bulk of the nutshell (36g, 73%) was recovered from the midden area in features identified during the Phase II investigation (Keener and Pecora 2003). The nutshell remains and cupstones present at the site indicate that the Late Archaic occupants were incorporating nut mast resources into subsistence activities. Only a small number of seed types (n=3) were recovered and from only two features (Features 53 and 97). Feature 53 contained one bedstraw and seven maygrass seeds. Feature 97 contained a large number of sumac seeds (n=316). The ethnobotanical examination points to a late fall/winter and summer occupation of the site.

Significance and Interpretation of 33Ms29

Four late Late Archaic dated contexts, and a large Merom/Trimble point and micro tool assemblage firmly place 33Ms29 within the parameters of the Maple Creek phase as advanced by Vickery (1980, 2008). However, contrary to Vickery (2008), the continued findings of Maple Creek sites in Kentucky and eastward along the Ohio River have not produced an east to west trend of date chronologies. Older and more recent dated sites do not appear to exhibit any discernible regional movement pattern and with so few sites possessing dated contexts it may be some time before this premise can be properly accessed. The radiometric dates at 33Ms29 are more comparable to Grayson than to the core area of the phase. Site 33Ms29 is similar to the Maple Creek site with the recovery of pottery, which to the authors' knowledge has not been found at any other Maple Creek phase site.

At first glance, the finding of a large midden with numerous features, a large complex and diverse tool assemblage, and possible structures at 33Ms29 are very similar to the findings at Maple Creek, Logan, and Grayson. These attributes of the site meet the definition of Vickery's (1980, 2008) base camp for the Maple Creek settlement pattern (Keener and Pecora 2003). Yet while the limited Phase II excavations in the core of the site demonstrated intensive occupation, it also found that features were identified at different levels within the midden, overlapping each other, indicating multiple occupations. This is also supported by the geophysical data that reveals a massive number of probable features in the central and southern portion of the site. Ledbetter and O'Steen (1992:27) have pointed out the problems associated with a site like

33Ms29, and for that matter the Maple Creek site itself, that rather than representing aggregated base camps, the middens and numerous features may actually constitute a series of much smaller re-occupations of a particular landform over an extended period of time. Brown's (2009) excavation in the northern end of the site, which did not contain a midden, resulted in his conclusion that this portion of the site may be more representative of a specialized camp, which is more reflective of Vickery's ancillary site type. Only until the core area containing the midden is excavated more thoroughly will we better know which one of these interpretations is right or if both may apply at such a large site. Fortunately, approximately two thirds of the site, containing the core area of the midden, remains unexcavated and preserved for potential future research.

To conclude, the CRM investigations at 33Ms29 have contributed greatly to late Late Archaic studies along the Ohio River in southern Ohio. Much appreciation must be given to ODNR for the amount of time, expense and patience involved with their project, which has contributed to the field of archaeology and to a greater understanding of the prehistory of the area. Acknowledgement should also be given to OHPO which advocated that an article detailing with the findings be presented for publication to the Ohio Archaeological Council web page.

References Cited

Boisvert, Richard A.

1986 Late Archaic Settlement Models in the Middle Ohio Valley: A Perspective from Big Bone Lick Kentucky. Unpublished Ph.D. dissertation, Department of Anthropology, University of Kentucky, Lexington.

Brown, Joel

2009 Phase III Data Recover for Prehistoric Period Archaeological Site 33-Ms-29 Located Within the Approximately 8.9 ha (22 a.) Ohio Department of Natural Resources Ohio River Boat Access in the Village of Racine, Meigs County, Ohio. EMH&T. Copy on file at the Ohio Historic Preservation Office, Columbus.

Burks, Jarrod and Craig S. Keener

2004 Additional Geophysical Survey Work on 33MS29 Located at the Proposed Ohio River Boat Access in Racine, Sutton Township, Meigs County, Ohio. Professional Archaeological Services Team. Copy on file at the Ohio Historic Preservation Office, Columbus.

Clay, R. Berle

2009 Where Have All the Houses Gone? Webb's Adena House in Historical Context. *Southeastern Archaeology* 28(1): 43-63.

Cowan, C. Wesley

1976 Test Excavations in the Proposed Red River Lake, Kentucky: 1974 Season. Ms. On file, Office of State Archaeology, University of Kentucky, Lexington.

Cramer, Ann C.

1989 The Dominion Land Company Site: An Early Adena Mortuary Manifestation in Franklin County, Ohio. Unpublished Masters thesis, Kent State University, Kent, Ohio.

2008 The Dominion Land Company Site: An Early Adena Mortuary Manifestation in Franklin County, Ohio. In *Transitions: Archaic and Early Woodland Research In The Ohio Country*, edited by M. P. Otto and B. G. Redmond, pp.284-333. Ohio University Press, Athens, and The Ohio Archaeological Council, Columbus.

Duerksen, Ken and John Doershuk

1994 Report on the Archaeological Data Recovery of 33BU477, a Late Maple Creek Phase Occupation in Butler County, Ohio. Report on file at the Ohio Historic Preservation Office.

1998 The Houpt Site and The Late Archaic of Southwestern Ohio. *Midcontinental Journal of Archaeology* 23(1):101-112.

Griffin, James B.

1943 Adena Village Pottery from Fayette County, Kentucky. *The University of Kentucky Reports in Anthropology and Archaeology* 5(7):666-670.

Hall, Christopher T.

2005 Phase III Archaeological Investigations at the Hayes Site (15Cl67), Carroll County, Kentucky. Cultural Resource Analysts, Lexington.

Heyman, Marjorie, Elliot M. Abrams, and AnnCorinne Freter

2005 Late Archaic Community Aggregation and Feasting in the Hocking Valley. In *The Emergence of the Moundbuilders: The Archaeology of Tribal Societies in Southeastern Ohio*, edited by E. M. Abrams and A. Freter, pp. 67-81. Ohio University Press, Athens.

Justice, Noel D.

1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States: A Modern Survey and Reference*. Indiana University Press, Bloomington.

Keener, Craig S.

2003 Phase I Cultural Resource Management Survey for a Proposed 8.9 ha (22 a.) Ohio River Boat Access, in Racine, in Sutton Township, Meigs County, Ohio. Professional Archaeological Services Team. Copy on file at the Ohio Historic Preservation Office, Columbus.

Keener, Craig S. and Albert P. Pecora

2003 Phase II Archaeological Assessment of Site 33Ms29 located at the Proposed Ohio River Boat Access in Racine, Sutton Township, Meigs County, Ohio. Professional Archaeological Services Team. Copy on file at the Ohio Historic Preservation Office, Columbus.

Keener, Craig S., Kevin Nye, and Joshua Niedermier

2009 The Settler's Ridge Site, An Early Woodland Leimbach Phase Upland Encampment in Northern Ohio. *North American Archaeologist* 30(1):23-56.

2010 Phase III Archaeological Mitigation of Sites 33-LE-680, 33-LE-683, 33LE-684, and 33-LE-685 in the Village of South Point, Lawrence County, Ohio. Professional Archaeological Services Team. Copy on file at the Ohio Historic Preservation Office, Columbus.

Ledbetter, R. Jerald, and Lisa D. O'Steen

1992 The Grayson Site: Late Archaic and Late Woodland Occupations in the Little Sandy Drainage. In *Current Archaeological Research in Kentucky 2*, edited by D. Pollack and A. G. Henderson, pp.13-42. Kentucky Heritage Council, Frankfort.

O'Steen, Lisa D., Kristen J. Gremillion, and R. Jerald Ledbetter

1991 Archaeological Testing of Five Sites in the Big Sinking Creek Oil Field, Lee County, Kentucky. United States Forest Service, Department of Agriculture, Winchester, Kentucky.

Purtill, Matthew

2002 Phase II Archaeological Investigations at Sites 33LE680, 33LE683, 33LE684, and 33LE685 within the Proposed South Point Industrial Park, Lawrence County, Ohio. Gray & Pape, Inc. Copy on file at the Ohio Historic Preservation Office, Columbus.

2008 Down by the River: Late Archaic Through Terminal Archaic Dynamics at the Davisson Farm Site (33LE619), Lawrence County, Ohio. In *Transitions: Archaic and Early Woodland Research in the Ohio Country*, edited by M. P. Otto and B. G. Redmond, pp. 41-78. Ohio University Press, Athens and The Ohio Archaeological Council, Columbus.

2009 The Ohio Archaic: A Review. In *Archaic Societies: Diversity and Complexity Across the Midcontinent*, edited by T. E. Emerson, D. L. McElrath, A. C. Fortier, pp. 565-606. State University of New York, Albany.

Purtill, Matthew and J. A. Norr

2001 Phase I and Preliminary Phase II Cultural Resources Investigations and Evaluation of the Proposed South Point Industrial Park, Lawrence County, Ohio. Gray and Pape, Inc. Copy on file at the Ohio Historic Preservation Office, Columbus.

Shane, Orrin. C.

1975 The Leimbach Site: An Early Woodland Village in Lorain County, Ohio. In *Studies in Ohio Archaeology* (revised edition), edited by O.H. Prufer and D.H. McKenzie, pp.121-186. The Kent State University Press, Kent, Ohio.

Shott, Michael. J., Rolfe D. Mandel, Gerald Oetelaar, Nancy O'Malley, Mary L. Powell, and Dee Anne Wymer

1989 Childers and Woods: Two Late Woodland Sites in the Upper Ohio Valley, Mason County, West Virginia. Archaeological Report 200. Program for Cultural Resource Assessment, University of Kentucky, Lexington.

Stothers, David. M. and Timothy J. Abel

1993 Archaeological Reflections of the Late Archaic and Early Woodland Time Periods in the Western Lake Erie Region. *Archaeology of Eastern North America* 21: 25-109.

2008 Early Woodland Prehistory (1000-1 BC) in the Western Lake Erie Drainage Basin. In *Transitions: Archaic and Early Woodland Research in the Ohio Country*, edited by M. P. Otto and B. G. Redmond, pp. 79-116. Ohio University Press, Athens and The Ohio Archaeological Council, Columbus.

Tune, Teresa W.

1985 Fayette Thick: A New Vessel Form for an Old Ceramic Type. In *Woodland Period Research in Kentucky*, edited by D. Pollack, T. Sanders, and C. Hockensmith, pp. 43-61. The Kentucky Heritage Council, Frankfort.

Vickery, Kent D.

1976 An Approach to Inferring Archaeological Site Variability. Unpublished Ph.D. dissertation. Dept. of Anthropology, Indiana University, Bloomington.

1980 Preliminary Definitions of Archaic Study Units in Southwestern Ohio. Copy on file at the Ohio Historic Preservation Office, Columbus.

2008 Archaic Manifestations in Southwestern Ohio and Vicinity. In *Transitions: Archaic and Early Woodland Research in the Ohio Country*, edited by M.P. Otto and B. G. Redmond, pp. 1-28. Ohio University Press, Athens and The Ohio Archaeological Council, Columbus.

Wandsnider, LuAnn

1997 The Roasted and the Boiled: Food Composition and Heat Treatment with Special Emphasis on Pit Hearth Cooking. *Journal of Anthropological Archaeology* 16:1-48.

White, Claude F.

1978 An Archaeological Impact Assessment of the Syracuse-Racine Regional Sewer Works Project (C 391150), Sutton Township, Meigs County, Ohio. Copy on file at the Ohio Historic Preservation Office, Columbus.

Winters, Howard Dalton

1969 *The Riverton Culture: A Second Millennium Occupation in the Central Wabash Valley*. Illinois State Museum Reports of Investigations, No. 13. Springfield, Illinois.