

The 2007-2008 Archaeological Investigations at Lady's Run (33R01105)

by

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Introduction

This report is a brief, preliminary overview of our 2007 and 2008 field seasons at the Lady's Run site (33Ro1105), a multicomponent Woodland period site that includes an important Ohio Hopewell occupation with a structure and associated pit features. The site is a companion to the Brown's Bottom #1 site (33Ro1104), which we excavated in 2005 and 2006 (Burton 2006; Carr 2008; Pacheco, Burks, and Wymer 2005, 2009; Snyder et al. 2008). Both sites are located on the same section of Scioto River bottom land on the well known Harness Farm, about 10 km south of Chillicothe. The purpose of this report is to present the field methods and preliminary results of our 2007 and 2008 field seasons at the site. After a one year hiatus in 2009, we will return to the site in 2010 to continue and hopefully complete the excavation. A formal site report will be completed sometime after work at the site has finished.

One issue that needs to be clarified before presenting our preliminary report is how the site came to be called Lady's Run. As explained in our most recent report on the Brown's Bottom #1 site, published here on the OAC website (Pacheco, Burks, and Wymer 2009), considerable confusion has surrounded the Brown's Bottom site name since the days of the original site investigations in the early 1960s. We suspect that the area we are now calling Lady's Run represents cluster II, of three clusters, from Prufer's 1963 excavations and surface surveys, which were reported by Blank (1965). The confusion was generated because later in his Scioto Survey Report, Prufer (1967) himself identified the area encompassing all three of the clusters as Brown's Bottom 1, giving them the site number 33Ro21. Prufer also identified a second Brown's Bottom site on

the same section of bottom land, some 500 m west and closer to the Scioto River, which he called Brown's Bottom 2. He gave this site number 33Ro22.

As we noted in the 2009 BB#1 report, Prufer's site numbers, while mimicking Ohio Archaeological Inventory (OAI) numbers in form, are not actually official state site inventory numbers. We asked Prufer about this in March of 2007 and he placed blame on the shoulders of Raymond Baby. Prufer said Baby assigned him these numbers and told him they were part of the new trinomial state numbering system, but ultimately Baby did not follow through in recording the site numbers with the state. Quite obviously, Prufer never followed-up either. Consequently, these OAI numbers were assigned to other sites. Later during the late 1970s, the Ohio Historic Preservation Office assigned the number 33Ro107 to cover all three clusters of the Brown's Bottom site reported by Blank (1965). To avoid any further confusion, the Ohio Historic Preservation Office (OHPO) assigned us the number 33Ro1104 to cover our 2005-2006 research, although we will continue to refer to the site as Brown's Bottom #1 since it is already known by that name.

In 2006 we began to focus on a second artifact cluster, located about 100 m northwest of our BB#1 cluster; it's one we feel probably represents a good candidate for Blank's cluster II. But rather than call this site BB#2, since Prufer had already assigned this name to a separate site location, or BB#1 cluster II, or even BB#3, both of which we felt further perpetuated the confusion, we decided we needed a new site name. Our solution was a naming contest held by the 2007 field school students. Throughout the 2005-2007 field seasons, Bob Harness frequently visited us in the field with his female black lab named Lady (Figure 1). Since Lady loved to jump out of Bob's golf cart and

dash across the site, visiting the students in their excavation units and chasing all manner of things, the students' proposed to name the site Lady's Run. We have also been given a new OAI number for the site by the OHPO: 33Ro1105. Should future work in this area of the farm reveal additional discrete sites, new names and new OAI numbers will be assigned. Hopefully, this approach will prevent further confusion in the future.

Research Strategy and Methods

The Lady's Run cluster was actually first identified for us by Burks and his volunteer crews during an initial surface survey of Harness Field T during April of 2005 (see Pacheco, Burks, and Wymer 2005; Coughlin and Seeman 1997 show the distribution of lettered fields on the Harness Farm). Two diagnostic artifacts, a bladelet and a projectile point, indicated a possible Hopewell occupation at this locale. The surface collection also identified several small ceramic fragments, a smattering of debitage, and a loose cluster of fire-cracked rock (FCR). Since we were suspicious that this area might correspond to Blank's cluster II, we decided to place several magnetic gradient survey blocks over the cluster to see if magnetic anomalies representing potential features existed below the plowzone. The first magnetometry survey at the site was conducted in March of 2006, during which a total of ten blocks were completed, each 20 x 20 meters in size. While surveying these blocks, a Wyandotte chert (Indiana Hornstone) bladelet fragment was also found, further supporting the likelihood that this spot held the remains of a second Hopewell occupation in Harness Field T.

The 2006 summer field season was spent completing the excavation at Brown's Bottom #1. Because our spring 2006 magnetometry survey had identified several

anomalies representing potential features, we decided to work in the area of the new cluster during the 2007 field season. Prior to the summer excavation, we returned to the site in March 2007 and added eight more 20 x 20 meter blocks of magnetic data to our growing geophysical sample. This new magnetic survey work brought the total magnetometry coverage at the site to 7,200 m². The processed magnetometry data that formed the basis for planning the 2007-2008 excavations at the Lady's Run site are presented in Figure 2. Much like the BB#1 magnetic data, numerous small and large pit features (the small black anomalies that are about 50-150 cm across) are evident in the magnetic data at Lady's Run.

Prior to focusing our attention on the magnetic anomalies, our first goal during the 2007 field season was to obtain a sample of plowzone artifacts from across the site to provide distributional data and give the students some experience excavating and screening before assigning them to work on cultural features. One of the most efficient and effective sampling strategies to achieve these desired ends is systematic-aligned test pits in which a standard volume of sediment is screened. Our solution was to place 1 x 1 meter units in the southwest corner of each 20 x 20 meter block within the grid. Thus, eighteen 1 x 1 meter units were excavated in the systematic aligned sample. One very interesting feature, F421, was discovered during this sampling strategy. As will be discussed and documented in more detail below, F421 is a buried (i.e., below the plowzone) Ohio Hopewell secondary refuse deposit; it is similar in many respects to the deposit that Prufer et al. (1965) excavated at the McGraw site, which Prufer called a midden. The refuse deposit, or midden, at Lady's Run was explored throughout the

remainder of the 2007 field season and again during the 2008 field season and has proved to be a treasure trove of evidence for studying Ohio Hopewell daily life.

Our second and primary goal for the 2007 field season was to investigate a large sample of the magnetic anomalies identified by our geophysical survey. As in seasons past, Burks interpreted the results of the magnetic survey and produced a map of anomalies representing probable cultural features. These anomalies were then divided up into four magnetic amplitude classes (Figure 3)—a strategy we employed to define classes of magnetic anomalies at Brown’s Bottom #1 during the 2006 field season (Pacheco, Burks, and Wymer 2009). As we discovered at BB#1, magnetic anomaly strength is related to feature function, size, and contents and is a good tool for choosing a representative sample of features for excavation. Anomalies were given feature numbers intended to follow consecutively with the 2005-2006 feature numbers from BB#1, but unfortunately there is some overlap in the low 300 numbers.

Our next step was to exclude a portion of the anomalies (those that lack fill in Figure 3) from our sampling strata based on the cohesiveness/morphology of their magnetic signature. Obvious cultural features (i.e., pit features) typically have very consistent magnetic signatures that increase in amplitude toward the middle of the anomaly and decrease toward the edges. This sorting step left a sample of 74 likely features detected by the magnetometer, which were then divided into their respective magnetic amplitude classes using the same four classes devised at BB#1.

Our experience at BB#1 taught us that most magnetic anomalies in the strongest magnetic class (black anomalies in Figure 3) have an almost certain chance of being cultural features in these floodplain sediments. Not only that, but all of the black class

anomalies investigated at BB#1 turned out to be prehistoric earth ovens, all but one of which was revealed to be Hopewell in origin. We also learned at BB#1 that green and yellow class anomalies tend to be basin-shaped pits—that is, when they are actually associated with a discernable culture feature. While some of these less magnetic anomalies are cultural features rich with artifacts, which are easy to define during excavation, some of them have faint outlines in the sub-soil that are quite hard to define and are almost devoid of artifacts. A portion of the promising anomalies (solid-filled anomalies in Figure 3) in these two amplitude classes also yielded no evidence of cultural features, which was especially true for the yellow class of anomalies. While it is possible that some of these anomalies are associated with cultural features that are simply too indistinct to be discerned with the naked eye/trowel, they also could have been created by variations in plowzone thickness or other natural factors. It should be noted, however, that the male burial found in 2005 at BB#1 was discovered in F33, a yellow class anomaly. Thus, weakly magnetic anomalies cannot be dismissed outright as lacking cultural potential (see Pacheco, Burks, and Wymer 2009).

A stratified random sampling strategy with replacement was employed to choose which magnetic anomalies to initially investigate at Lady's Run. The sampling strata were comprised of the four anomaly amplitude classes shown in Figure 3. While this is the same sampling strategy that we employed in 2006, the smaller number of anomalies to investigate at Lady's Run (N=74) means that our sampled anomalies represent a larger, and perhaps more representative, portion of the anomalies present at Lady's Run (as compared to BB#1)—approximately four times greater than the BB#1 sample. We choose to investigate four out of the eighteen yellow anomalies (<3nT), for a 22.2%

sample, five out of the twenty-four green anomalies (3-4.99nT), for a 20.8% sample, and four out of twenty red anomalies (5-7.99nT), for a 20% sample. Since the black anomalies, which have magnetic signatures of 8+nT, were likely associated with cultural features like earth ovens, we chose a sample size double that of the other amplitude classes (because earth ovens tend to be filled with pottery and the kinds of refuse needed to study subsistence). This translated into choosing five out of the twelve black anomalies to investigate, representing a 41.6% sample. The anomalies we randomly picked to investigate are shown circled in Figure 3. Fortunately, the sample has a well dispersed spatial distribution.

In addition to the systematic aligned test pit sample and the stratified random sample of anomalies, we were also able to employ limited purposive sampling during the 2007 field season to investigate two additional black anomalies (F320 and F348). The addition of these two anomalies to the sample brings the frequency of black anomalies investigated at Lady's Run to 58.3%.

We likely would have been able to carry out even more purposive sampling, but an important discovery was made while investigating F334, one of the black anomalies chosen by the stratified random sampling technique. Five rock-filled post holes were identified in the 3 x 3 m unit opened to explore F334, representing what looked to be the northern corner of a square or rectangular structure similar in design to the one we had discovered at BB#1. Investigating these post holes, and the Hopewell structure that they did indeed turn out to represent, consumed the remainder of the 2007 field season and was the primary goal of the 2008 field season. Preliminary results of both the 2007 and

2008 excavations investigating the Lady's Run structure are presented in more detail in the next section.

Preliminary Results

The discovery of the buried secondary refuse deposit (F421) during the 2007 field season created an opportunity to explore an important and, up to this point, relatively rare Ohio Hopewell context—few unplowed Ohio Hopewell refuse deposits have ever been studied (the McGraw site [Prufer et al. 1965] and the Strait site [Burks 2004] are notable exceptions). A total of nine 1 x 1 meter units were excavated into this deposit in 2007, including the original unit (1940 E/ 2040 N) in which F421 was discovered. The eight additional units expanded outward to the west, south, and east from the original unit, creating a block excavation pattern and continuous profiles. All units were excavated down into underlying culturally sterile floodplain deposits.

During the following 2008 field season, one of our excavation goals was to better define the refuse deposit boundaries, while at the same time expanding our sample of artifacts from the deposit. Twenty additional 1 x 1 m units were excavated in 2008, bringing the total number of units in the refuse deposit to twenty-nine and our screened sample to about 8.5 cubic meters of sediment. We succeeded in discovering the northern and eastern edges of F421, but did not find the southern or western margins. Thus, an unknown portion of the deposit remains unexplored.

The secondary refuse deposit is situated in a shallow swale, which helps account for why its lower portions were never plowed. Presumably, flood deposits leveled off this swale at some point after the refuse was dumped in, burying the deposit enough to

keep it from being destroyed by modern agricultural practices. Our most complete north-south profile of the filled-in swale and its contents is shown in Figure 4. The unit in which F421 was initially discovered is located in the center of this 9 m long profile. The profile shows that the refuse deposit averages approximately 30 cm in thickness at the center, making it a little thicker on average than the McGraw refuse deposit or midden, which averages about 20 cm in thickness (Prufer et al. 1965).

When F421 was first discovered, it appeared as an organic and artifact rich layer located below the plowzone. Since our other 1 x 1 m units in the systematic aligned test pit sample had found a plowzone depth of approximately 28 cm, the first clue that we had discovered a buried Hopewell deposit in this area was the recovery of four bladelets in the first 10 cm below the plowzone. The same density of bladelets was not repeated in any other unit, however. In fact, only twenty-six bladelets were recovered by screening in the twenty-nine total units excavated in F421 through 2008; that's enough to conclusively support a Hopewell origin for F421, but not a substantial number for such a large volume of screened sediment. Vanport chert (Flint Ridge) was used to manufacture twenty-two of these bladelets, with one made out of Wyandotte chert, and three from an unknown exotic chert. No bladelet cores were recovered.

During the 2008 field season, five fragments of a beautiful small Hopewell platform pipe were recovered in the refuse dump (Figure 5). The pipe fragments were found in four separate, but spatially connected 1 x 1 m units. Since the deposit is below plow disturbance, this distributional pattern suggests very strongly that the pipe was broken elsewhere and then the fragments were gathered up and unceremoniously tossed into the trash – perhaps from within the confines of a hide or basket. Clearly the pipe was

not placed into the refuse deposit while intact. Preliminary visual inspection suggests that it broke during manufacture as there is no evidence of any residue or discoloration in it or on it that might be expected from use. Nonetheless, this conclusion will have to wait for more detailed testing. We were able to determine the source of the raw material from which the pipe is made thanks to a PIMA (Portable Infrared Mineral Analyzer) test graciously performed by Sarah Wisseman, Thomas Emerson, and Randall Hughes—the Illinois team working on a larger Hopewell pipe sourcing project. The PIMA test results show that the material is a perfect match for Ohio pipestone, likely quarried at Feurt Hill near Portsmouth, Ohio.

Additional diagnostic artifacts recovered from the buried refuse deposit include a few small fragments of mica, one Middle Woodland projectile point, and a fairly abundant, though very fragmented, Middle Woodland ceramic assemblage, including at least one small decorated rim fragment with a Hopewell Series design. A total count of ceramics is not yet available, but the 2007 ceramic sample from F421 includes 1,669 total sherds. The average weight from this sample is less than 1.5 grams per sherd (D'Amico and Pacheco 2008), indicating the assemblage is highly fragmented.

The same pattern of fragmentation is repeated in the faunal assemblage. After two years of excavating in the refuse dump we have recovered a total of 1.3 kg of bone. While we have not yet completed the counts for the 2008 faunal remains, the 2007 sample consists of 1,354 bone fragments, many of which are very weathered and eroded; a few exhibit polishing and incising indicative of decorated bone tools. The 2007 specimens have an average long axis of 13.9 mm, with an average weight of just under 0.4 grams. Additionally, 485 fragments weighed under one tenth of a gram, which is the

lowest exact weight available on our scale (D'Amico and Pacheco 2008). Artifactual materials are also present in the heavy fraction of the flotation soil samples collected from the refuse dump. Processing and analysis of these samples have thus far confirmed the high degree of fragmentation and erosion in the screen-collected ceramic and bone assemblages. The tip of a small needle or bone punch and the root end of a drilled and worked bear canine also were identified in the heavy fractions. In addition to the materials so far mentioned, the refuse dump excavations have also produced 4.94 kg of fresh water shellfish, 890 kg of FCR, and copious amounts of fragmented carbonized hickory and black walnut nutshell.

D'Amico and Pacheco (2008) recently compared the Lady's Run refuse dump to the McGraw "midden" (Prufer et al. 1965). Results of this comparison show that the two deposits are very similar in content and probable function; both deposits were used as secondary refuse deposits to systematically maintain and keep the respective settlement spaces cleared of garbage. In particular, the densities of the various artifact classes in the two deposits are reasonably similar. The only two major classes that are more abundant (per volume of excavated sediment) at McGraw are bladelets and bone tools.

The most significant difference between the two deposits may be in the amount of time it took for each to become buried. Prufer et al. (1965:12-13) argued that the McGraw midden was effectively sealed by one or more floods shortly after the occupation. As a result, the preservation of organic materials in the McGraw deposit is excellent. Prufer describes the color of the deposit as "intensely black." In contrast, the Lady's Run deposit is nowhere near as rich organically. While it does appear as a darker layer under the plowzone when it is first exposed upon excavation, it quickly dries out

and loses this color. Given the degree of ceramic and bone fragmentation, the reason for this difference in organic preservation between the McGraw and Lady's Run refuse deposits must have something to do with the extreme weathering experienced by the Lady's Run trash. It was not effectively buried, relative to the modern surface, until perhaps long after the site had been abandoned.

Temporal Components and Pit Feature Contents at Lady's Run

Excavation of the stratified random sample of magnetic anomalies in 2007 produced mixed results in terms of locating obvious Hopewell pit features. All features or potential features in the yellow and green classes proved to be ephemeral with none containing abundant cultural material or even a single diagnostic artifact, though they were features. Excavation of the red and black class anomalies in the sample provided somewhat better results. Three of the red anomalies in the sample also failed to provide diagnostic artifacts, but all of these anomalies were clearly pit features. The other red anomaly, F390, turned out to be an earth oven. Incidentally, the signature of this anomaly was just below the threshold for being classified with the stronger magnetic anomalies (i.e., the black class).

All of the black class anomalies also turned out to be pit features, but, unlike at BB#1, they did not all represent obvious earth ovens. Excavation of F334, which serendipitously led to the discovery of the Lady's Run Hopewell structure, proved to be confusing. The feature we excavated was a basin-shaped pit with only 11.5 kg of FCR, which contrasts with black class anomalies at BB#1 that tended to have hundreds of kilos of FCR. However, F334 did contain a layer of red-orange burned soil located about 10

cm below the bottom of the plowzone underneath the north corner of the structure. This burned looking soil, which no doubt contributed to this feature being so magnetic, was discovered while digging the structure post holes during the 2008 field season. It's possible that F334 is an older pit feature that the posts of the later Hopewell house intruded upon. Another of the black class anomalies in the sample, F323, is probably the remnants of a deconstructed earth oven. The other three black class anomalies in the sample contain two earth ovens, F414 (Figure 6) and F349, and an organically rich basin-shaped pit, F403, which contains some interesting Hopewell diagnostics that we will discuss further below.

Diagnostic artifacts in the black class anomalies show that Lady's Run is a multi-component Woodland period site. While evidence is limited, there does seem to be some spatial segregation of these components. As at BB#1 (Pacheco, Burks, and Wymer 2009) there is a Late Woodland, Jack's Reef Horizon occupation at Lady's Run. But there may also be an Early Woodland component at Lady's Run, as well.

The most significant diagnostic Jack's Reef artifact recovered so far is a large rim sherd found in F414 (Figure 7). This large, thick, chert/grit tempered vessel is characterized by crude cord marking and a collared rim decorated by obliquely applied cord-wrapped dowel impressions. F414 is a deep earth oven, about the only kind of Jack's Reef features so far found at BB#1 and Lady's Run. The F390 earth oven probably also represents a Jack's Reef feature based on the morphology of the feature and a few thick cordmarked sherds that look similar to the ceramics in F414. The Jack's Reef component at Lady's Run, in combination with Jack's Reef components at BB#1 and the C+ site (Seeman 1992) and intrusive elements in the Edwin Harness mound (Greber

1983), adds incrementally to the evidence for the presence of Jack's Reef horizon occupation in and around the Liberty Earthworks, though the earthworks were built about 600 hundred years before the Jack's Reef materials were deposited.

An Early Woodland occupation is probably indicated by abundant ceramics in F323. This pottery is very fragile, plain surfaced, thick in cross-section, and grit-tempered. It looks similar to typical Early Woodland ceramics from the region (see the contributions in Otto and Redmond 2008). This feature, while probably the remains of a deconstructed earth oven, was difficult to define in plan and profile. The concentration of ceramics was associated with 32.05 kg of FCR and 32.6 g of animal bone. A radiocarbon date is necessary before we can definitely associate this feature with the Early Woodland period.

The other possible Early Woodland feature is F320, a black anomaly chosen for purposive sampling because of its strong magnetic signature (22.47 nT). The feature contains only a single artifact, one fragment of thick, plain, grit-tempered pottery found very near the bottom of the feature, so its identification as Early Woodland is tentative at best. Like many other features at the site, it was very difficult to identify in plan view during the excavation. Approximately 50 cm were excavated (i.e., 20 cm below the plowzone) before the feature could be clearly mapped in plan view. Students excavating this feature, composed of a team of our veterans, convinced us that removing the fill of the feature and exposing the FCR at the bottom would make for a nice picture of how the feature was constructed. Figure 8 shows the results of their work after exposing the intact layer of FCR at the bottom of the feature; below this is an approximately 15 cm thick layer of charcoal. This configuration of FCR on top of charcoal at the bottom of a pit is

common for earth ovens, though this oven may have been used only once and then back-filled with culturally sterile soil.

The Middle Woodland component associated with F421 and the structure (see below) is represented by two black class anomalies from the stratified random sample (F403 and F349) and one purposively chosen anomaly (F348). Two of these three are earth ovens, F348 and F349. We recovered diagnostic ceramics in F349 and bladelets and ceramics in F348. The F349 earth oven is fairly similar in plan and profile to the Hopewell earth ovens excavated at BB#1. The most striking difference is the quantity of FCR. F349 contains only 69.25 kg of FCR, which is considerably less than the quantity of FCR in most Middle Woodland earth ovens at BB#1. The F348 earth oven is fairly small, but unique because it is part of a paired feature, consisting of a basin-shaped pit and an earth oven that are side by side and which appear to have been purposefully constructed next to each other. The basin side contained numerous artifacts, but had no evidence of *in situ* burning, while the earth oven side contained few artifacts and had a layer of charcoal at the bottom.

The other Middle Woodland feature, F403, is an organically rich basin-shaped pit. Unlike many of the site's other features, it was easily identified in plan view when the plowzone was removed (Figure 9). Along with 35 g of animal bones and abundant ceramics, F403 contained two unique artifacts for the site. The first of these is a longitudinally split and worked bear canine with a grid pattern of punctations on the root (Figure 10). The canine clearly broke while perforations were being added to the back side (not shown in Figure 10). The second artifact is a small stone bowl or cup (Figure 11). The two larger portions of the bowl were found on opposite sides of the feature; the

dark section was mixed in with a concentration of charcoal rich soil and the light section was in a clump of “clean” sandy fill. Thus, the sharp contrast in color between the fragments was caused by different depositional contexts within the feature and was not intentional. The stone bowl appears to be carved out of limestone, but this has not yet been confirmed. After we reassembled the bowl it became apparent that the hole in its side, near the bottom, has a beveled edge. The beveling suggests that the hole was intentionally made and not by a single strike as the beveling effect was created by the removal small flakes. This object could be a type of pipe not seen before at Hopewell sites. It may have been broken in manufacture.

In addition to the bear canine and stone bowl, a preliminary scan of the flotation samples from F403 indicates that this pit also contained a dense and rich paleoethnobotanical assemblage, including numerous specimens of Eastern Agricultural Complex taxa, squash rind, and hickory and black walnut nutshell.

The Hopewell Structure

As noted previously, excavation of the unit opened to explore F334 led to the unanticipated discovery of five rock-filled post holes that appeared to be the northern corner of a square or rectangular structure. After discovering these potential post holes during the 2007 field season, we began to excavate units designed to follow the walls of this structure to the east and west, eventually exposing what turned out to be the northeast and northwest walls of the structure. We succeeded in finding the east and west corners of the structure with four days left in the 2007 field season. These corners indicated that the structure was square in shape, like the one identified at BB#1, but slightly smaller in

size. Since it was clear that we would not have enough time left in the 2007 field season to follow the southeast and southwest walls of this structure, we estimated where we thought the south corner and the center post should be and set up excavation units in each area. The projected locations were spot on and we found the center post and the south corner at the end of the 2007 field season. With all of the corners exposed, we were able in 2007 to measure the size of the Lady's Run structure as 11.8 x 11.8 meters, providing an interior area of 139 m² (Figure 12). There was insufficient time to excavate the fill from any of the posts in 2007, except for the center post. Unlike the wall posts, the center post contained no rock in its fill, besides a couple possible chinking stones. It was 30 cm in diameter and extended down to 47 cm deep below the plow zone. The helicopter fly-over photo shown in Figure 12 indicates the extent of the 2007 excavations, which were backfilled at the end of the excavation season and re-excavated in 2008.

While excavating units to follow the walls, we encountered numerous Hopewell artifacts, including bladelets, ceramics, mica, and FCR—especially in the vicinity of the eastern corner. The presence of these artifacts below the plowzone suggested there might be an intact living surface or floor present in this portion of the structure. The possibility of finding an intact living surface or floor contributed to our decision to re-bury the unexcavated post holes at the end of the 2007 field season, saving the floor excavation for the 2008 field season when we could take our time with the excavation.

In 2008, we took a more fine-grained approach to the excavation of the structure interior. Ultimately, we were able to map the distribution of artifacts in the structure and did find an area of what appears to be prepared floor located along the southeast side of the structure. The potential floor is composed of a thin, 3 cm-thick layer of compact pea

gravel. No artifacts were recovered from screening the pea gravel, but the heavy fractions from flotation samples contained a few tiny ceramic and bone fragments. While the artifacts found above the pea gravel may indeed be part of a living surface, they could also represent artifacts plowed out of interior features or they might even be secondary refuse from some other source. Nonetheless, while our analyses of the complex results of the 2008 excavations in the interior of the structure are incomplete and on-going, we feel confident in stating that the south side of the structure appears to have been buried on average about 10 cm deeper, relative to the plowzone and modern surface, than the northern side of the structure, thus preserving a section of prepared floor.

During the 2008 field season we were able to excavate the entire interior of the structure and several associated features (Figure 13). Two of the features, F358 and F359, are shallow basin-shaped pits containing FCR and abundant diagnostic Hopewell artifacts (Figure 14). These features are similar to the thermal pits found in the BB#1 structure. They are not hearths but perhaps were used to hold heated rock that radiated heat into the room. Two probable hearth areas, identified by bright reddish-orange soil appearing directly below the plowzone, were discovered along the northwest side of the structure at either end of the wall. A pit was found in between the two probable hearths and it had a thin layer of reddish-orange soil directly below the plowzone and deeper layers that extended down into the underlying sterile sand and gravel. This pit contains few artifacts and ends at a depth of approximately 65 cm below plowzone. This could be a storage pit into which hearth cleanings were dumped near the end of its use-life. Interestingly, the possible interior storage pit in the BB#1 structure also contained

relatively few artifacts and ended in the loosely compacted sand that underlies the fertile silts on this section of floodplain.

In 2008 the remainder of the wall posts at the Lady's Run structure were excavated and mapped. The post holes mimic the BB#1 posts in all respects, with each containing small cobbles and gravel that appear to have been acquired from nearby Dry Run. Similar to BB#1, the structure posts were apparently pulled and then the post holes were purposefully backfilled. The forty wall posts excavated in the Lady's Run structure had an average diameter of 22.6 cm and an average depth of 42 cm below the base of the plowzone. This average size matches the posts of the BB#1 structure remarkably well, where the average diameter of the forty-seven excavated wall posts is 22.2 cm and the average depth is 33.2 cm below plowzone. The difference in post depth between Lady's Run and BB#1 is likely a product of the Lady's Run structure being partially buried, while the BB#1 structure has been somewhat truncated by plowing. Though feature placement, wall length, and corner post configuration of the Lady's Run structure are not identical to the BB#1 structure, the two structures are very similar in overall architectural design and orientation; both are square with large center posts and have interior hearths, other thermal features, and a possible storage pit. Likewise, both structures have a number of smaller interior posts suggesting possible benches or partitions.

Radiocarbon Dates

Following the 2007 field season, we submitted a small grant to the Ohio Archaeological Council to partially fund three radiocarbon dates for Lady's Run. The three samples we submitted for dating were well preserved carbonized nutshells from

F421, the secondary refuse deposit (Figure 4), wood charcoal from F403, the basin-shaped pit in which we recovered the bear canine (Figure 10) and the small stone bowl (Figure 11), and wood charcoal from F468, the center post of the structure. Because of their small size, the samples from F403 and F468 required AMS dating. Results of these dates are listed below:

Lab #	Context	Conventional Radiocarbon Age	2 Sigma Calibration
Beta 242883	F421	1650 ± 60 BP	AD 250 - 550
Beta 242884	F403	1710 ± 40 BP	AD 240 - 420
Beta 242885	F468	1800 ± 40 BP	AD 120 – 330

In our opinion, the Hopewell component at Lady’s Run represents a single occupation of the house and surrounding yard. Given this interpretation, the overlap in the 2-sigma calibrated dates suggests that this occupation occurred sometime during the period AD 250 – 330. The average of the calibrated dates is AD 317, essentially the same as the average date for BB#1 (Pacheco, Burks, and Wymer 2005) and the primary floor of the big house under the Edwin Harness Mound (Greber 1983). In other words, these separate Hopewell occupations on the Harness Farm are at the very least radiocarbon contemporaneous. We would also note that the Harness Farm sites discussed here appear to pre-date the primary occupation of the McGraw site by about a century (Prufer et al. 1965).

Conclusions

Our work at Lady's Run and BB#1 has identified two discrete, yet spatially clustered, Ohio Hopewell household settlements located on the prime bottom land within 2 km of a major Hopewell earthwork (Figure 15). These sites appear to provide solid confirmation for the settlement model of Ohio Hopewell that we have promoted over the years based on Prufer's earlier work at McGraw and our work in Licking County (Dancey and Pacheco 1997; Pacheco and Dancey 2006; Wymer 1996). Indeed, we would argue that our work on the Harness Farm represents an independent test of the general settlement model, because prior to this project we did not have Hopewell settlements with complete structural patterns.

The big question, of course, is the relationship between these two Ohio Hopewell households. Are they contemporaneous households that are part of a kinship-based unit (e.g., parents, offspring, or siblings)? Or, are they the non-contemporaneous remains of households that periodically shifted their location around on the floodplain? These are difficult alternatives to separate at this time, especially given the radiocarbon contemporaneity of the average dates from both households. We hope an answer to these questions emerges as the material analyses are completed for Lady's Run.

It is clear to us that the Lady's Run cluster is incomplete and extends farther to the south as the southern boundary of our 2006-2007 geophysical survey is located less than 5 meters south of the southern corner of the structure. To fill in this data gap, we returned to the site in March 2009 and completed additional magnetometry survey south of the structure. Anomalies from this new survey will form the basis of our investigation at the site in 2010.

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D'Amico. Dee Anne Wymer took the photographs for Figures 1, 6-9, 13, and 14. Jarrod Burks took the photographs for Figures 5 and 10-12.

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Figure 1. From right to left: Robert L. Harness Jr., Lady, and Bob's long-time friend Gary Argabright.

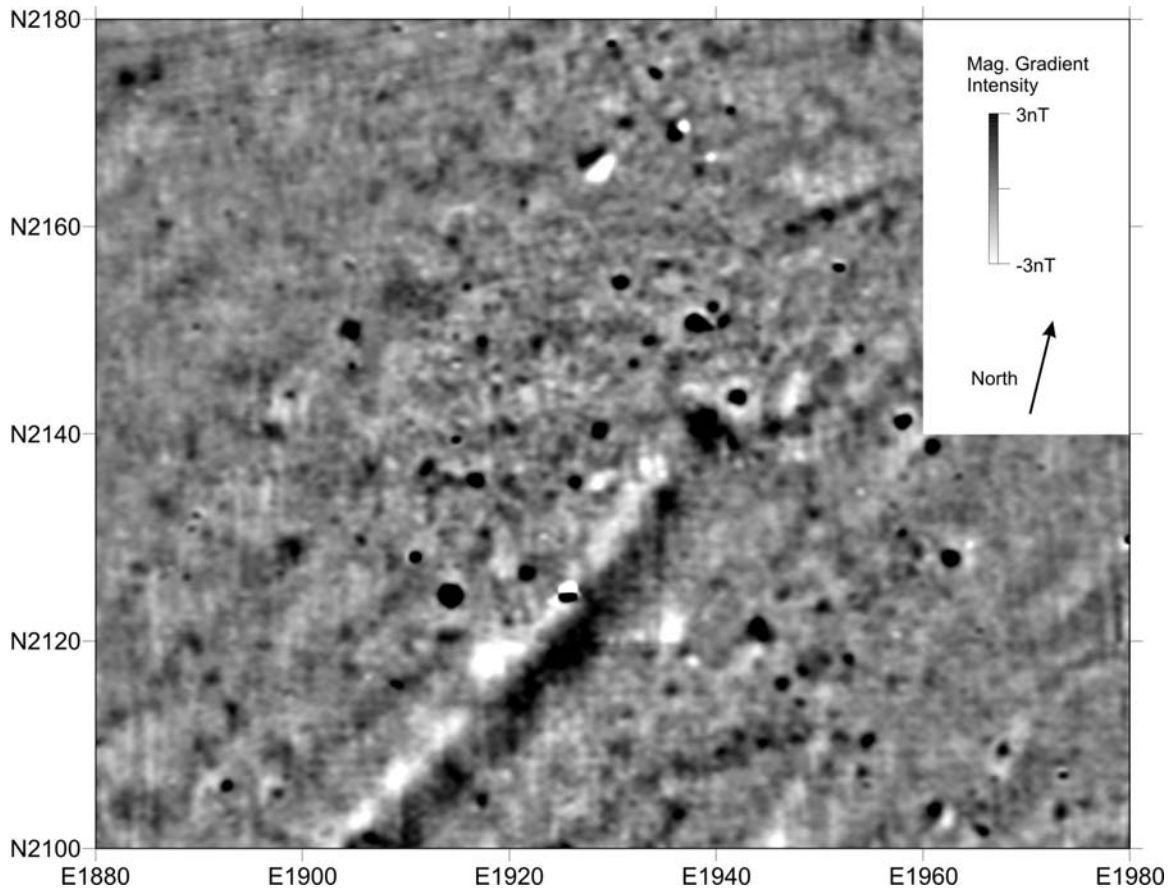


Figure 2. Magnetic gradient data map.

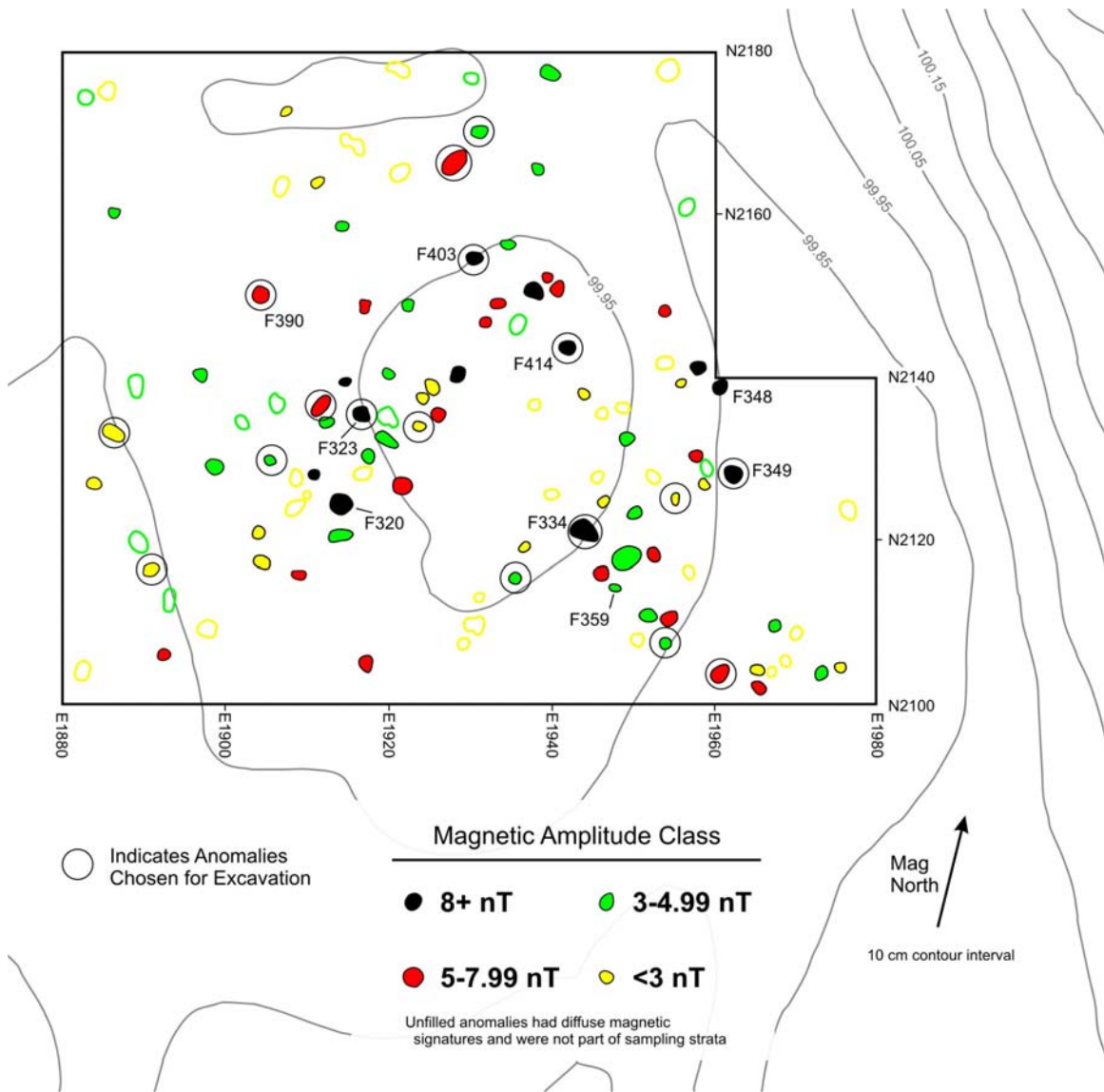


Figure 3. Stratified random sample of four classes of magnetic anomalies based on magnetic amplitude. Numbered features are discussed in the text.

Lady's Run
 Profile of Feature 421 at 1940E
 (2135N to 2143N)

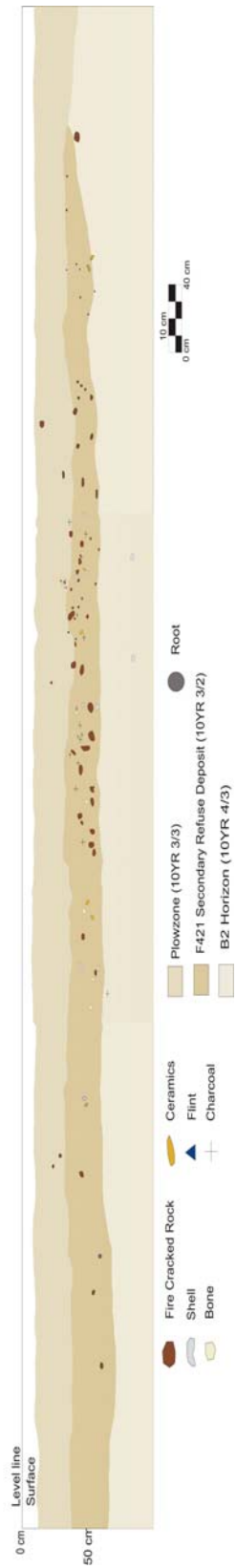


Figure 4. Stratigraphic profile of F421; map shows west profile of 1940 East gridline.



Figure 5. Ohio Hopewell platform pipe recovered from F421.



Figure 6. Northern half of F414 showing top of FCR layer and burned edges.



Figure 7. Large, late Late Woodland period rim sherd recovered from F414. Scale is in cm.



Figure 8. Plan view of FCR layer at the bottom of F320.



Figure 9. Plan view of F403 at base of plowzone.



Figure 10. Bear canine recovered from F403 shortly after excavation.



Figure 11. Several views of small stone bowl or cup recovered from F403.



Figure 12. Aerial view of Lady's Run structure at end of 2007 field season, view looking southwest. Identified post holes are shown in white, pit features in black.



Figure 13. Plan view of Lady's Run structure at end of 2008 field season, view looking south. Identified post holes are shown in white, pit features in black. There is a meter stick near the center post for scale.



Figure 14. Complete Ohio Hopewell bladelet made out of Vanport chert recovered from F359 within Lady's Run structure. Scale is in cm.

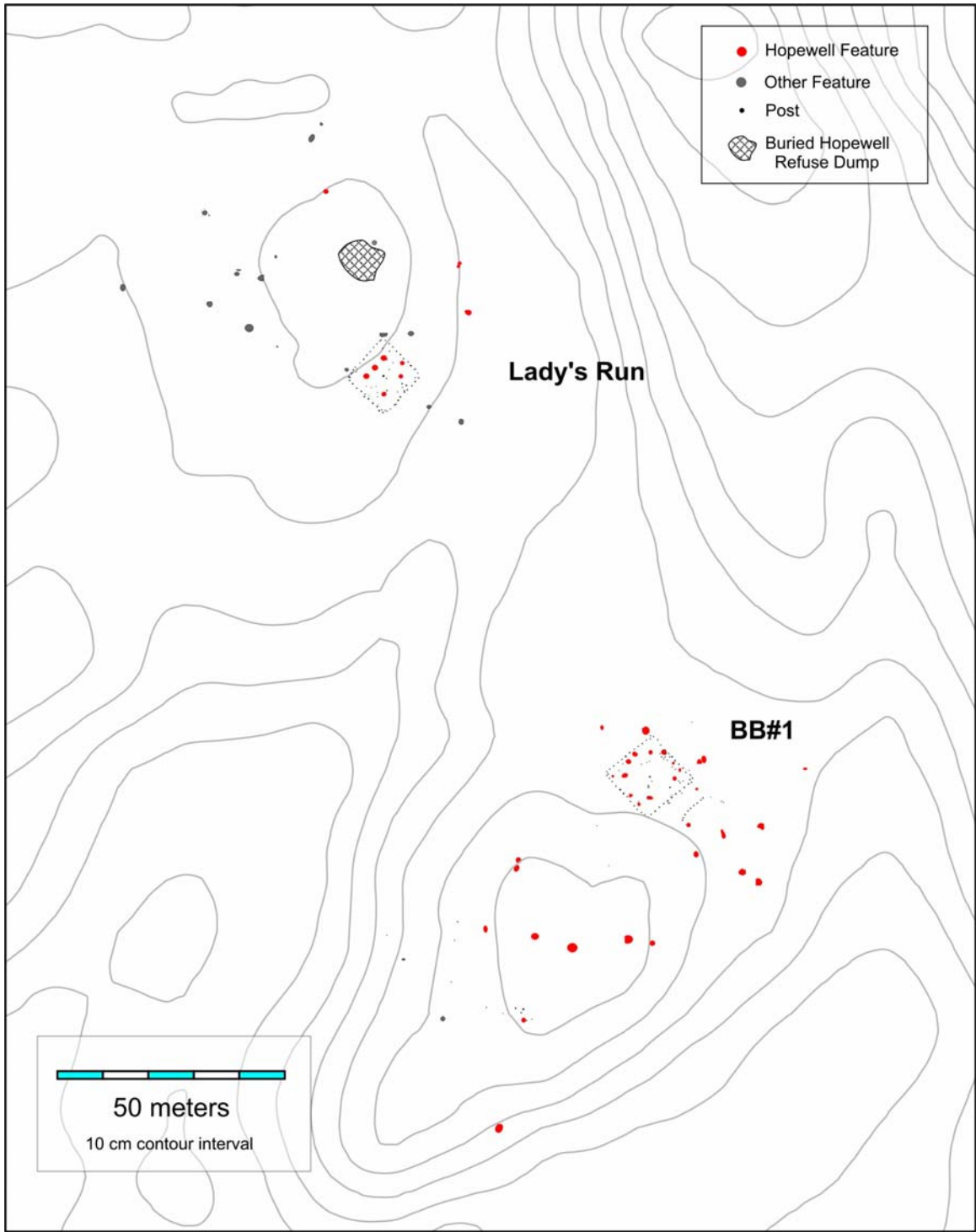


Figure 15. Overview map of 2005-2008 excavation results in Harness Field T showing locations of Lady's Run and Brown's Bottom #1 relative to one another.