

Hopewell Archeology:

The Newsletter of Hopewell Archeology in the Ohio River Valley

Volume 1, Number 2, December 1995

1. Editorial Policy and Numbering Procedure

This newsletter is intended to provide an informal forum for distributing and exchanging news about research, data, interpretation, public education, and events relating to Hopewell archeology in the Ohio River valley. It will promote the study of Hopewell archeology, cooperation between researchers, and public education about Hopewell archeology. The Newsletter is a joint effort of the Midwest Archeological Center in Lincoln, Nebraska and Hopewell Culture National Historical Park in Chillicothe, Ohio. Hopewell Archeology is published twice a year.

Hopewell Archeology publishes short news items, book reviews, short research papers and research notes relating to Hopewell archeology in the Ohio River valley. Information about other Middle Woodland cultures that relate to the Hopewell will also be considered for publication. Items for potential inclusion to the newsletter may be submitted to either office.

2. From the Editor, Mark J. Lynott

As I write this, I have just returned from my first trip to England. I was fortunate to receive an invitation to attend a conference sponsored by the Council of Europe and the Royal Commission on the Historical Monuments of England. The conference theme was archaeological survey and data recording standards, and was attended by archaeologists from all over Europe, plus delegates from South Africa, Brazil and the United States. It was truly fascinating to learn about the survey and data recording programs used by archaeologists in other nations.

To my great pleasure, the conference also included a tour to visit important sites in Wessex and Devon. This included a stop at Stonehenge, which is a World Heritage Site for obvious reasons. Stonehenge must be among the five most famous archaeological sites in the world, and it is indeed impressive. What you learn from visiting the site is that Stonehenge was built in three stages, and is just a small part of an extensive prehistoric landscape that includes ceremonial roads, megaliths, earthworks, a woodhenge, and numerous barrows (burial mounds). The preservation of these features is excellent, and I couldn't help but think that this is how the Chillicothe area must have looked in Squier and Davis' time (1840s). What an opportunity that was to view the whole cultural landscape, rather than simply see the isolated remnants that have been preserved in most of southern Ohio.

Avebury is equally, if not more, impressive. This immense earthwork is also part of a fantastic bronze age landscape. The earthwork itself is massive beyond simple description, even larger than the features at Newark, Ohio. Associated with the earthworks are megalithic formations, lines of

stones, ceremonial roadways, barrows, and Silbury Hill. The latter is a huge earthen mound that dominates the landscape. It is comparable in size to Monk's Mound at Cahokia, and is equally as impressive. What I found most impressive about my brief visit to Avebury is the way the English have managed to live with these monuments without totally destroying them. For example, the roadway through the earthwork was built through gateways included by the original builders, and shops, restaurants, and residences are nestled carefully within or outside the massive earthwork and ditchworks. I must also admit that the sheep that graze throughout the site are picturesque and add to the atmosphere of the place.

However, for someone that still considers himself a research archaeologist, the visit to Dartmoor National Park was the highlight of the trip. This rugged and lonely area is all in private ownership, and has been impacted by mining and other modern activities, but the archaeology is unbelievable. The area is literally covered with Bronze Age settlements and field boundaries. There are also numerous megaliths, stone circles, stone rows, cairns and burial cists. After spending nearly two hours exploring the features at Merrivale, I am certain that I now have some small sense of how the Wetherills must have felt in their early exploration of Mesa Verde. Everywhere I turned there was some new, different and exciting feature in a remarkable state of preservation. And remember, this represents one of the more visited sites at Dartmoor. I can't even begin to comprehend what the more remote and less visited sites must be like.

On the long flight home from England, I spent quite a bit of time thinking about our cultural heritage. While many of my new friends in Great Britain tell me that their society is development oriented, and not everyone respects the archaeological record, I was very impressed with their societal effort to preserve their heritage. Restoration work has been necessary at both Stonehenge and Avebury to bring them to their current states of preservation. In the United States, we haven't done nearly as well. This is particularly true of the eastern United States, where we have cultivated nearly every square yard of flat ground east of the Mississippi River. When Squire and Davis conducted their landmark survey of Ross County, Ohio in the 1840s, the earthworks and mounds they recorded must have been nearly as impressive as sites I saw in England. Somehow the English have found a way to preserve much of their archeological heritage, while we have destroyed most of the sites that Squier and Davis so carefully mapped. It saddens me to think that we can never appreciate the awesomeness of the Hopewell culture in the way that I experienced the Bronze Age features surrounding Stonehenge and Avebury.

The value of cultural landscapes cannot be over estimated. The appreciation that visitors feel for George Washington's home at Mount Vernon is in great part due to the fact that much of the grounds surrounding the house has been preserved. If parking lots and apartment buildings had been constructed next to the structure, visitors would have a far less satisfying experience. The same can be said for Abraham Lincoln's Home in Springfield, Illinois. The Home itself would be far less impressive if the neighborhood and adjacent houses were not preserved. In prehistoric contexts, the preservation of the Anasazi landscape in Chaco Canyon makes the sites really come to life. For those of you familiar with the Hopewell sites in the Chillicothe area, consider the Story Mound. While it is laudable that the mound has been preserved, it exists totally in a twentieth century context. Houses and roads surround the site and have disturbed everything right up to the foot of the mound. It is impossible to imagine Woodland Indians building a mound in this setting.

I am convinced that as archeologists, we must view the archeological record as a cultural landscape. The Hopewellian earthworks, mounds, and habitation sites of Ross County were not built as isolated components, and we cannot appreciate their contribution to the prehistory of North America unless we study individual sites as part of a system. This places great urgency on our research and preservation efforts. Much has already been lost, and the opportunity to study and understand the Hopewell Culture in southern Ohio will not last forever. We need to make the commitment to study as much as possible of that record before it is lost.

3. Paradise Regained and Lost Again: The Anderson Earthwork, Ross County, Ohio (33RO551) By William H. Pickard and Laurie A. Gray Pahdopony Department of Anthropology, The Ohio State University Columbus, Ohio

Introduction

Ross County, Ohio was at one time perhaps the most archaeologically rich locale in North America. From the time of Squier and Davis into the present, the once bountiful resource found there had been explored, exploited and abused to a point where only a small portion remains and little else could have been overlooked. Yet as recent as the 1970's, there were still significant finds to be made. A case in point is the Anderson Earthwork, a sizable square enclosure positioned between Hopewell and Mound City, only discovered in 1975. Although less spectacular than its more famous neighbors, Anderson contained a section of wall that was still mostly intact and original to the time of construction. In 1993, limited excavations were conducted at Anderson in the face of a proposed development on the site. As a result, valuable insights were gained into building techniques used by the builders that could possibly be carried over to the interpretation of other sites. More importantly, however, sufficient material for radiocarbon dating was recovered to provide evidence for a Hopewellian origin of the Anderson Earthwork.

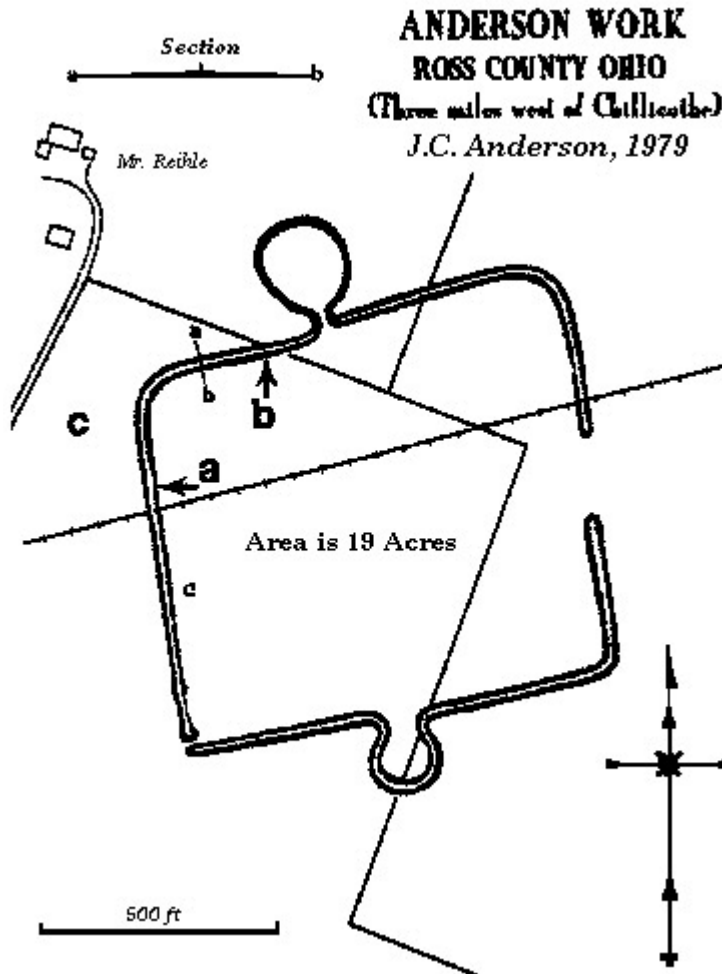
History and Background

The Anderson Earthwork is a slightly irregular low walled square enclosure measuring between 235 and 287 meters on a side located in extreme southern Union Township in Ross County, about 9 km. west of Chillicothe. It was named for the nearby unincorporated village of Anderson. It is situated at about 700 feet above sea level on a glacial outwash terrace that is bounded on the west side by Bier's Run and on the east by an unnamed seasonally intermittent stream. Both streams flow into the North Fork of Paint Creek about .7 km to the south. The high, level nature of the terrace provides excellent Visibility in all directions, and its placement in a saddle between four sets of hills allows easy passage from the Scioto valley to the northeast and the Paint Creek and North Fork valleys to the south and southwest (Anderson 1980: 31).

The earthwork was inadvertently discovered in 1975 by vocational archaeologist, Jerrel Anderson, while examining a 1938 Department of Agriculture aerial photograph of Ross County. He was studying the various local earthworks, attempting to locate ground features that had since been destroyed by modern farming methods.

About 2 km east on the same terrace as the Hopewell Earthwork, he noticed a large square enclosure that to his knowledge had not yet been described in the literature. Using a combination of the USDA aerial, modern infrared aeriels and ground surveys, Anderson was able to construct

the plan map seen in (Figure 1). Although heavy cultivation had taken its toll on the site, the map represents a reasonable plan of the earthwork's original geometry. This general configuration was also confirmed by James Marshall's 1975 ground survey using theodolite and steel tape (pers. comm.).



On the ground, much of the earthwork is traceable by the bright red color of the soils used in its construction. This effect is most apparent on the enclosure south of the B&O Railroad. North of the railroad, plowing and a drainage problem created by the track bed had all but obliterated the earthwork. The exception was that part of the enclosure located in the three corner field formed by the railroad, a fence row, and the farmer's lane (Figure 1 c). Here the wall is visible as an elongated rise 10 to 12 m. wide, .5 m. high with a total length of about 120 m. This well preserved nature of the wall was due to the fact that it had never been plowed. According to the land owner, Rufus Riehle, that particular parcel had been an orchard or in pasture for the several decades he had been on the land (Anderson 1980: 31). This was confirmed in 1993 by Mr. Riehle's cousin, Phillip Riehle, who had managed the land since 1988. He stated that a tenant farmer had removed the fence row in 1989 to create one large field but that he had only plowed the ground once. That was the only time he had ever seen it plowed. Aside from this wall section no other prehistoric constructs were visible on the terrace.

As is common with many earthworks, there was a distinct lack of habitation debris near the earthwork, although a Middle Woodland site was said to be located at the junction of Bier's Run and North Fork, nearly a kilometer to the south (Anderson 1980:32). A local collector reported a few Archaic and Early Woodland lithic scatters along Bier's Run, but there were few places in Ross County where such sites could not be found. Additionally, the 1993 excavations would reveal a paucity of artifacts in the subsurface.

1993 Excavations

By 1993, the terrace north of the railroad had been purchased by developers and slated to become a housing sub-division known as Golf View Estates. The overall plan of the project was such that what remained of the earthwork would be completely destroyed. In an ironic twist of fate, the centerline of the main thoroughfare lay almost directly on the centerline of the east-west wall of the square. Additionally, the preserved section of the north-south wall was located on one of the first housing lots to be developed. A sorry state of affairs indeed. In the summer of 1993, an agreement was reached with the developers to conduct limited test excavations on the site prior to the start of construction. On July 27, two .75 x 10 m. trenches, later extended to 20 m., were laid out across the wall in the area that had once been the three corner field. The first unit, trench A (Figure 1 a), cut across the wall 20 meters north of the railroad and the second unit, trench B, was placed across the east-west wall a few meters short of the old fence row (Figure 1 b). Excavation was by mattock, square shovel and trowel. Both trenches produced straight forward profiles of similar design, but differing somewhat in detail.

It would appear that the construction sequence began with the stripping of the original vegetation and top soils down to the B horizon. At this stage a layer of fine angular gravel in a silty clay matrix was laid down (Figure 2e). Generally, this layer was between 5 and 8 cm. thick and up to 7 m. wide. with these gravels forming a more or less continuous strata across all profiles. Onto this layer the embankment fill itself was placed (Figure 2b).

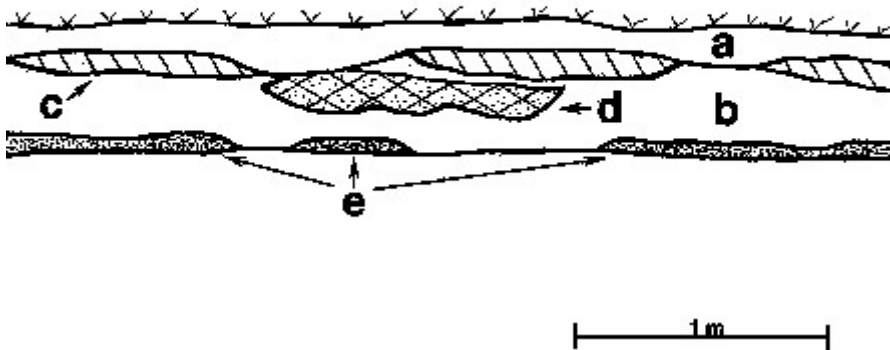


Figure 2. Soil profile of trenches placed along the walls of the structure.

This component was a bright red (Munsell 2.5YR5/8) sandy clay composite up to 30 cm. thick at the apex of the profiles and tapering to 15-20 cm. at the ends where it became indistinctly mixed with the surrounding natural soils. In both test units this strata extended approximately 5 m. in

both directions from the apex. Above the embankment fill was a 10-12 cm. thick sod zone immediately below the surface (Figure 2a). Between the embankment fill and sod zone were compacted turnings of sod (Figure 2c), evidence of the 1989 plowing described by Phillip Riehle. It might be suggested that the very low profile of the walls, even without a long history of plowing, was due to the moderately incompetent nature of these embankment fill soils. Further, it should be noted that they do not occur naturally on the terrace and would have had to be carried in from a remote location.

In total, seven possible features were identified, a surprising number considering the limited scope of the excavation. Three were ruled out as either tap roots or rodent incursions. Of the four remaining, three were post molds and the fourth a basin-like gravel loading. Feature #1 was the charred remains of a large wooden post, located in trench B directly beneath the apex of the wall and originating below the embankment fill. The post was 30 cm in diameter and cut to an acute point that extended 50 cm into the subsoils. Dee Anne Wymer of Bloomsburg University identified the wood as hickory (*Carya*), noting that it had been subjected to a rather intense burning. Charcoal from this feature returned an AMS date of 2010 +/- 60 B.P. (Beta 68758/CAMS 10484), slightly early, but well within the accepted chronology for Ohio Hopewell. Also the use of hickory by the builders raises an interesting point. N'omi Greber (1983:54) reports that of the posts sampled at the Edwin Harness Mound, 76% were identified as hickory. Perhaps this may indicate a continued utilization of a preferred material by Hopewell peoples. Then again, perhaps it doesn't.

Feature #2 and #4 were located in the western end of the gravel layer in trench A. As with feature #1, both originate at a level below the embankment fill. Unlike feature #1 however, features #2 and #4 seem to represent sockets that had silted in after the posts had been removed. Feature #2 was 20 cm. in diameter and came to a dull point 21 cm. below the gravel base. Feature #4 was 15 cm, in diameter and extended 15 cm. below the gravel base where it also formed a dull point. Both features contained the same dark sandy silt with the same minor charcoal flecking.

Feature #3 (Figure 2d) was located in the south profile of trench A and appeared to be a basin shaped construct 10-12 cm. thick and about 1.2 m. across. The fill consisted of about 90% fine rounded gravels in a sandy matrix that also contained a few small (<1 cm.) pieces of charcoal. In plan this feature continued into the wall 40-45 cm. and was rather irregular in shape. Feature #3 probably more accurately represents a construction loading rather than a basin per se.

What purpose the posts the aforementioned post molds represent is unclear. It is doubtful they formed part of a stockade and the lack of habitation debris or major features seems to point away from any type of structure. Perhaps considering their location within the embankment, they were measuring or surveying points used by the ancient builders as they perfected a craft so manifest in their later works. Not enough data was recovered however, to make a concrete determination or to rule out any of the above.

Conclusion

Squares are not at all uncommon items in Hopewell earthwork design. Well known examples include those at Liberty, Baum, Hopewell, Seip and at Newark. However, these examples are exact segmented units and not the axially aligned square and circle combinations seen at Anderson.

While the Anderson square is indeed a rare form, it is not exactly unique. A very similar form of comparable dimensions is seen on James Salisbury's highly detailed 1863 map of the Newark Earthworks (Figure 3). Such adaptations on the square may be an element of Hopewell earthwork iconography that was simply heretofore overlooked, but not as rare as one might think.

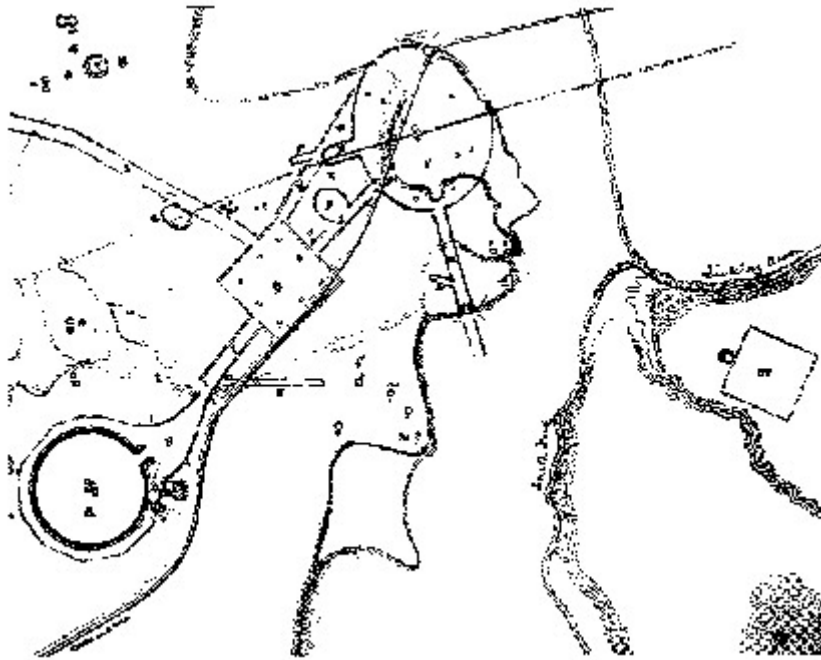


Figure 3. Newark Earthworks. This map was created by James Salisbury in 1863.

Finally, why the Anderson Earthwork waited until 1975 to be discovered is somewhat of a mystery. But suffice it to say it was like finding a jewel in the rough, one that is now forever lost. Although everything cannot be saved from development, Anderson's destruction was a sad commentary on development at any cost. Whether those parts of the Anderson Earthwork that could have been saved were destroyed merely in the course of construction or to keep "nosy" people away is uncertain, the effect was still the same.

Acknowledgments Special thanks go to Jerrel Anderson, Barbara Donahue, N'omi Greber, Brad Lepper, Robert Peterson and Dee Anne Wymer. Also to Jeff Weinberger, John Pack, Cathy Wolf Crowser, Larry Wickliff, Dave Towell to Jan Long, and especially to Mr. Alva McGraw, the best friend the Hopewell culture has.

Cited References

Anderson, Jerrel

1980 A Recent Discovery-The Anderson Earthwork. Ohio Archaeologist, 30(1), Winter 1980.

Greber, N'omi

1983 Recent Excavations at the Edwin Harness Mound. MCJA Special Paper No. 5. Kent State University Press.

4. A Last Look at the Anderson Earthwork By William F. Romain 4000 Westbrook Drive #502 Brooklyn, Ohio 44144

Modern man, the world eater, respects no space and no thing green or furred as sacred. The march of the machines has entered his blood. -- Loren Eiseley, anthropologist

The Invisible Pyramid

It was a gorgeous day. The sun was bright and the air was crisp. I thought it was going to be a great trip. I was wrong.

After loading our gear into the little Cessna 152, I looked over the maps one more time. I figured that with stop-overs, the round-trip flight would take about 5 hours. The plan was for my wife Evie and I to fly from Cleveland to Newark, take some aerial photographs of the Newark earthworks, and then continue on to Ross County - where we would photograph a few more of the Hopewell earthworks.

I had just got my private pilot license a few weeks before, and I was especially excited about this trip. Archaeology and flying - it didn't get any better than this.

I checked over the airplane, completed the pre-takeoff checklist, and we taxied out to the runway. The tower cleared us for takeoff, and I gave it full throttle. Within moments we were soaring skyward - climbing in the cold, dense air at a thousand feet per minute. In no time, we were at our cruising altitude of 2,800 feet - winging our way southeast. Like magic, the little airplane homed-in on the invisible navaid signals that would guide us across the 110 miles of airspace to Newark. Quickly though, my exuberance turned to concern.

The weather was clear. However, as soon as we leveled off we hit turbulence. Updrafts, downdrafts, and wind shifts combined to make things very uncomfortable. The little two-seater airplane, more like a go-cart with wings, pitched and rolled, and bounced up and down, up and down. Equally bad, the headwinds were stronger than expected - and our progress over the ground was agonizingly slow. Worse yet, I could see from my wife's pale white face - tinged with green, that she was not having fun.

Some fresh air - gained by opening a vent in the top of the windshield - seemed to cure the worst of her symptoms. And, like the brave explorer that she is, she elected to continue our adventure. An hour or so later we made an interesting crosswind landing at Newark.

The runway at Newark is narrow - only 75 feet wide and it has trees and power lines at its approach end. To Evie though, I think any solid ground was looking pretty good. I left her in the pilot's lounge with a good supply of quarters for the vending machines - no fancy lunch counter here - and I went back up.

Back in the air, I took what ended up to be a mediocre series of photos of the Newark earthworks. Part of the problem is that with one hand, you have to aim and shoot through the open left-side window of the plane - while the other hand operates the controls - keeping the airplane in a slow, steep turn without stalling, losing altitude, or otherwise crashing. It's a bit like patting your head and rubbing your belly at the same time. I was sure that my wife had made a good decision to stay on the ground.

Anyway, after a cup of coffee and some Cheese-Nip crackers for lunch, we continued onward toward Ross County. It was a bit smoother as we left Newark and headed southwest. Off to our right we could see the skyline of Columbus - some 20 miles away, while below us the shimmering waters of Buckeye Lake quickly passed. Ahead loomed the hills of the Appalachian Plateau and Chillicothe. Twenty minutes later we landed at the Ross County airport.

Not wanting to risk her life unnecessarily, Evie again decided to wait for me in the pilot's lounge. At least this lounge had a sofa and color TV. I, on the other hand, was enthusiastically ready to go back up in search of the Hopewell earthworks. I had the plane refueled, checked the charts, and took off. First Dunlap, then Mound City, Cedar Bank, and Hopeton. I circled Chillicothe a couple of times, flew over the confluence of the Scioto River and Paint Creek, and skimmed along the summits of the mountains to the east of the city. Then on to High Bank, Hopewell, and Frankfort. I was thrilled to fly over and photograph the very same earthworks that I had walked over, wondered about, and studied so intently on the ground. I was having a spectacular time.

Then I saw it. While following Paint Creek, at an altitude of about 2,000 feet, I looked for Anderson. What I found was incredible. In the space of a heartbeat, my soaring spirit was shot through with the finality of what unfolded below me. There was the Anderson Earthwork -- an ancient ceremonial ground being torn apart by bulldozers. I lowered the flaps on the plane and slowly circled - astonished at what I was seeing. For almost two thousand years the Anderson Earthwork had withstood the ravages of time and the elements. Wind and sun and rain had not erased the sacred geometric figure that once connected the Hopewell people to their universe. Now, in a matter of moments, the walls that defined this sacred space were being ripped down and crushed beneath the steel treads of tremendous yellow machines.

Never again would this ancient figure -- this legacy of our collective-past be seen. Never again would anyone walk within the peaceful walls of the enclosure, or experience the awe and mystery expressed in the purity of its form. No amount of regret would ever bring back what we as a

people had destroyed. In one fell swoop, humankind had just lost 10 percent of the existing Hopewell squares.

The flight back to the Ross County airport took only about five minutes, but it seemed like an eternity.

I told Evie about what I had seen, and we headed north -- back to Cleveland. For the first time ever, I was glad to leave Ross County. The destruction was too great.

As we approached Cleveland, the sun began to set. The metaphor was obvious. After a few more moments, darkness fell - and all that was certain were the small white lights that outlined the runway of our airport.

It was a quiet ride home. Certainly, I had seen more than I ever wanted to. As we drove across the concrete covered ground, bits and fragments of the words attributed to Chief Seattle came to mind:

Every part of this earth is sacred to my people.... What befalls the earth befalls all the sons of the earth.... Man did not weave the web of life -- he is merely a strand in it. Whatever he does to the web -- he does to himself.

5. The Great Hopewell Road

The current issue of Archaeology magazine (Vol. 48, No. 6, November/December 1995) contains an article by Bradley T. Lepper titled "Tracking Ohio's Great Hopewell Road." The well illustrated feature presents Lepper's hypothesis that the Newark Earthworks and the earthworks in the Chillicothe area were linked by a sacred or ceremonial road. Reference to the hypothesized road first appeared in the writings of Caleb Atwater, who noted a set of parallel earthen walls projecting thirty miles to the southwest from the Newark octagon. Lepper also notes that further evidence for the Great Hopewell Road appears in the writings of Squier and Davis, and a manuscript written by James and Charles Salisbury, and currently housed in the American Antiquarian Society in Worcester, Massachusetts. Although physical evidence for the Great Hopewell Road has yet to be discovered, Lepper presents aerial photographic evidence to support the hypothesis. Consistent with all features in Archaeology magazine, this story is well illustrated and well written. We recommend it to anyone with an interest in Hopewell archaeology.

6. Hopeton Settlement Archaeology, 1995 By William Dancey

In one of the hottest, driest summers in recent memory in Ross County, Ohio, new archaeological discoveries were made that contribute to knowledge about Ohio Hopewell. From June 18 to July 21, a crew of 20 students enrolled in Anthropology 685 (Archaeological Field Expedition) under my direction investigated several localities on property .8 km northwest of the Hopeton Works in a bend of the Scioto River. The field

school dig was a cooperative effort involving the Chillicothe Sand and Gravel Company, which owns the land on which the project took place, the Midwest Archaeological Center (MWAC) in Lincoln, Nebraska, the Hopewell Culture National Historical Park staff, and the Ohio State University.

MWAC assigned Forest Frost and Karen Archey to handle the photography, mapping, recording, among many responsibilities. Bret Ruby, assisted by Bill Anderson, took charge of a testing project on the lower terrace. Superintendent John Neal and his staff laid the groundwork for the project, arranging for, among other things, residence in an unused wing of a Veteran's Administration hospital building and access to the gravel company land.

In the 4th week we were joined by Dr. James Brown of Northwestern University and a contingent of 6 students from his field school at the Zimmerman site in Illinois. Then, in the fifth (and last) week a group of 13 high school students and 3 teachers from the Hershey School in Pennsylvania were added to the crew. This group was led by Randy Farmer.

A preliminary survey of the 8 ha (c. 20 acres) field (the Overly Tract) was conducted in the spring with students in Anthropology 602.01 (The Strategy of Field Archaeology). Surface collection and test pitting by the student crews produced evidence of a series of artifact clusters (A-E) extending along the bluff overlooking the Scioto and a low ridge perpendicular to the river. This ridge marks the western margin of a linear depression that must have been a pond or marsh in prehistory. The survey and testing data suggested the presence of an early Late Woodland, Newtown-like, occupation on a village scale (Cluster A) along the bluff and this became the target of the summer work. Test pitting in 1x1 m squares during the first few weeks failed to confirm Cluster A as a Newtown nucleated village and revealed instead the presence of several smaller clusters, one of which might date to the Late Prehistoric and at least one other to the Middle Woodland.

In the third week of the field school, Mike Hamm of the Chillicothe Sand and Gravel stripped a 15x40 m area where Hopewellian artifacts (bladelets and sherds) were found and where artifact densities were high. This operation revealed about 40 soil discolorations of various sizes, 37 of which were tested. By the end of the project we had identified and excavated 22 cultural features most of which were basin shaped pits. Only a few of the features were post molds and thus no evidence of a structure was uncovered by the stripping.

As feature excavation progressed, it became clearer that the deposit included evidence of a Middle Woodland occupation. Bladelet fragments were found, along with small flecks of mica, and corner-notched projectile points. Several features contained large quantities of ceramic sherds. Although cleaning and analyzing the ceramic sample has not been completed, as an educated guess based on seeing the sherds coming out of the ground, I think the ceramic assemblage is quite close to the McGraw site ceramics. The Overly sample contains rocker stamping, incising, punctating, all attributes found on sherds at

McGraw which is a late Middle Woodland settlement occupied somewhere between 200 and 400 A.D.

Because of the importance of knowing whether Middle Woodland communities cultivated and used maize, all of the fill from the pit features was removed and saved. About 25 percent was processed in the field by flotation; the remainder is being processed in a lab. If maize is present in this deposit, we want to find it.

The shrinking of Cluster A and the identification of a Middle Woodland settlement in the middle of it suggests an explanation of the archaeological record in the Overly Tract. The series of small, equal-sized clusters is similar to what was documented by Prufer in the McGraw site vicinity and by Paul Pacheco on the Murphy property in Licking County. The clusters apparently represent archaeological traces of households one or more of which were occupied at the same time over several generations by a growing biological unit. A goal for culture work at this locality is to obtain samples from all clusters to explore this hypothesis.

Samples for TL (thermoluminescence) dating were collected in the field, as were charcoal samples for radiocarbon dating. The abundance of decorated ceramics will be helpful in fixing the time of occupation. Ceramic samples will be subjected to mineralogical analysis to determine whether or not they were made of local clays.

Reconnaissance survey of the lower terrace (floodplain) in the spring disclosed several potential artifact deposits, one of them containing Fort Ancient tradition sherds. This locality became the focus of additional surface survey, auguring, and deep testing trenching. Evidence was found of stratified archaeological deposits as early as the Early Woodland. While not locating Middle Woodland deposits, the stratigraphic record clearly could include Hopewellian occupations. In the tested area, for example, it would not be surprising to find a Middle Woodland paleosol with evidence of Hopewellian use. If this bears out with continued testing, the floodplain deposits will contribute important data to the goal of chronology building for the local area.

7. Publications Available from the Eastern National Park and Monument Association

The Eastern National Park and Monument Association is a non-profit organization that supports the educational and scientific activities of Hopewell Culture National Historical Park and other eastern parks. Proceeds from the sale of educational materials is made available to the parks through contributions and grants. A variety of publications, historical maps and a bibliography of Ross County archeology are available.

Reprints of Classic Works in Ohio Archeology

Many of the classic works in Ohio archeology, long out of print, have recently been reproduced and re-issued in affordable paperback editions by Arthur W. McGraw. The following titles are available.

Atwater, Caleb

1883 Descriptions of the Antiquities Discovered in the Western Country. Extracted from The Writings of Caleb Atwater. Published by the Author, Columbus. \$14.00.

Fowke, Gerard

1889 The Manufacture and Use of Aboriginal Stone Implements. Ohio Archaeological and Historical Quarterly 2(4):514-533. \$3.25.

Mills, William C.

1909 The Seip Mound. Reprinted from a section of the Putnam Anniversary Volume. Torch Press, Cedar Rapids, Iowa. \$2.95.

1921 Flint Ridge. Ohio Archaeological and Historical Quarterly 30. \$4.75.

1922 Exploration of the Mound City Group. Ohio Archaeological and Historical Quarterly 31:423-584. \$8.75.

Moorehead, Warren K.

1890 Fort Ancient. Robert Clarke & Co., Cincinnati. \$19.50.

1892 Indian Mounds on the Worthington Estate (near Chillicothe). Extracted from Primitive Man in Ohio. G.P. Putnam's Sons, New York. \$3.90.

1892 Primitive Man in Ohio. G.P. Putnam's Sons, New York. \$23.85. Putnam, F. W.

1883 Iron from the Ohio Mounds. From an undated reprint of the Proceedings of the American Antiquarian Society, Vol. II, New Series, Part 3, April 25, 1883. \$1.50.

1887 The Manufacture of Bone Fish Hooks in the Little Miami Valley. From the Twentieth Annual Report of the Trustees of the Peabody Museum of American Archaeology and Ethnology, Cambridge. \$1.00.

Smucker, Isaac

1885 Alligator Mound: An Effigy or Symbolic Mound in Licking County, Ohio. American Antiquarian 7(6):349-355. \$1.50.

Squier, E. G. and E. H. Davis

1848 Ancient Monuments of the Mississippi Valley. Smithsonian Contributions to Knowledge 1. Smithsonian Institution, Washington, D.C. Hardback, \$45.75.

1848 Complete 48 Plate Collection. Extracted from Ancient Monuments of the Mississippi Valley, 8-1/2 x 11" format. \$4.50.

Thomas, Cyrus

1889 The Problem of the Ohio Mounds. Bulletin 8. Bureau of American Ethnology, Government Printing Office, Washington, D.C. \$4.00.

1889 The Circular, Square and Octagonal Earthworks of Ohio. Government Printing Office, Washington, D.C. \$4.50.

Whittlesey, Charles

1852 Descriptions of Ancient Works in Ohio. Contributions to Knowledge Volume 3, Article 7. Smithsonian Institution, Washington, D.C. \$4.50.

People of the Mounds: Ohio's Hopewell Culture

People of the Mounds: Ohio's Hopewell Culture is a new booklet being made available by Hopewell Culture National Historical Park. Written by Bradley Lepper of the Ohio Historical Society and published by the Eastern National Park and Monument Association, the booklet features a comprehensive and accessible overview of Ohio Hopewell culture. Historical maps, drawings and color photographs accompany the text. Price: \$1.75.

Bibliography of Ross County Archeology Available on Computer Disk

The National Park Service is making available on computer disk a comprehensive and annotated bibliography of archeology in Ross County, Ohio. The work was commissioned to facilitate research that will provide a deeper understanding of Ohio Hopewell and its cultural and historical contexts. The bibliography was prepared by Mark F. Seeman and Cultural Resource Analysts, Inc. of Lexington, Kentucky. Making the bibliography available on computer disk offers considerable cost savings and permits the user to perform word searches using any word processor. The bibliography is presented in WordPerfect 5.1 and ASCII formats on a single 3-1/2" diskette for only \$2.00.

Historical Maps

A number of historical maps in 11 x 17" format and suitable for framing are available through the Eastern National Park and Monument Association. The following plates drawn from Squier and Davis' 1848 publication, Ancient Monuments of the Mississippi Valley, are available for \$1.00 each:

- Mound City Group, Plate XIX
- Serpent Mound, Plate XXXV
- Cedar Bank Works, Plate XVIII
- High Bank Works, Plate XVI
- Hopeton Work, Plate XVII
- Hopewell Mound Group, Plate X

- Seip Earthworks, Plate XXI, No. 2

Availability of above items are subject to change.

8. Research News

Recent Dissertation

Hays, Christopher Tinsley

1994 Adena Mortuary Patterns and Ritual Cycles in the Upper Scioto Valley, Ohio. Ph.D. dissertation, Department of Anthropology, State University of New York at Binghamton.

Lecture Series at Hopewell Culture National Historical Park

In an effort to bring research results to a wider public, an open lecture series was offered this summer at Hopewell Culture National Historical Park. The series featured a diverse array of speakers and topics. Berle Clay (State Archaeologist, Kentucky and University of Kentucky) presented an overview of his excavations at the Peter Village site, a large **Adena** earthwork enclosure in central Kentucky. Bret J. Ruby (Hopewell Culture National Historical Park) presented an abstract of his dissertation research concerning the Mann site and Hopewellian culture history and adaptation in southwestern Indiana. Paul Pacheco (Kent State University) reviewed his research into Ohio Hopewell settlement patterns. James Foradas (Franklin Pierce College) presented an overview of chert sourcing studies and described newly-developed quantitative methods of chert source identification. Robert Connolly (University of Cincinnati) offered an overview of current excavations at the Fort Ancient Earthworks. James A. Brown (Northwestern University) presented an overview of investigations at the Mound City Group. A similar series will be offered during the summer of 1996.

Seip Earthworks

N'omi Greber has recently completed a description and map of more than sixty archeological localities in the vicinity of the Seip Earthworks and Dill Mounds Historic District. The work synthesizes information derived from various institutions and local collectors to provide a baseline synthesis and overview of the rich archeological record surrounding this important Ohio Hopewell mound and earthwork complex. A portion of the study area is currently preserved and protected by the Ohio Historical Society and is open to the public. The study was commissioned by the National Park Service to guide efforts to preserve additional resources in the vicinity as part of the planned expansion of Hopewell Culture National Historical Park.

Fort Ancient

Fort Ancient State Memorial is a large Hopewellian hilltop enclosure in southwestern Ohio managed by the Ohio Historical Society. The Society is planning a major expansion

of the existing museum facility located within the enclosure. To avoid or mitigate any impacts to archeological resources as a result of this expansion, the Society and the University of Cincinnati have sponsored an investigation directed by Robert Connolly. During the summer of 1995, field school students and volunteers explored a portion of the earthwork wall adjacent to one of the many "gateway" features that punctuate the enclosure, as well as an apparent habitation area within the enclosure. Ongoing analyses of the investigation promise to shed light on the chronology, nature and function of the enclosure.

Remote Sensing Experiments at the Hopeton Earthworks

In a follow-up of 1994 geophysical surveys near the Hopeton Earthworks, the National Park Service sponsored soil resistivity, conductivity and magnetometry at the Overly site. The surveys were conducted by John Weymouth, University of Nebraska, R. Berle Clay, Kentucky State Archaeologist and University of Kentucky, and Stephen J. Ball, Glenn A. Black Laboratory of Archaeology, Indiana University. The surveys were conducted in advance of excavations by the Ohio State University. Results from this study will be used to refine future geophysical surveys in Ross County, and aid investigators in interpreting geophysical survey data.

Spruce Hill

Legislation enacted in 1992 authorized the expansion of Mound City Group National Monument to include Hopeton Earthworks, Hopewell Mound Group, High Bank Works and Seip Earthworks. The park was renamed Hopewell Culture National Historical Park to reflect this expansion. That same legislation directed the National Park Service to conduct studies of the Spruce Hill Works, Harness (Liberty) Earthworks, and Cedar Bank Works and any other sites significant to Hopewellian culture for the purpose of evaluating the desirability and feasibility of preserving additional sites as units of Hopewell Culture National Historical Park. In response to this directive, Bret J. Ruby and archeologists from Hopewell Culture National Historical Park began a preliminary investigation of the Spruce Hill Works during the fall of 1995. The Spruce Hill Works were first described in 1814 as a stone-walled enclosure encompassing some 140 acres atop a prominent hill overlooking the Paint Creek valley, 12 miles west of Chillicothe, Ohio. The goals of this initial work are to evaluate the nature, significance, integrity and cultural affiliation of the site. Detailed topographic mapping, survey and limited subsurface testing are underway.

Petrographic Analysis of Ceramic Thin Sections

James B. Stoltman (University of Wisconsin-Madison) has been conducting quantitative petrographic analysis of Middle Woodland ceramics from the Midwestern United States. Stoltman's methods have been published in *American Antiquity* (Vol. 54, No. 1, p. 147-160; Vol. 56, No. 1, P. 113-120). The current research has included samples from Marietta, Grimes, Mound City, Seip, Newark, Hopewell, Harness, Turner, Tremper, Russel Brown and the McGraw sites. The on-going study is being conducted to

distinguish locally made Hopewell ceramics from non-local vessels. This line of inquiry adds another dimension to the interpretation of Hopewell interaction.

General Management Plan Update

For the past year, Hopewell Culture National Historical Park has been developing a General Management Plan for the park. The plan is intended to guide the management and development of the park over the next 15 to 20 years. This summer, activities focused on the portion of the plan that will guide the development of interpretive or educational programs in the park. A workshop was held in the park and was attended by park staff, National Park Service planners, and specialists in Hopewell archeology. A representative of the Loyal Shawnee Tribe of Oklahoma provided a Native American perspective. The group reviewed current visitor facilities and educational programs and developed recommendations for new facilities, exhibits and programs that will provide visitors with more varied experiences and a more comprehensive understanding of Hopewellian life.

The first draft of the General Management Plan is nearing completion and will soon be available for public comment. If you would like to comment on the plan and participate in the planning process, please contact John Neal, Superintendent, Hopewell Culture National Historical Park, 16062 State Route 104, Chillicothe, Ohio 45601.

Plant Survey Conducted at Hopewell Culture National Historical Park

The National Biological Survey funded a comprehensive plant survey of Hopewell Culture National Historical Park. University of Wisconsin graduate Jennifer Course collected at least one specimen of every tree, shrub and herbaceous plant found in the park. Collecting was done in and around the earthworks at each of the five park units (Hopeton, Hopewell, Mound City, High Bank and Seip). The purpose of the survey was to produce a baseline inventory of the native and introduced vegetation in the park, and to identify any threatened or endangered species. This information will be used to guide natural resource management activities in the park, and will provide a useful point of departure for studies of past and present environmental variability and human ecological adaptation in the region. Some 350 species and 750 specimens have been collected. About 65% of the identified species are native to Ohio. Some of the less common native plants found were Indian Pipe, Golden Seal and Canada Lily.

Archeology on Television

The Arts and Entertainment Network will be showing a feature on the mound sites and archeology in the midwest during November 1995. The feature was partially filmed at the Overly site, Mound City Group, and Hopewell Culture National Historical Site, and features interviews with William Dancey, N'omi Greber and Bret Ruby. Check your local listings for broadcast times.

9. Midwest Archaeological Conference

The 40th Annual Meeting of the Midwest Archaeological Conference was held in Beloit, Wisconsin on October 25-28, 1995. The Conference was organized by Dr. Robert Salzer, and hosted by the Department of Anthropology and the Logan Museum of Anthropology. The Conference included a reception at the Logan Museum of Anthropology, where participants had the opportunity to view the innovative, new, open storage facility for the collections.

The Midwest Archaeological Conference program included a Late Woodland roundtable discussion and 108 papers. The papers included a number of interesting and contemporary papers on Hopewell studies.

Robert F. Bozhardt (Mississippi Valley Archaeology Center) presented a paper on "ceremonial" bifaces found in association with Hopewell tombs in the Trempleau/La Crosse area of western Wisconsin. Many of these artifacts are made from non-local raw materials, including Knife River Flint, obsidian, Hartville Uplift Chert and Morrison Orthoquartzite. Bozhardt's research suggests that these northwesternmost Hopewellian groups were either travelling west to collect raw materials, or trading with northern Plains people to acquire these lithic materials. Further research is needed to determine if these western lithic materials were being imported for use in the Trempleau/La Crosse area, or if some of the material was being sent east to other Hopewell groups in Illinois, Indiana and Ohio.

Mark Schurr (Notre Dame University) presented a paper on his current research on the Goodall Focus of northwest Indiana and southwest Michigan. The Goodall Focus was defined by George I. Quimby in 1941, and represents one of the first formally defined Hopewell complexes outside of Ohio. Little research has been subsequently conducted on Hopewell in northwest Indiana, and Schurr's research at the Bellinger site provides exciting new data. After three seasons of field research that included geophysical surveys and excavations, Schurr has documented that habitation adjacent to the Bellinger mound was limited. This is in strong contrast to Havana Hopewell sites in Illinois, where substantial villages were often located near mortuary mounds.

James A. Marshall presented a paper on his interpretation of aerial photographs and maps of major Hopewellian earthwork sites in southern Ohio. Marshall noted that many of the geometric earthworks and parallel walls seem to have a non-random orientation. For example, Marshall notes that if the parallel walls at the Dunlap Works were extended, they would intersect the square and circle at the Hopeton Earthworks, and an extension of the parallel walls at the Dunlap Works and Hopeton Earthworks intersect at right angles. Marshall proposed that the orientation of these features indicates that the builders of these sites were aware of the location and orientation of other nearby earthworks, and designed and built the earthworks with that in mind.

Janet Brashler (Grand Valley State University) described an extensive surface collection from the Prison Farm site in southcentral Lower Michigan. The collection was

acquired by an avocational archaeologists during 35 years of regular collecting. The majority of artifacts from the site are attributable to the Middle Woodland substage, and indicate Havana stylistic attributes.

Duane Esarey (Dickson Mounds, Illinois State Museum) presented a paper on the wealth of Hopewellian sites in the lower Illinois River valley near the modern towns of Havana and Beardstown. Esarey noted that although much has been written about Havana Hopewell, basic research to document and map Hopewell sites in this region still needs to be done.

10. Conference Calendar

Society for Historical Archaeology

1996 Conference on Historical and Underwater Archaeology

January 3-7, 1996

Cincinnati, Ohio

For registration information, contact: Registration Chair, Jeanne Harris
(513) 665-6707.

Society for American Archaeology

61st Annual Meeting

April 10-14, 1996

New Orleans, Louisiana

Program information will be forthcoming in early 1996.