Park News

National Park Service
U.S. Department of the Interior

Hopewell Happenings

Boy Scouts of America Earn the Archaeology Merit Badge at Hopewell Culture National Historical Park

Park Ranger Laura Murphy

Photo 1: Laura Murphy helps scouts identify an artifact.

The summer of 2005 brought the Boy Scouts of America to Hopewell Culture National Historical Park to participate in a clinic to earn the coveted "Archaeology Merit Badge". A two day clinic was conducted by Park Ranger Laura Murphy with the support of Scout Master Tom Bain of Troop 38 in Chillicothe. The Archaeology Merit Badge is highly sought after, but difficult to earn.

The two-day clinic included lecture materials, a variety of hands-on activities, and a full days participation with an archeologist excavating an archeological site. The excavation site was located on the property of Chief Logan, a Boy Scout Reservation in Jackson County. The excavation site is an early 20th century rural homestead and includes a building foundation along a creek, a debris-filled well, and a historic trash pile where a house may have once stood before being burned down.

The clinic was very successful and at the end of the second day most of the scouts had completed all the requirements for the merit badge. The buzz surrounding the success of the first clinic stirred up enough interest for a second one.

The second Archaeology Merit Badge Clinic was held in October, 2005. Refined methods and a better idea of the historical site led to the second clinic being an even bigger success. At the excavation site, the scouts learned how to set up and excavate units, sift the excavated dirt, record and map the site, and "bag and tag" the artifacts. Artifacts discovered by the scouts include a variety of nails, parts of glass bottles, buttons, shoe soles, ceramics, and other metal objects. As part of the requirement, they then cleaned and labeled some of the artifacts for what will eventually become a display at the Boy Scout Camp.

Photo 2: Boy Scout Tommy Bain sifts through excavated dirt.

The future plan for this program is to keep expanding. In the summer of 2006, five different clinics are planned at Chief Logan. The goal is to reach as many scouts as possible who have an interest in learning what it is like to be an archeologist and studying the field of archeology.

Archaeology Merit Badge Requirements

1. Describe archaeology and explain how it differs from other fields.

2. Describe site location, site excavation, artifact identification and examination, interpretation, preservation, and information sharing.

3. Describe at least two ways to determine ages of sites, structures, or artifacts and explain relative dating.

4. Research and describe 3 archaeological sites outside of the U.S. OR within the U.S. OR visit one site and research and describe it.

5. Present the findings from above to a group.

6. Explain why it is important to protect archaeological sites, what people should do if they find an artifact, and how to become a protector of the past.

7. Make and discuss a list of items one would include in a time capsule OR items of trash a family throws out during one week.

8. Spend 8 hours helping to excavate an archaeological site OR spend 8 hours helping in an archaeological lab OR if unable to do either of the above, a mock dig may be substituted.

9. Prepare an archaeological exhibit for display OR use the methods of experimental archaeology to recreate an item or practice skills from the past.

10. Describe 3 careers in archaeology and the education and experiences required for each.

11. Research American Indians who live or once lived in the area OR settlers or soldiers who were in the area at least 100 years ago.

Hopewell Discovery Day 2005

Park Ranger Laura Murphy

Ed Moreland knapping a large piece of obsidian.

Hopewell Culture National Historical Park celebrated *Ohio Archaeology Month* during October 2005 by hosting "Hopewell Discovery Day: An Adventure in Archeology." A series of displays were presented to highlight archeological research, including displays by Dr. Jarrod Burks, the Mound City Chapter of the Archaeological Society of Ohio. Hopewell Culture NHP presented a display on the archeological work done at Hopewell Mound Group in preparation for the new parking lot and trail and another display on the new raised garden.

Several flint-knappers, including Ed Moreland and Geddy Webb, demonstrated their knapping skills. Flint-knappers make stone tools, such as spear points, by striking or "knapping" the stone until it is reduced to a smaller point with a sharp edge.

Park rangers led interpretive mound tours every hour and demonstrations on how to use an atlatl, an early spear-thrower. Face-painting of Hopewell artifacts was also provided. The event drew a crowd of nearly 300 people. Plans are in the works for another "Hopewell Discovery Day" in October 2006.

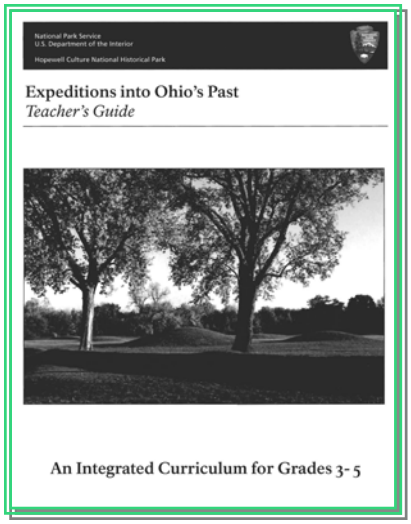
Brandi Harmon painting a projectile point on an excited girl scout's arm.

Teacher's Guide Now Available

Park Ranger Megan Stevens

Hopewell Culture National Historical Park is pleased to announce the release of Expeditions into Ohio's Past: An Integrated Curriculum for Grades 3-5. The guide will provide teachers and students with the necessary tools to understand and appreciate Ohio's prehistoric past. Teachers are encouraged to schedule at least one in-classroom visit by a park ranger or one visit to the park for their class in addition to completing activities in the curriculum guide.

Education of the public and of children in particular, is an important mission of the National Park Service. The curriculum guide was prepared to help ensure that the opportunities provided by the park for learning about Ohio's prehistoric past are realized. This guide strengthens and expands upon the education programs offered by the park.



Use of the curriculum guide before and after on-site visits to the park will help make the student's experience more complete and meaningful.

This curriculum guide is the result of the outstanding contributions of educators, volunteers, and National Park Service employees. A number of people have freely given of their time and abilities to make it available. As educators, students, and park staff use the curriculum guide, it is important that the experiences are shared and the curriculum refined to better serve the needs of students and educators alike.

The stories of the Hopewell culture, archeology, and national parks are exciting and meaningful to our lives today. We seek to share them with the public through the curriculum guide and other park programs.

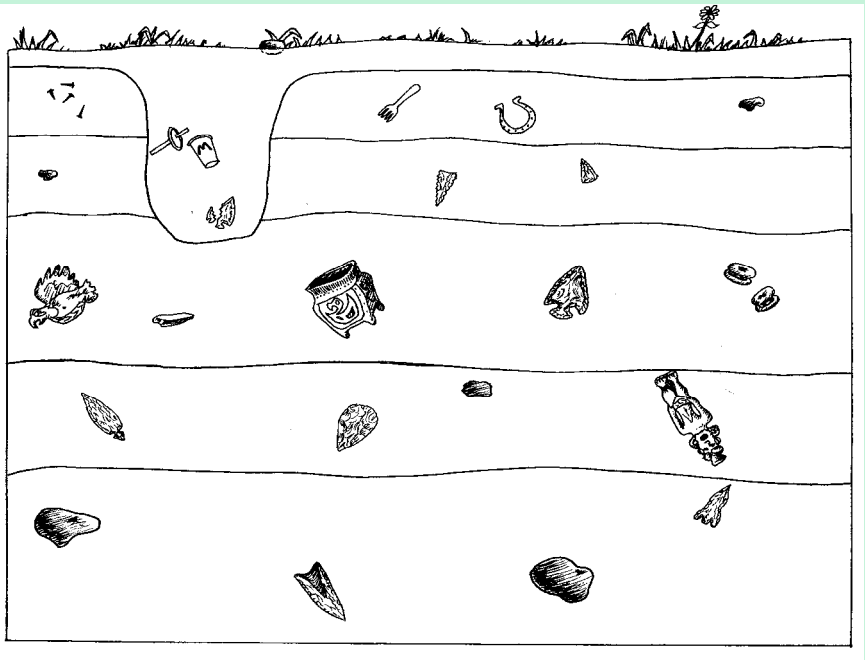
Junior Ranger Page

Park Ranger Sara Lewis

Become a Junior Ranger and help Hopewell Culture National Historical Park protect and preserve Hopewell earthworks for generations to come. To become a Junior Ranger, visit the Mound City Group visitor center and complete a Junior Ranger training booklet. You will then be awarded a Junior Ranger badge and certificate of completion for the Hopewell Culture National Historical Park Junior Ranger Program!

STRATIGRAPHY

Stratigraphy is defined as the arrangement of information or events in layers, like layers of rock. When archeologists dig a site, they record the location of what they find, so that chronological order can be established. Objects discovered at the bottom of the pits dug by archeologists are the oldest, while those near the surface are the youngest (see picture below).



Were the artifacts found on the bottom of this site placed there before or after the artifacts found on top?

What would happen to this site if someone had dug a trench?

Name some of the items that would be found:

Most recent **Oldest**

Re-mapping the Past: Mound City and the Hopeton Works

Dr. Jarrod Burks

Ohio is home to many ancient earthworks—a Native American legacy from over two thousands years of moving earth, wood, and stone. Some of these earthen monuments are so large that you cannot see from one side to another. In the early 1800s, when Ohio was first being settled by Euro-Americans and other immigrants, these amazing sites were of great interest and many pondered their origins. Fascination with Ohio's earthworks remains even today, though most have been damaged or destroyed by land development, gravel mining, and agriculture. Of those that are now gone, our only records of their existence are the maps and descriptions made in the nineteenth and early twentieth centuries. Given the immense size and complexity of these earthworks, (some are over 1000 feet across and consist of multiple, geometric forms), it is no wonder that there are inconsistencies and inaccuracies in many of these old maps.

At Hopewell Culture National Historical Park, in Ross County, Ohio, the maps and descriptions (especially) of Mound City and the Hopeton Works made by Ephraim Squier and Edwin Davis in the 1840s are important historic resources. They provide us today a means to visualize what these great works were like over 150 years ago, before they were diminished by plowing (at both sites) and the construction of Camp Sherman (at Mound City).

The Squier and Davis maps of Mound City and Hopeton appear in Figure 1.

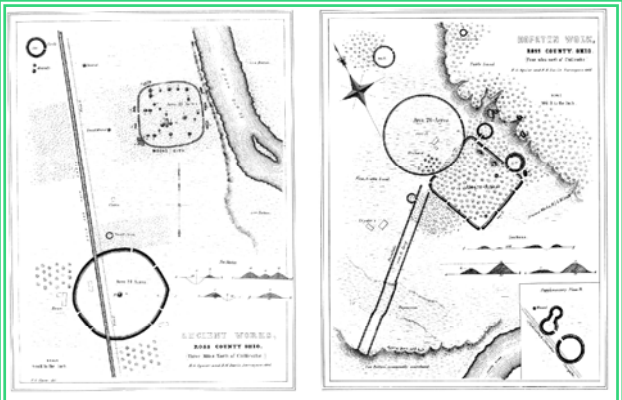


Figure 1. The Squier and Davis maps of Mound City (on the left) and the Hopeton Works (on the right). The large, circular enclosure southwest of Mound City is the Shriver circle, which today is bisected by State Route 104. While no longer visible at the surface, portions of the Shriver Circle are very much still intact beneath the surface.

Less than fifty years after these were produced, archaeologists began to wonder about their accuracy. In the 1880s Cyrus Thomas of the Smithsonian Institution's Bureau of Ethnology sent out a Bureau assistant, James D. Middleton, to check on some of Squier and Davis's measurements. Using a transit and a one hundred foot steel chain (a nineteenth century surveying device, kind of like a tape measure, where each link in the chain was one foot long), Middleton remapped components of six of the Squier and Davis earthworks in central Ohio, including Liberty, Newark, Seal, High Bank, Hopeton, and Baum (Thomas 1889). The new survey results revealed numerous, and significant, errors in the Squier and Davis maps.

Beyond a few other expeditions to resurvey some of the famous earthworks showcased in Squier and Davis, such as Overman's efforts to remap Fort Hill (Overman 1888), few archaeologists in the early twentieth century made new maps of the earthwork sites. Instead, they focused on excavation and used the older maps as their base maps. A prime example is the work of Moorehead (1922) at Hopewell Mound Group.

In the last two decades, renewed interest in Hopewell earthwork sites has led to fresh attempts to reconcile old maps with today's landscape (for example, Greber's [1999] work at Hopewell Mound Group). Some archaeologists are also beginning to remap the earthworks using much more sophisticated and accurate instruments that have only become available in the last 25 years. Recently, I have had the opportunity to remap Mound City Group and the Hopeton Works.

At Mound City, I used a global positioning system (a.k.a. GPS) to walk around the existing earthworks, mapping as I walked. This new map appears in Figure 2.

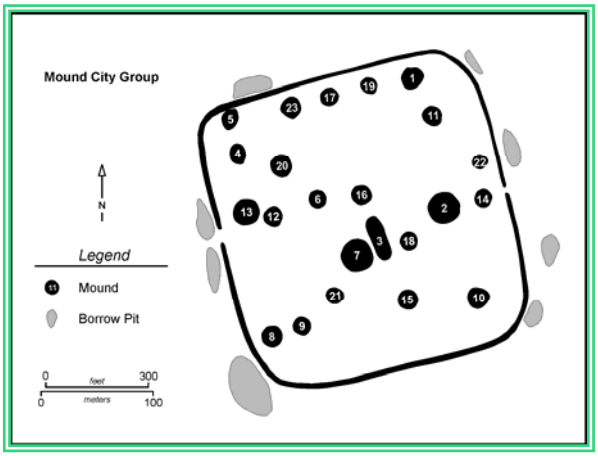


Figure 2

While the mounds and embankments at Mound City are reconstructed, their locations were determined by the systematic re-excavation of nearly all the mounds and portions of the embankments starting in the early 1960s (Brown 2004). Based on these excavations, and some of the measurements taken by Squier and Davis, the mounds, embankments, and borrow pits were reconstructed to almost the same state encountered by Squier and Davis. Still missing from the reconstruction, however, is a borrow pit at the northeast corner of the enclosure. Though apparent on the 1848 map, this borrow pit was "lost" until 1998 when test excavations preceding the relocation of a park trail rediscovered it. In addition to providing the most accurate and up-to-date map of Mound City, the GPS data were also useful for recalculating the acreage found inside the enclosure. Squier and Davis reported this area to cover 13 acres while in reality it is 15.6 acres—that's 1.2 times larger.

At the Hopeton works I used a different, more labor intensive mapping technique. With the help of Karen Royce, a PhD candidate at The Ohio State University, and using a laser transit, I blanketed the earthworks at Hopeton with about 26,000 topographic data points. Curiously, none of the large Hopewell earthworks in Ohio has ever been mapped topographically in such detail, until now. The new map of Hopeton is exhibited in Figure 3 as a shaded relief map.

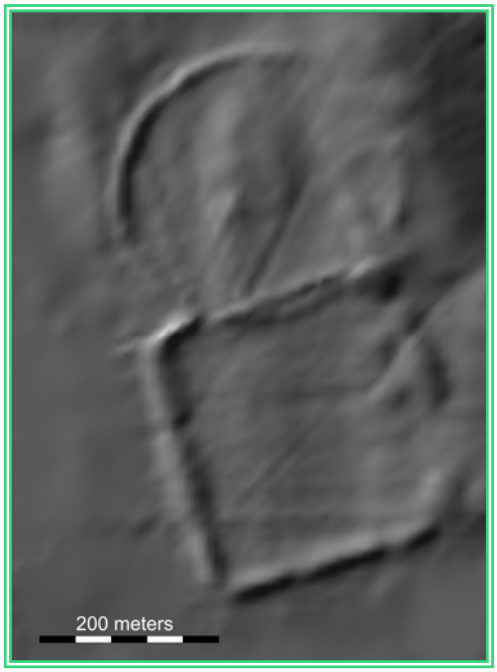


Figure 3

We took great care in collecting a data point about every 6 feet on the embankment walls and every 15 feet inside the enclosure. The result is pretty remarkable. Portions of the earthwork that are difficult to see on the ground, such as the large circle, are much easier to see on the map. And, clearly, the Squier and Davis map is much different than what is actually present on the ground, as Cyrus Thomas discovered in the 1880s.

In addition to the earthworks, more recent modifications to the landscape are also visible. Plowing has left a distinct ridge in a fence row at the north edge of the square, making it look like the square was laid on top of the circle. Plowing has also left long, linear depressions and ridges at the points in the fields where the tractors turned year after year. There are two or three of these lines in the square and at least one in the circle. Unfortunately, nothing of the parallel walls is visible in the new data.

Nearly two thousand years ago, Native American groups in southern Ohio built immense geometric enclosures of earth and wood. Around A.D. 450 nearly all of them had been abandoned to be reclaimed by the forest. Though erosion has been slowly nibbling away and reducing these ancient monuments for fifteen centuries, the last two hundred years of agriculture and land development have greatly accelerated the process, nearly obliterating most earthworks. And while many maps of these old sites have been drawn since the mid 1700s, few modern surveys have taken place. If the new maps of Mound City and Hopeton are any indication, we still have much to learn about the Hopewell and their enigmatic earthworks.

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A Seasonal Ranger's Perspective

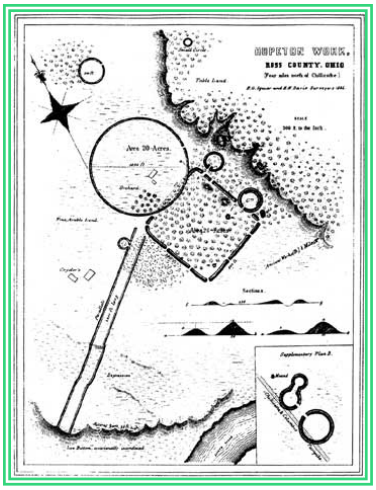
Hopeton Earthworks: Kite & Camera

Park Ranger Daniel Elsbrock

I began my seasonal assignment as a park guide at Hopewell Culture NHP in early January. The winter season gave me time to read about the site and to prepare for spring tours. During this time, I was often drawn to the collection of Squier and Davis illustrations of the spectacular earthworks. Having a bird's eye view of those ancient designs–albeit from these surveyor's measurements-was a great way to absorb so much about these curious marks across the southern Ohio landscapes.

It's hard not to wonder how the earthworks, often in the shapes of large circles and squares, appeared upon the actual terrain 2,000 years ago by observing them from a static, two-dimensional representation in the illustrations. Knowing the exactness and attention to detail found in Hopewell effigy pipes and many adornment pieces, I wouldn't be surprised that the earthen designs were at least partly dependent on the terrain characteristics. Not that we'll ever know. It's just fun to wonder about…

Image 1: Squier and Davis Map of Hopeton Earthwork



I have been a photographer for many years and during my last assignment in North Dakota at the Knife River Indian Villages NHP, I managed to successfully send my camera up by a kite and snap off images while I hiked with it. I was able to get some interesting views of Sakakawea Village and the banks of the Missouri River nearby. Once getting used to managing long lengths of string in tall grass and the freaky sight of my 500 dollar camera swaying high above in some very strong winds, I then tried it out at Badlands NP on my return east. Those rolling short grass hills at the southern end were perfect for walking miles and miles. A steady wind kept me barely concerned for my little airborne tag- along.

Thus, after waiting through many weeks of wet winter weather in Ohio and cursing the Hopewell for not building their earthworks in Tahiti, I was anxious to play with this new toy again and capture at least some recognition of an original earthwork and its grand layout from the sky. The first week of May finally brought clear skies, consistent winds and a balmy 72 late in the evening. No sign of sunbathers, squawking sea gulls, silhouetted couples in the sunset or salty mist in the air. Good thing too, because I had work to do… at Hopeton Earthworks, another Hopewell site located across the Scioto River from Mound City (Image 1).

The southwestern corner walls of the square at this site are still a feature prominent enough to witness from the ground. It's especially impressive when viewing from the eastern hillside. The rest of the earthwork is tough to see. However, a fence line exists approximately where the circle and square overlap, providing strong visual evidence of their dimensions.

Despite a problem with my camera often focusing on my kite string instead of the land far below, the flight over the Hopeton square was a success. (Of course, I didn't mention the other two attempts when the winds barely lifted my camera above the grass.) The segments of the walls of the square are easily seen by the soft, rounded shadows as sunset approaches over the landscape. And I like that my camera caught the surrounding landscape running out to the horizon, giving some actual perspective to the size and scope of the earthwork (Image 2).

Image 2: View from the Kite by Daniel Elsbrock shows the remnants of the Hopeton Square: The southwest wall of the square is visible as a line running right to left near the center of the photo.

Hopefully, at my new assignment at the Lewis and Clark NHP I will have more chances to hone my skills with my kite and camera. Until then, I will still be jealous of Squier and Davis's mapping of the earthworks...and wishing I could've been their aerial photographer.

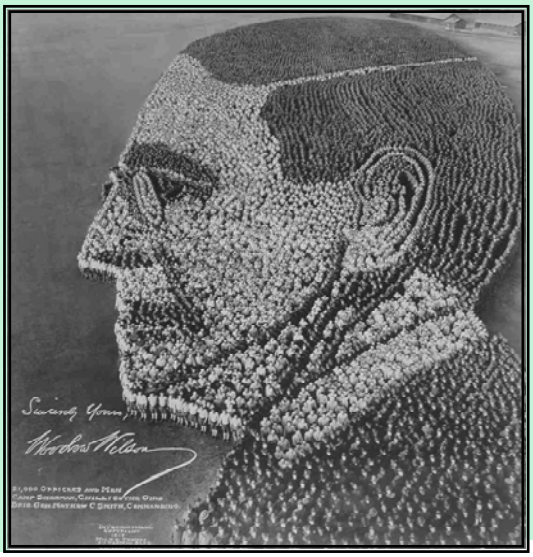
Living Pictures

Brandi Harmon

In 1918 during a time when thousands of soldiers inhabited the land of the Hopewell and patriotic zeal filled the air, photographer Arthur Mole produced one of his most famous works with the aide of Camp Sherman troops.

When the United States entered World War I, Arthur Mole, a 29 year-old photographer from England, traveled to military camps around the U.S. using the trainees as subjects for patriotic themes. Mole's travels led him to Chillicothe, Ohio, where the troops at Camp Sherman were to become his next subjects.

21,000 soldiers and officers stood at attention while Mole stood from the top of a 70-foot observation tower shouting formation directions



through a megaphone. The ground area, which stretched over 700 feet of the Camp Sherman parade grounds, was covered with assistants positioning the troops. Once the troops were positioned, each soldier became an individual tile, which became part of huge human mosaic that took the shape of the familiar profile of President Woodrow Wilson.

Camp Sherman troops not only became the subject of a brilliant work of art in which Mole captured a wonderful sense of perspective and contrast, but also through Mole's artwork became the symbol of patriotism and unity that led the United States to victory.

Camp Sherman Days

Park Ranger Jay Elhard

As part of its annual Veteran's Day observance, on Nov. 11-12 2005, Hopewell Culture National Historical Park presented a documentary from its archives that featured the actual stories and voices of Camp Sherman veterans and area residents. *"Camp Sherman: In Retrospect"* is an audiotape and slide show presentation that was first produced in 1982 from oral history interviews that were recorded with 16 individuals who had direct experience.

Camp Sherman was the third-largest training camp for World War I. At its height, the camp had capacity for 40,000 soldiers, 1,378 buildings and more than 20 miles of streets. The impact on Chillicothe was enormous, increasing the population from 16,000 to 60,000 people.

The National Park Service production, which had not been shown publicly for many years since, had been recently converted into a digital format for new generations of viewers and listeners. A separate computer was available for visitors who wished to search a database for records of relatives who may have served at the military base.

The park also presented regular screenings of silent films recently obtained from the National Archives that depict the camp, the soldiers and their expeditions during the war. Local historical consultant Kevin Coleman presented a slide show talk about the architecture of Camp Sherman and a map that he has made of relevant sites, including a number of structures that are standing to this day.

Among the community members who helped with the event were collectors who brought in photographs, maps, guns, postcards and newspaper clippings to display to the community. Two collectors, Russ Jones and Jim Locke, offered comprehensive displays of Camp Sherman souvenirs and artifacts, ranging from original books, photographs, and postcards to canteens, rifles, bayonets, a camp typewriter, and a button-hole sewing machine.

Special thanks to all community members who contributed to making Camp Sherman Days possible.

Gardening and Gathering

Park Ranger Jay Elhard

Hopewell Culture NHP's latest example of a working garden was created in 2005 largely by three park volunteers, Ralph Keaton, Troy Moore and Ethan Jones. They used "heirloom seeds" provided by Fort Ancient State Park and built raised beds for the garden. These raised garden beds are located north of the cement walkway that leads to the ceremonial area at Mound City Group.

Plant species were included in the exhibit if they are known to have existed here naturally 2,000 years ago or if there is research that suggests they served a useful purpose to the Hopewell. Among the choices for this first planting were amaranths, goosefoot, gourd, Indian hemp, common milkweed, squash and sunflower. A small elm tree was also included for medicinal purposes.

Other edibles that the Hopewell likely collected and cultivated include may grass, pokeweed, wild mustard, black berries, wild black cherry, persimmon, wood nettle, as well as the fruits and nuts from well-established stands of hickory, walnut, oak and paw paw trees.

The new garden at Hopewell Culture National Historical Park.

While there is trace evidence that the Hopewell may have grown a small amount of corn late in their reign, other plants would have been much more common and important to them. Goosefoot, for instance, which we now know has more protein and fiber and less fat than corn, could have been eaten as young, fresh greens and the seeds ground into dark flour.

The use of squash has been recorded throughout history by many cultures. Here is an examples of our first crop.

Local Artist Featured at Hopewell Culture NHP

Brandi Harmon

As a little girl, Mary B. Cooper grew up in Maine surrounded by natural beauty and an artistic family. Mary was always involved in art, even through her college years at Oberlin College in Ohio, where she majored in History. Since leaving Maine for college, Mary has made her home in Ohio. After Oberlin, she attended Antioch College in Yellow Springs, where she was heavily involved in art outside of her studies. Since that time, Mary made Chillicothe her home, where the Appalachian hills, fields, and wildflowers often inspired her numerous watercolor paintings.

The art piece pictured here, "Mound City Group Held by the Hopewell Spirit", was created by Mary for the 75th anniversary of the National Park Service's design competition. This winning design is used at Hopewell Culture NHP as a graphic site identity at the Mound City Group. Mary's fine artistry has been used on Eastern National t-shirts and Junior Ranger booklets.

Mary's design is known as a collagraph, meaning that each element of the picture was cut from mat board with texture added by combinations of paste, crushed paper, and string. The pieces were then inked, each with it's own appropriate color, and placed carefully into position for the final printing of "Mound City Group Held by the Hopewell Spirit".

Besides her collagraph and watercolors, Mary is also known for her works of ceramic sculpture. She now resides in nearby Waverly, Ohio, where the hills, fields, and wildflowers are still very much a part of her life.

VIP Spotlight: Ralph Keaton, Hartzog Award Winner

Chief Ranger Rick Perkins

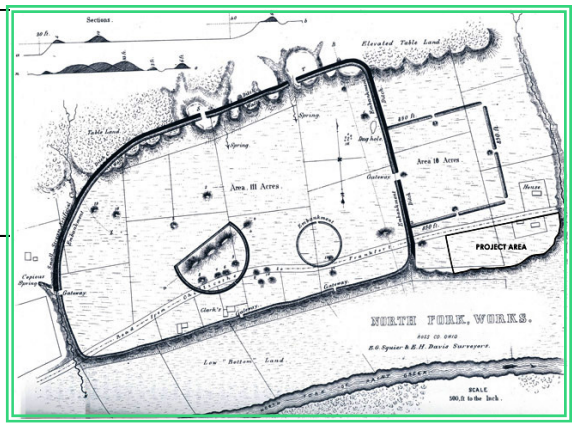
Ralph Keaton won the Midwest region George B. Hartzog, Jr. award for outstanding volunteer service in 2005. The National Park Service created these awards to honor volunteers' hard work and draw attention to their vast skills and contributions to the National Park Service. George Hartzog, Jr. was the National Park Service director from 1964-1972, and in 1970 he announced the new "Volunteers-In-Parks" program.

For the past three years Ralph Keaton has been volunteering faithfully for Hopewell Culture NHP for three separate divisions: interpretation, maintenance, and resource management. Ralph generously donated 700 hours of his time in 2005, with significant results. His knowledge as a Master Gardener led to a successful Park Steward Grant award for the park. His efforts can be seen in a raised bed garden of plants that the Hopewell culture used. Ralph initiated the idea, researched the plant types, collected seeds, planned the layout, built the raised bed, sowed the seeds, tended the plants, weeded and watered the garden, and reviewed the interpretive literature.

Ralph also helped establish and maintain six acres of native grassland and assisted with the planting and was solely responsible for the maintenance of 1.5 acres of native trees. Ralph is involved with many programs at the park ranging from invasive plant control, Integrated Pest Management, salamander monitoring, butterfly programs, aquatic workshops, and restoration work on park benches. Ralph is well-known and liked by park staff, and he is always willing to offer any help he can.

New and Scheduled Improvements at Hopewell Mound Group

Superintendent Dean Alexander



A new public parking area and restroom facilities were open to the public in Spring of 2006 at Hopewell Mound Group. Located on Sulfur Lick Road near Maple Grove Road, the lot provides access to the Tri-County Triangle Trail, a multi-use trail that is especially scenic and a popular trek for bikers, birders, runners, and skaters.

The next two improvements to the Hopewell Mound Group site are in advanced planning stages. The park is now reviewing texts and layouts for a series of wayside exhibit panels to be placed along the rail trail. Also being designed at this time is a mile and a half-long hiking trail that will start at the north end of the new parking lot and run up to the upper terrace eventually leading to a good view of the intact walls built 2000 years ago by the Hopewell. The trail will connect to the rail trail near the west of the earthworks to allow visitors to loop back to the parking lot. The trail will also feature lookouts from the upper terrace that will afford good views of the entire Hopewell Mound Group site. The trail should be ready by summer 2007.

The Hopewell Mound Group (pictured above) is one of five important archeological sites in Ross County, Ohio that are preserved and interpreted by Hopewell Culture National Historical Park.

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U.S. Department of the Interior

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Official Business

EXPERIENCE YOUR AMERICA

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The Mission of the National Park Service:

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

Eastern National
Serving America's National Parks and Other Public Trusts

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