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Ancient Leetsdale sandbar reveals history as 8,000-year-old stories come to life

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By Lillian Thomas, Post-Gazette Staff Writer

Eight thousand years before workers began casting two gigantic sections of a dam on the banks of the Ohio River in Leetsdale, people were wading out from shore to the same spot, then a sandbar, and camping for short periods.

Groups continued to visit the site over the next several thousand years, making stone weapons and ceramic vessels, building hearth rings, roasting food and putting up structures.

The sandbar became a full-fledged island, then gradually began to attach itself to the shore, eventually becoming part of the bank.

A hundred years ago, laborers fired bricks there. And today, archaeologists are digging straight-edged pits to reconstruct many fragments of human occupation.

The archaeologists are working for the Pittsburgh District of the Army Corps of Engineers. When the Corps decided to replace the badly deteriorated Braddock Dam, it took the unusual approach of building the dam on land in Leetsdale and floating it upriver into place.

It was built in a huge pit on the banks of the Ohio in Leetsdale, and an archaeological survey of the area was required before the project started in 1999. That survey indicated that there was evidence of occupation of the area that dated back several thousand years, so more extensive excavations were planned.

Moving down through the soil and back through time, archaeologists found a 19th-century brick factory

Volunteers welcome, tours offered

During the rest of this month and early November, the Leetsdale archaeology site will be open to volunteers interested in excavating and for tours.

Archaeologists will train and supervise the volunteers. The sessions will run from 8 a.m. to 3:30 p.m. seven days a week through Nov. 10. Volunteers must be at least 12 years old.

Hard hats, safety glasses and leather work gloves will be provided. Participants should wear comfortable

associated with the Harmonist Society, a community founded by German religious separatists that played an important role in development along the Ohio River, archaeologist Lori Frye said. She and Corps archaeologist Deb Campbell are coordinating work by several contract archaeology firms.

There was little representing the next several hundred years of time, but ample evidence has been found of occupation during the Early Woodland period (about 1,100 BC to AD 200). Digging 16 to 18 feet below the surface, archaeologists found signs of encampments throughout the Middle, Late and Transitional Archaic periods (6,000 BC to 1,100 BC).

The artifacts they have uncovered include both crudely worked stone tools and sophisticated projectile points; ceramics; and flakes from a tool-making process known as "debitage" along with points that had been resharpened until they were too tiny for use.

They also have found fire-cracked stones, reddened soil and other evidence of fires, and signs of posts used in some type of structure.

For Frye, one of the biggest surprises was the occupation of the site when it was a sandbar. Evidence indicates there was little soil and vegetation during the first 3,000 or so years of human occupation, because it was being flooded so often.

"To me that's a big mystery. Why would you come out to this little weedy brushy sand thing that might be there for a short period each year?"

People waded out and built fires, and perhaps made or sharpened tools, because archaeologists have found stone flakes that chip off during tool making. The activity continued when the sandbar became an island about 5,500 B.C.

When the island merged into the shore by about 3,500 B.C., its attractiveness is easier to understand. Groups probably caught and roasted shellfish, Frye said. Though they have not found shell middens -- heaps of discarded shells -- they have found ample evidence of fire rings typically used to roast them, as well as stone sinkers used with nets to catch them.

clothes and expect to get dirty.

Volunteering and tours must be scheduled in advance -- no walk-ons are allowed. Children must be 10 or older for the tour. Tour dates and times are 10 a.m. Tuesday and Thursday; 11:15 a.m. Oct. 22 and Oct. 24; 1:15 p.m. Oct. 29 and Oct. 31; and 2:30 p.m. Nov. 4 and Nov. 7.

The site is off Route 65, adjacent to Leetsdale Industrial Park.

To schedule a tour or sign up to volunteer, call Kathy Furgerson, (443)-691-0196.

The site is significant for several reasons, Frye said. Because it was a sandbar/island separated from the bank by a back channel of the river, it was frequently flooded.

Many times, those floods washed over a layer of soil that sealed off the soil below. That gives the archaeologists nicely separated "time capsules" in which distinct occupations, even brief visits, are clear, Frye said.

The site is undisturbed, meaning the soil hasn't been plowed or dug in for construction, mixing the layers.

Because the area was periodically occupied over thousands of years, archaeologists will be able to trace transitions from hunting-and-gathering societies to early agriculture, as evidenced by changing tools and settlement patterns.

And because the project included what is called an environmental reconstruction component -- analyzing soil, pollen and plant materials to figure out what the climate was like, what plants were present, and tracing changes in both -- the site may yield significant data about how changes in climate affected human society, Frye said.

Archaeologists have discovered two small, perfectly preserved hunks of peat that may help determine how long it took this part of the country to thaw out after the last Ice Age.

About 10,000 years ago, water swept leaves and other debris down the Ohio River and left two pockets, like puddles, Frye said. "You could see swirl patterning" from the churning waters.

Before the debris could decay, another flood deposited soil over it, sealing out the oxygen and bacteria that cause decay. The leaves became peat. Then another flood swept leaves and other debris over the same area. This was sealed by another flooding episode, creating a second peat deposit.

Scientists do not know how long it took for temperatures to rise and vegetation and climate to change once glaciers receded from the northern portion of the United States after the last Ice Age ended 10,000 years ago. The information from the two peat bogs will be radiocarbon dated and could reveal whether it took a century or thousands of years for that climate change to take place.

At the site, there are three areas being worked now, and about 20 trenches have been dug in the course of the project, Frye said. The trenches help set the time and space boundaries of the site, finding out where the edges of occupation

were. Six smaller areas will be excavated over the next several months.

At the site of the brick works, where excavation work is finished, walls are still visible, as well as the remains of a kiln and many scattered bricks.

In an adjacent site where Archaic period evidence has been found, about 20 archaeologists have found stone projectile points, some characteristic of groups from Ohio and eastern Pennsylvania, and hearths.

The area seems to have been used for brief visits by small groups over very long periods of time. The group last week found what appears to be a stone hearth from the earliest period of occupation and decided to extend the work to explore further.

Area 2, the largest site now being excavated, is closer to the river. Archaeologists there have reached the level of the Early Woodland Period, about 800 BC. They have found hearths, many stone tools, including projectile points, drills, knives, scrapers and some ceramics. On Thursday, they found evidence of posts, indicating a structure, which would mean it was more than a temporary camp.

A portion of Area 3, which is closer to Leetsdale Industrial Park, will be worked by volunteers under the supervision of archaeologists over the next few weeks (see accompanying story).

Leetsdale Industrial Park owns all the land being excavated, and has been very accommodating about letting the archaeologists work on it, Frye said. She hopes to be able to continue the project into next year.

The work is being paid for by the Corps of Engineers, which is permitted to spend about $7.05 million, or 1 percent of the total cost of the dam project, on archaeological work. Frye said she expected to come in at or under that amount.

She also expects the site to become well-known as the wealth of data it is producing becomes known.

"I believe it'll end up in textbooks. When we finish, we're going to have lots of pieces of the puzzle from the last 8,000 years."

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