

## A SEVEN-POUND COPPER AXE AMONG 1946 HOPEWELL DISCOVERIES

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Four burials in a Fulton County mound, with their accompanying burial goods which include as an outstanding item, a 7-pound copper axe, are among the 1946 Hopewell discoveries of Mr. and Mrs. George Schoenbeck, members of Peoria Academy of Science, to be reported in this paper.

Other discoveries described briefly include material from three additional sites near the mound: a Hopewell village site, a Mississippi village site, and a Mississippi burial site. Recorded, also, as of interest, is another Hopewell find from the Steuben village site.

The first Fulton County discoveries were made September 22, 1946, when a fresh road-cut was investigated. The cut affected four adjacent sites, all of which had been previously recorded by Cole and Deuel in "Rediscovering Illinois,"<sup>1</sup> as among the mound and village sites of the general Sister Creeks group. These sites were designated as F<sup>o</sup> 60 (unit No. 60 in the Fulton County survey), a Hopewellian Mound; F<sup>v</sup> 49, a Hopewellian village termed the Whitnah village; F<sup>v</sup> 47, a Mississippian village; and F<sup>o</sup> 48, a Mississippian burial place.

### HOPEWELL MOUND

First, brief exploration was done at the Hopewell mound, considered the most important site, and results suggested there should be a full in-

vestigation. A report was made to Dr. Thorne Deuel, Director of Illinois State Museum, and work was withheld. At the other sites, all with material conspicuously exposed, some work was done.

After Dr. Deuel stated the museum could not undertake exploration of the mound and after road work had again exposed and destroyed still more material, the Schoenbecks, three weeks later, made a limited excavation. A few days after the excavating, more road work destruction occurred when a signpost was placed inside the face of the mound.

The large copper axe was one of five that accompanied the three original burials in the mound. Four of them, surrounded by bark as though wrapped in it and the bark preserved by the copper, occupied the same relative position, under the base of the skull, with the small end protruding to the left of the head. The fifth one was lower, possibly by the hand of the skeleton having the big axe.

All axes are covered with verdigris, but exposed areas on the large one show a high polish. Each was but a part of the burial goods, which included several types of shell and pearl beads, cut human and animal jaws, worked bear canines, and stone gorgets. No Hopewell pipes, mica, copper other than the axes, Hopewell flint blades, or other chert arti-

<sup>1</sup> Cole, Fay-Cooper, and Deuel, Thorne, *Rediscovering Illinois*: Univ. of Chicago, 1937.



FIG. 1.—Hopewell mound in foreground, Hopewell village at base of bluff, Mississippian sites on bluff.

facts were found, though such might have been in the destroyed areas.

Weight of the large axe is seven pounds. Measurements are: length,  $12\frac{5}{8}$  inches or 32 centimeters; width of blade,  $3\frac{1}{4}$  inches or 8.1 centimeters; width of poll,  $1\frac{1}{8}$  inches or 2.8 centimeters. Thickness at center is 1 inch or 2.4 centimeters.

The other four measure and weigh as follows:

Length (in.)	Blade width (in.)	Poll width (in.)	Weight
8	$3\frac{1}{4}$	2	$2\frac{1}{2}$ lbs.
$6\frac{1}{2}$	$2\frac{5}{8}$	$1\frac{1}{4}$	1 lb. 1 oz.
$5\frac{1}{8}$	2	$\frac{3}{4}$	14 oz.
$5\frac{1}{2}$	2	$1\frac{5}{16}$	11 oz.

Only the northwest quarter of the mound remains, the rest of it having been cut away by road building. Its two sloping cut faces, each with a ditch at base, meet at approximately the mound center, where the burials lay. A low remnant of the mound showed on the far side of the new road, from the east face, but it has since been buried under a fill. The south face measures about 40 feet and the east one about 60 feet, their exact outer ends being hard to determine. The mound height is about 6

feet above the burial floor.

In the east face appeared a very definite sloping black layer, 3 to 4 inches thick, which is possibly an old sod line on the top of an original mound. It showed for a length of 9 feet; its upper end was one foot below the present top, and the other was several feet lower and disappeared over the burial area. It suggested that the top of the original mound dropped over the general burial area and that a new top had been built up later.

First burial evidence was seen at the east end of the south face as a fairly distinct, gray horizontal line or layer, 1 to  $1\frac{1}{2}$  inches deep, extending westward about 9 feet, which suggested and later proved to be a floor. Small fragments of bone were in the ditch.

Shallow digging revealed three skeletons on the floor, with heads to the north, approximately, and a dug-in burial at a higher level and further west, with head to the east. There were amounts of white bone ash on an inclined area to the north of the burials, and lastly two de-

posits of remains on the other sides of the two ditches, which may, or may not, have been in original position.

Two of the three skeletons on the floor lay extended, but lower parts had been cut away at about the hip line by the road machinery. The third one, which lay to the right and west of the extended ones, was flexed and had been cut through just above the ankles. The skeleton of the higher, dug-in burial was flexed and, lying in an east-west direction behind the cut face, was undisturbed.

The floor was a layer of bark. This bark mass separated and broke away freely, offering a sharp cleavage line. Soil beneath the layer was a gray-brown mottled clay, and a higher level for this clay in the area north of the burials and ash suggests the bark floor was a sunken one. Soil covering the three skeletons was a black, dense, very hard soil like a gumbo or a swamp muck, so very hard when dried by the air as to seem impenetrable. No sand floor was located.

Bones were exceedingly soft. The combined extremes of hardness of soil and softness of bones made digging most difficult and caused more or less unavoidable destruction of burial material, particularly of bones.

Particles of white ash were seen on the east face immediately north of the head of the east skeleton and shallow digging exposed several irregular layer-like deposits of this ash. The layers sloped downward to the west but how far they extended is not known. Soil lay between the ash layers. No evidence of fire on the area, i.e. no baked soil,

red-burned soil, charcoal or charred bone could be seen, though bits of charcoal were in the soil further north. The ash extends eastward across the ditch and suggests there may have been more burials there.

Some grave goods, part of which were found in the first shallow exploration and part found in the ditch following additional road work, have been tentatively assigned to two burials, according to location and other considerations. It was fortunate that the first items were obtained when they were because the later ditch work removed the front area of the mound.

The skeleton having the large axe lay extended upon its back, with the other extended one to its left and the flexed one to the right. Eighty barrel-shaped shell beads were around the neck and a portion of a perforated split bear canine, notched on inner edge, lay near them. This tooth was so tightly imbedded in the soil that it was brought out inside of a chunk of soil and extricated later. White material, possibly powdered shell beads, was inside the jaws, in the mouth. A piece of red ochre, a fragment of obsidian and one incised pottery sherd were in the soil.

Five copper-stained and copper-preserved pearl beads, one a 9/16 inch hemispherical one and the other four smaller cylindrical-shaped ones, were in the soil by lower left arm. Two more of the smaller beads were found later. The 11-ounce axe provided the stain on the beads and probably on another barrel-shaped bead found in ditch. Beside the axe were two large bear canines, each with two probably decorative perforations in the front and a complete

perforation in the top, probably for suspension. Lower on the arm were two small split bear canines, with notched edges perforated at the top, and bearing eight shallow decorative perforations arranged in two horizontal rows of four each. With these smaller canines were portions of eight cut and perforated human jaws, six left ones and two right ones. Here too was a portion of a human jaw with teeth, showing no cut, and a number of loose teeth.

By the right arm were two large bear canines, cut crosswise through the middle and beveled; at this cut the nerve canal showed enlargement into a perforation.

The skeleton to the left lay in a similar position, but in a slightly NW-SE direction, with face turned to the left—the upper part more than the lower—and the lower jaw split up and down, suggesting weight and pressure and probably some movement of upper face. Pelvic bones were in place and vertebrae were in alignment.

Two copper axes,  $6\frac{1}{2}$  and  $5\frac{1}{8}$  inches long, were under the head, the larger one lower on the skull than the other. At the throat were 394 pearl and shell beads (made from columellae of marine shells) of varying size and shape. Two large perforated bear canines were, one on each side, under the jaw. Perforations consisted of two oblique ones in the face and a lengthwise one in top. Two notched and sharpened human canines were on the chest. The mouth of this skeleton also contained the white material, probably shell.

Fragments of a reel-shaped, perforated, gray shale<sup>2</sup> gorget lay in

the soil, low on the body and close to the cut mound face, and other fragments were in the ditch. Twenty in all, they make almost a complete specimen. With the fragments in the ditch were fragments of another perforated gorget of white limestone,<sup>2</sup> extremely weathered and deteriorated by ground water action.

The flexed skeleton lay on its right side, in a NE-SW direction, but with head turned slightly to the left. A wide 8-inch  $2\frac{1}{2}$  pound axe was under the head. A portion of a perforated cut bear jaw with six jaw teeth lay east of the body, behind the back, at shoulder level. Lower leg bones protruded from the face of the mound.

The dug-in burial lay in an E-W position at a level about fifteen inches higher than the other burials and further to the west. The upper part of skeleton lay on its back, with head bent sharply forward onto chest. The skull was intact and in fair condition, better preserved than others. Teeth were well worn down. The occipital bone bore a very pronounced protuberance. Legs were bent, with knees high up and to the right of the pelvis. The skeleton gave the appearance of having been crowded into too small a hole. Sixteen split bear canines, 3 entire and 13 broken, one cut human jaw and a number of young teeth caps were imbedded in chest.

Pottery sherds found in outer mound soil and in ditches include Woodland Plain and Woodland Cord-roughened; thin leached Plain and Cord-roughened; Havana Zoned or Alternate Area; Incised; Dentate Stamped having horizontal band with plain band at top and incising

<sup>2</sup> Identified by Ruth Browne, Geology Instructor, Bradley University, Peoria, Ill.

and other with horizontal oblong teeth; gritty-tempered, wide-incised body similar to C. and D.'s No. 1 type; and Sister Creek Punctate in three variations.

Each of the small compact masses of burial material across the ditches seems to be isolated and may have been deposited there in a block by grader. The south one, which included a skull, lay at a depth below that of the bark floor in mound, so that if it were a burial it would have been a subfloor burial. Upper leg bones, which may belong to extended mound burials, and other bones are now weathering out of the soil on the road edge.

#### HOPEWELL VILLAGE

The Hopewell village lying on both sides of the new road going up the bluff, and extending well up the bluff face, has a freshly scraped area on the east side. From the village have been obtained perforated clam-shell hoes; a broken clay platform pipe; a cut perforated deer-bone game bone; clam shells; deer teeth; broken birdbone awl; drumhead mouth plate; grooved sharpening stone; pitted stones; otoliths; portion of limonite spade; worked fragment of turtle carapace; points and flake knives; chert scrapers; cut, hollowed, antler tip projectile point; celt fragment and many fish and other animal bones.

Around 100 rims and 86 lower rims and decorated sherds, including 5 Mississippi rims, have been collected. Represented are Naples Dentate Stamped; Crescent Dentate Stamped; Barred Ovoid Dentate Stamped; Woodland Plain with boss; Incurved Plain with sand tempering; Alternate Area or Havana

Zoned; Incised; Hopewell Rocked and punctated rim; Bar stamped; Incised; Hopewell Crosshatched Rim; Imitation Hopewell Crosshatched; Sister Creek Punctate, some with boss; Clear Lake Corded-paddle-edge Stamped, both the heavy and the thin with wide-interval cord-roughening; and Maples Mills, or Cord Decorated (Gooden Cord Impressed).

The Maples Mills ware shows a later Woodland occupation than the Hopewell; the Mississippi sherds and a Mississippi pit dug down through the Hopewell village show a still later occupation. It is a stratified village site, with the Hopewell the strongest occupation.

#### MISSISSIPPIAN BURIAL PLACE

At the Mississippi burial place on bluff, simple burials were exposed well down the bluff slope. There was little burial goods. Bones were in excellent condition.

#### MISSISSIPPIAN VILLAGE

Pits of the Mississippi village were found on top of burials, to the north of them and to the south. One on the lower slope of bluff, dug down through the Hopewell village, was exposed in the wall of the west road-side ditch. A Mississippian globular bowl containing black soil and many fish and other fine bones, protruded from ditch wall at a 2½ foot depth below Hopewell village floor. Two other pits show on the ditch wall.

A horizontal burnt log, which a little digging showed to extend some distance, was located in the face of a side road-cut on the bluff, at a depth of 12 to 15 inches. Sherds and a portion of a small pot, a part weath-

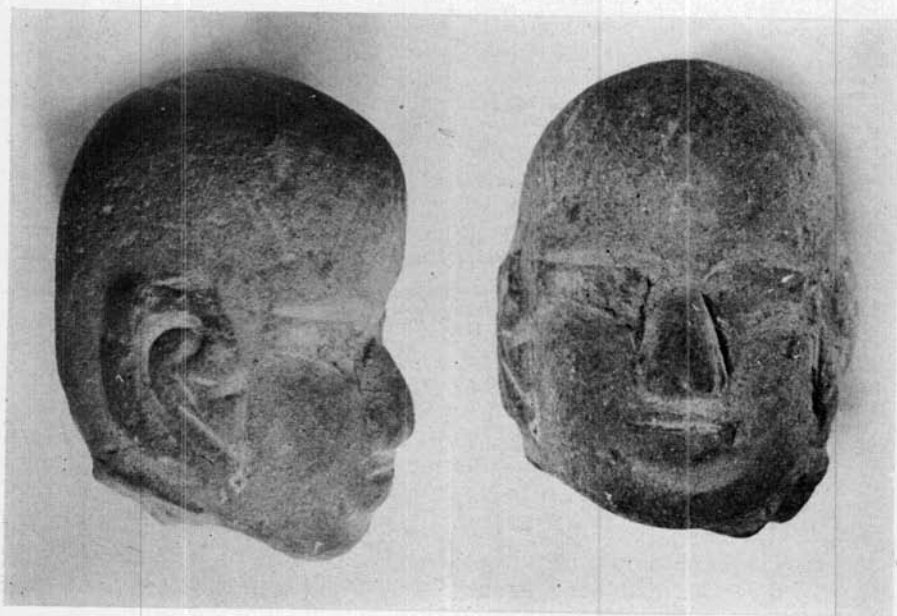


FIG. 2.—Front and profile view of Steuben effigy.

ered out and a part remaining, were by it.

An item of interest from a pit above burials was a cut, hollow bird-bone containing another bone as fine as a darning needle and sharply pointed. Both were broken off together at one end, possibly by road machinery.

Considerable pottery was obtained from pits on bluff top. Included was a bowl with a bottom shaped like a wooden chopping bowl, topped by a very wide, flaring rim, decorated on inside, and flaring at about a 45° angle.

#### STEBEN VILLAGE EFFIGY

Another Hopewell discovery, made May 5, 1946, is a carved and incised human head effigy of argillaceous sandstone<sup>3</sup> from the Steuben Village

site located on the Illinois River, in Steuben township, Marshall County, about 23 miles north of Peoria.

The head is skillfully, effectively done.

It is a portion of some larger object, possibly a figurine, and measures in height 22 millimeters. Details offered by the effigy include the type of features and facial contour; the shape of the head and the shaved scalp; the elaborately ornamented or highly conventionalized ear; and the indication of some accouterment breaking the line between neck and left shoulder.

The site is recorded as site 22 in the Peoria Academy of Science Survey, copies of which are also in hands of University of Chicago and the Illinois State Museum. It is a sloping gravelly floodplain, lying on west bank of Illinois River, between

<sup>3</sup> Identified by Harold Lucy, head of Geology department, Bradley University, Peoria, Ill.

river and high bluff. Lower area is occasionally flooded and the whole is subject to very much erosion.

Abundant material has been exposed by cultivation for many years, particularly on several gravel ridges. Artifacts were excavated from a stratum exposed in the bank of a creek at a depth of over six feet. The stratum was immediately overlain by 4 inches of gravel. A portion of a human skeleton with bones in position and other material including shells, bones, etc. was found in the bed of the creek, at a slightly deeper level, likely of the same occupation period. These finds indicate that the creek, which now runs along the south side of the recognizable village area, did not exist in this particular

location at the time of this occupation. Whether this deeper occupation level shows a buried sloping surface for the village now exposed on higher ground to the north or an earlier occupation has not yet been determined. The pottery dug out is Woodland.

The head was found on the freshly cultivated surface of the field following a plowing of increased depth which brought up a correspondingly increased amount of material. Most of the material was from a previously undisturbed depth as evidenced by an abundance of rotten, quickly deteriorating bones and shells, long depleted from the usual cultivation depth. A bird, of pink chert, is another effigy from this site.

# BOTANY

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1. Virginius H. Chase, Peoria Botanist: HARRY L. SPOONER, Peoria Historical Society, Peoria.
- \* 2. The Conspicuous Groups of Clavarioid Fleshy Fungi: MAXWELL DOTY, Northwestern University, Evanston.
3. Some Bryophytes of Coles and Clark Counties: CHARLES B. ARZENI, Charleston.
- \* 4. The True Irish Shamrock: JOHN B. MURPHY, DePaul University, Chicago.
5. The Control of Weeds on a Typical Prairie Farm: MARVIN R. SIBERT, London Mills High School, London Mills.
- \* 6. A New Species of Oedogonium from New Zealand: L. H. TIFFANY, Northwestern University, Evanston.
7. A Method for Cytological Investigation of Algae: CARROLL J. PETERSON, North Park College, Chicago.
- \* 8. The Growth of Conifers on Prairie Soil: RALPH W. LORENZ and J. NELSON SPAETH, University of Illinois Agricultural Experiment Station, Urbana.
- \* 9. Absorption of Streptomycin through the Root System and Its Transfer to Other Organs: O. D. MORGAN and H. W. ANDERSON, University of Illinois Agricultural Experiment Station, Urbana.
- \*10. A Decade of Experimenting with Colchicine: O. J. EIGSTI, Northwestern University, Evanston.
- \*11. Chromosome Studies by the Colchicine Pollen-tube Method: O. J. EIGSTI and CAROL SILVER, Northwestern University, Evanston.
- \*12. Chromosomal Morphology in *Polygonatum*: O. J. EIGSTI and JEANNE TOMHAVE, Northwestern University, Evanston.
- \*13. The Late Blight Problem: G. H. BOEWE, Illinois State Natural History Survey, Urbana.
- \*14. Carbon Dioxide Concentrations at Near-soil Levels of the Atmosphere of Illinois Forests and Grasslands: HARRY J. FULLER, University of Illinois, Urbana.
- \*15. The Use of Thermocouples in Soil Temperature Studies: MAX E. BRITTON, Northwestern University, Evanston.
16. Additions to the Check List of the Vascular Plants of Sangamon County, Illinois: GEORGE D. FULLER, Illinois State Museum, Springfield. (Read by title.)
17. *Houstonia minima* in Peoria County: E. SCHOENBECK, Peoria Academy of Science, Peoria.
18. The Acanthaceae of Illinois: GLEN S. WINTERRINGER, University of Illinois, Urbana.
19. A Revised Check List of the Vascular Plants of the University of Illinois Woodlands: G. NEVILLE JONES, University of Illinois, Urbana. (Read by title.)

\*Not published.