

Corrections

Please note that the correct title of my paper in *Ancient American*, #14 [July/August 1996], pp. 28-37, is "Ohio's Hanukkiah Mound," but was erroneously given as "Ohio's Hanukkah Mound." Likewise, the text beginning at the bottom center of p. 28 should read "Recently, ... David Berry ... has pointed out that the structure inside the walls looks rather like a Hanukkiah, the nine branched candelabrum or *menorah* used to celebrate the Jewish festival of Hanukkah. Eight of the nine candles of the Hanukkiah represent the eight days an oil lamp is supposed to have miraculously burned, despite the fact that the lamp had only enough oil for one day, after a siege of Jerusalem was lifted in 165 B.C. by Judah Maccabee." Although "Hanukkiah" (or Hanukiah or Khanukiah or Channukiah, etc.) is not found in English dictionaries, it is a household word in Israel, and precisely distinguishes this object from the seven-branched Temple Menorah.

Also, Figure 8 was enlarged somewhat for the magazine, giving it at a scale of about 1:19,600, rather than 1:24,000 as reported. The "17th Annual Report, Peabody Museum, p. 350" in the references after the name of Isaac Roberdeau was in fact authored by Frederic W. Putnam in 1882. The Roberdeau reference is to "A Sketch of Several ancient Fortifications," etc. as in the paper. Finally, the correct title of the 1922 Willoughby reference is *The Turner Group of Earthworks, Hamilton Co., OH*, and it appeared in the *Papers of the Peabody Museum of American Archaeology and Ethnology*, 8 (#3): 1ff.

Ohio's "Hanukkah Mound"

by J. Huston McCulloch, PhD. Ohio State University

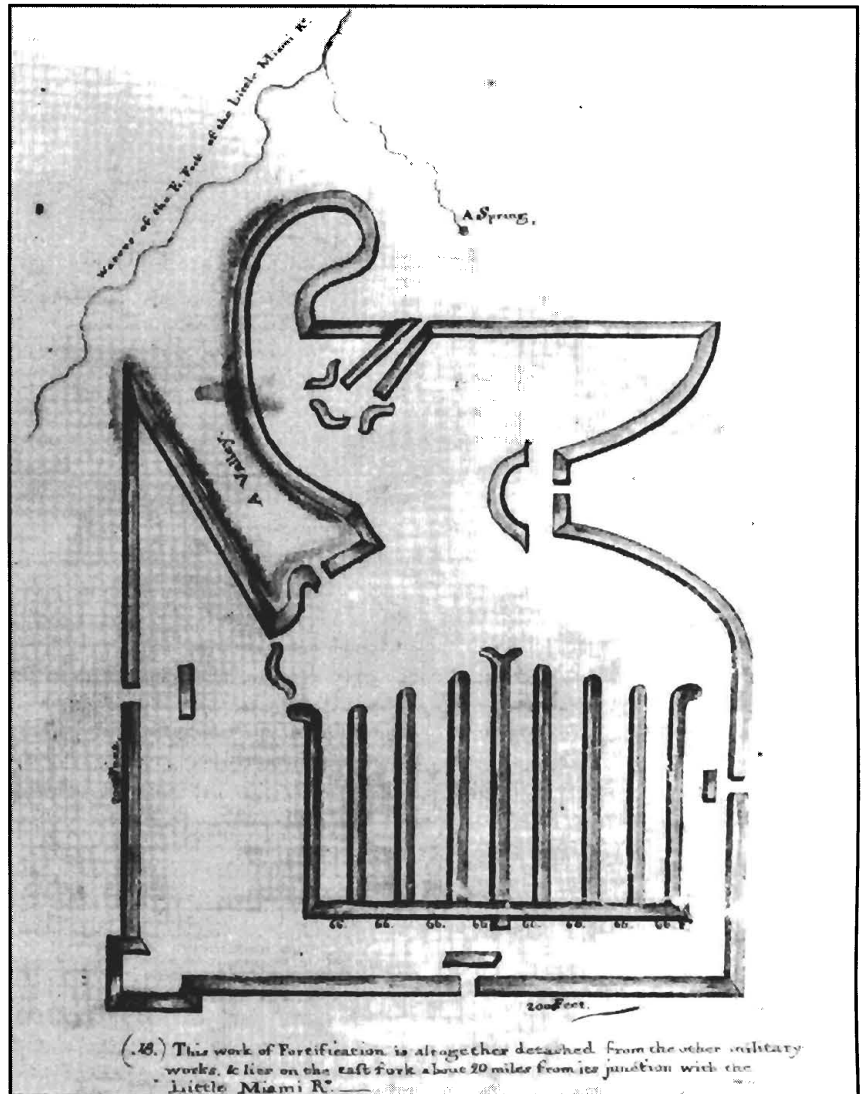
Surely the most curious of the many Ohio earthworks depicted by Ephraim G. Squier and Edwin H. Davis in their 1848 classic *Ancient Monuments of the Mississippi Valley* is the structure shown in Panel 2B of their Plate 34. Panels 1, 2A, and 2B of that plate are reproduced in Figure 1. According to their text, this "singular" work was on the East Fork of the Little Miami, about 20 miles above Milford. Depending upon whether one interprets this as being 20 miles along the general curve of the East Fork, or 20 miles by the most direct route, their description could place this structure anywhere between Madisonville and Fayetteville.

Cyrus Thomas, in his 1894 Report on the Hound Explorations of the Bureau of Ethnology, dismissed Squier and Davis's representation of the East Fork works as being largely, if not entirely, fictitious: "Some of the singular works described and figured in *Ancient Monuments* and elsewhere are to a large extent imaginary. Of these we may name Nos. 1 and 2, Pl. XXXIV of that work. The wing to No. 1 is not only imaginary, but, according to the Bureau assistant who visited the locality, was made impossible by the topography." (p. 566.)

Thomas gave no specific objections to the East Fork works shown in Panel 2B, but he evidently regarded them as guilty by association with the Milford works, shown in Panel 1, since Squier and Davis had given the same sources for both. The reliability of Squier and Davis's illustration of the East Fork works has therefore been linked to that of the Milford works.

In his 1902 *Archaeological History of Ohio*, Gerard Fowke approvingly quoted this passage by Thomas, and added that not only the "diverging lines" of the Milford works, but also the "interior arrangement of the other [East Fork works], induce some skepticism as to the accuracy of the drawings." (1902: 213-4)

The diverging walls of the Milford works are somewhat unusual, since extended parallel walls are more the norm for Ohio earthworks. But by itself this is merely a "novel and interesting feature," as Squier and Davis put it, and not *ipso facto* grounds for "skepticism as to the accuracy of the drawing." The structure at the end of these walls, which Squier and Davis referred to as "a maze of walls unlike any other which have yet fallen under notice," is also curious, but again hardly grounds for dismissal. These terminal walls look somewhat like the pinion feathers of certain



Did Hebrew visitors build a colossal image of their sacred sign 2,000 years ago? Frontispiece: Major Isaac Roberdeau's 1823 map of the East Fork Works. This map is the ultimate source of Plate 34, Panel 2B in Squier and Davis's 1848 classic *Ancient Monuments of the Mississippi Valley*, and has recently been rediscovered in the records of the U.S. Army Corps of Engineers. In 1894, Cyrus Thomas, who was unaware of this source, dismissed Squier and Davis's illustration of this earthwork as being "to a large extent imaginary." National Archives photograph, RG77, Dr. 144, sh. 20.

species of hawk, crow, eagle, or vulture in flight, and give the extension the appearance of a bird's wing. While such a large-scale mound effigy would be unusual, it is hardly so exotic as to tax one's credulity.

The problem apparently was with the East Fork works themselves. Squier and Davis did not elaborate on what they styled their "extraordinary outline," nor did Fowke indicate what he found so suspicious about their "interior arrangement." Recently, however, David Berry of Columbus (as quoted by Bauer

1988) has pointed out that the structure inside the walls looks rather like a Hanukkah, the nine-branched candelabrum or *menorah* used to celebrate the Jewish festival of Hanukkah. Eight of the nine candles of the Hanukkah represent the eight days an oil lamp is supposed to have miraculously burned, despite the fact that the lamp had only enough oil for one day, after a siege of Jerusalem was lifted in 165 B.C. by Judah Maccabee. The ninth candle, the *shammes* or "servant," traditionally stands either higher than or aside from the other eight, and is

used to light the others¹.

It is interesting to note that the upper portion of the outside enclosure of the East Fork works bears a curious similarity to an ancient oil lamp².

Without explanation, Fowke turned Squier and Davis's illustration of the East Fork works 90° clockwise, so that the objectionable "interior arrangement" no longer looked so much like a candelabrum (see Figure 2) dubbed the mound the "Gridiron." Fowke's nickname demonstrates, if nothing else, that by 1902 football had already become the leading preoccupation of Ohio academicians.

Whatever (if anything) the builders of the East Fork works intended them to portray, they are an interesting and unique structure whose "thorough investigation," as Squier and Davis put it, "is an object greatly to be desired."

Squier and Davis did not observe the East Fork earthworks first hand. Instead, they stated that they, in addition to the works shown in their Panels 1 and 2A, were the subject of "a very good survey" made "many years ago by Gen. Lytle of Cincinnati, and published in Worden's Appendix to DuPaix's work on the antiquities of Mexico." They noted that the East Fork works also appeared "in the appendix to Hugh Williamson's work on the climate of America. Whether both plans are from the same survey is unknown; they however coincide in all important particulars. "Without vouching for the entire accuracy of the plan, we may be permitted to say that there can be no doubt of the existence of a work of this general and extraordinary outline, at the point indicated." (1848: 95)

Williamson's diagram, reproduced in Figure 3, is obviously of the same structure, and clearly shows the 9-branched "candelabrum," although the outer enclosure now is more linear and looks more like a pitcher or milk can than an oil lamp (1811:195). According to his captions, B represents a branch of the Miami River, though his text (1811: 192) clearly states that this is one of three forts "upon the waters of the Little Miami."

Williamson perhaps merely made the natural assumption that the Little Miami is a tributary of the Great Miami, so that the East Fork of the Little Miami would ultimately be a branch of the Miami itself, even though it in fact is not. He did not explicitly indicate which direction he intended to be north in this diagram.

The dotted lines in Williamson's diagram are where he places lines of palisades which he conjectured would have been necessary to close the entrances, though he did not claim to have physical evidence of their existence. His dimension

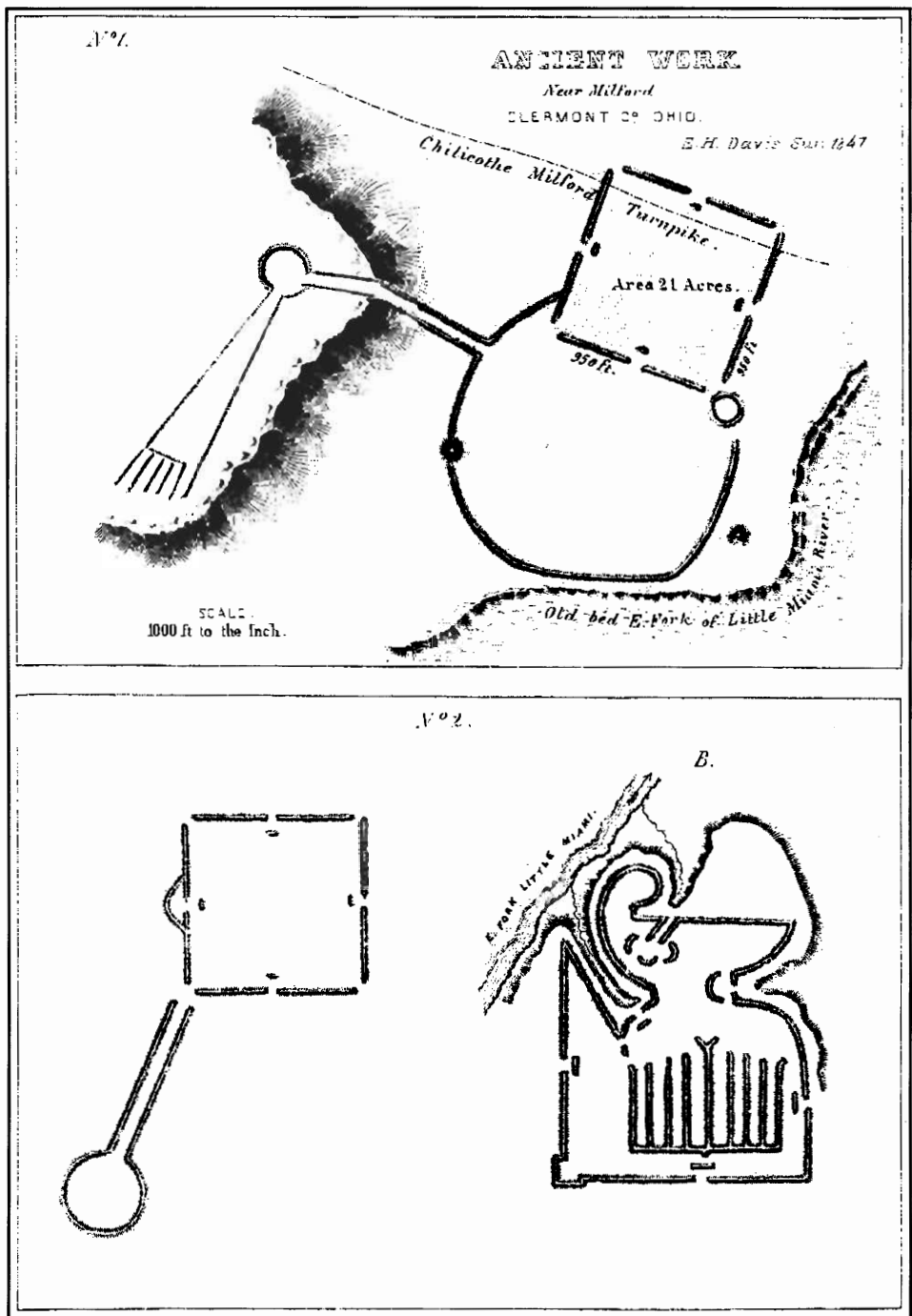


Figure #1. Panels 1, 2A, and 2B of Squier and Davis's Plate 34, depicting the Milford, West Milford, and East Fork works (1848: facing p. 94). Original scale.

of about 2100 feet for a wall agrees well with his estimate of 100 acres or more for the total area, since 100 acres equals 2087 feet square. The "covered way" to which he refers would not indicate a road which has been covered overhead. Rather, this is an eighteenth century military term for a passageway outside the walls of a fortification which is at once shielded from enemy fire and exposed to friendly fire.

Although Squier and Davis did not mention it, Williamson also gave an illustration, reproduced here in Figure 4, of the works in Panels 1 and 2A of their

Plate 34. Again Williamson did not explicitly indicate which direction he intended to be north for this group. Note that Williamson shows these earthworks as part of an integrated group, rather than isolated structures.

It is not obvious from Squier and Davis's reference which of several Lytles of Cincinnati would have surveyed these works³.

However, Charles Hill of New Philadelphia has searched the Lytle papers in the Cincinnati Historical Society and found correspondence, some of it mentioning a

Presidential interest in Lytle's survey on the part of Thomas Jefferson, indicating that it was in fact the elder (Revolutionary War) William Lytle, and that his survey would easily have been early enough to have been Williamson's source. Unfortunately, Hill could not find Lytle's survey itself.

The Milford works, unlike the East Fork works, were, according to the caption on Panel 1 of Squier and Davis's Plate 34, personally surveyed by Davis himself in 1847. They describe it as follows:

"The work here presented is situated near the western border of Clermont county, Ohio, about one mile east from the town of Milford, which is built near the junction of the East fork with the Little Miami river. It occupies the third terrace, which is here broad and fertile, and consists of those constantly recurring figures, the square and the circle. The plan will give a correct idea of its outline. In its form and combination, it closely resembles some of the more remarkable structures of the Scioto valley, and was doubtless erected for a common purpose with them. It has however, one novel and interesting feature. The parallels which lead off from the large irregular circle extend upon an isolated hill to the left, which is elevated perhaps fifty feet above the plain, where they end in a small circle, not more than three hundred feet in diameter. From this circle diverging lines extend to the southwest, terminating in a maze of walls unlike any others which have yet fallen under notice. A portion of the parallels and the diverging lines just mentioned are much reduced, and when the crops are on the ground, are hardly traceable.

From the hill an extensive prospect is afforded, bringing in view the sites of several large groups of works in the vicinity. It has been suggested that the structures upon the hill were devoted to rites analogous to those attending the primitive hill or grove worship of the East.

An inspection of this work shows clearly that the irregularity of the great circle is due to the nature of the ground, and that the terrace bank bordering the old bed of the East fork existed at the period of the construction of the work. The river now flows a considerable distance to the southward." (1848: 94)

Davis did not explicitly indicate which direction is north in his diagram of the Milford works. However, Charles Hill, himself a native of Milford, has called to my attention that the "Chilicothe-Milford Turnpike" Davis shows passing through the works is the modern U.S. Highway

50, and that this positively identifies the top of the diagram as north. The square and circle must then be on the present site of Greenlawn Cemetery and the Clertoma development about 1 mile east of the original part of Milford. The "isolated hill" that was supposed to have held the small circle and diverging walls to which Thomas so emphatically objected would then be Robbie Ridge, which lies immediately to the west of Clertoma, and which indeed is about 50 feet above the terrace on which the square and circle are situated, as indicated by Squier and Davis.

According to the scale Davis gives for the Milford works, the parallel walls

ascending the isolated hill are approximately 1,125 feet long, and the diverging walls approximately 1,250 feet long, measured down their center line. They draw the small circle as being approximately 250 feet in diameter. Robbie Ridge could easily accommodate a 250- or 300-foot circle at its northeastern end, and then is straight and flat, if somewhat narrow, for at least 1,000 feet before beginning to turn and ascend the high, round knob that commands the center of Milford. The "wing" as depicted by Squier and Davis would thus be a tight squeeze on Robbie Ridge, and perhaps a little shorter than they draw it, but not altogether "impossible" as Thomas had characterized it.

Note that except for part of the small circle, the portion of the works on Robbie Ridge are entirely drawn with a fainter line than are the main square and circle. This may indicate that Davis was relying on an earlier source for this portion of the works, and did not clearly observe it himself.

In 1882, Frederic W. Putnam of Harvard's Peabody Museum visited Milford, and reported that, "The square and great circle can still be traced, but their embankments are nearly levelled by long cultivation of the ground, and the parallel walls extending to the small circle on the hill, with the circle itself and the singular diverging walls running from it, figured by Squier and Davis, no longer exist".

Previous researchers have been unable to track down Squier and Davis's elusive reference to "Worden's Appendix to DuPaix's work on the antiquities of Mexico." One would naturally assume that the reference would be to the English translation of Guillermo DuPaix's originally Spanish work, published in London in 1830 by Lord Kingsborough. This splendid but highly disorganized 9-volume set, whose legendary production costs landed Kingsborough in debtor's prison, includes works by many authors, interspersed with Kingsborough's own thoughts, but nothing clearly identified as being by anyone named Worden, and no diagram resembling any of these works.

It turns out, however, that Squier and Davis's "Worden" source was actually in the 1834 French edition of DuPaix, rather than in the 1830 English edition. Furthermore, their "Worden" is in fact a misspelling of the name of David Baillie Warden, the distinguished American diplomat and geographer. Warden's 200 page contribution, whose title may be translated as "Investigations into the Antiquities of North America," would have constituted a small book in itself if published separately.

Figures 2 and 3 of Warden's Plate 4

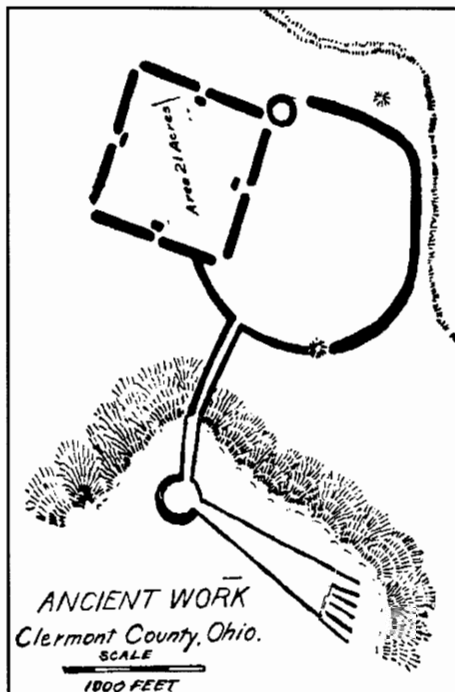


Figure 43.

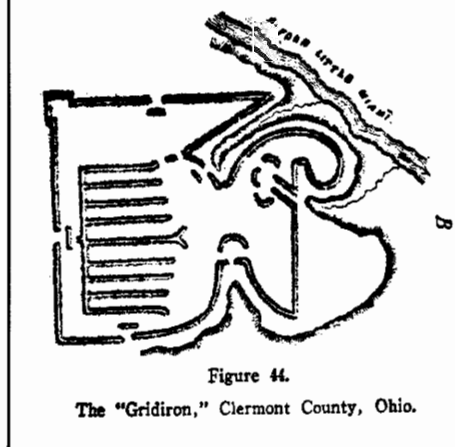


Figure 44.

The "Gridiron," Clermont County, Ohio.

Figure #2. Gerard Fowke's illustrations of the Milford and East Fork works (1902: 213). Note that Fowke has redrawn the former, but not the latter, and has rotated both in opposite directions.

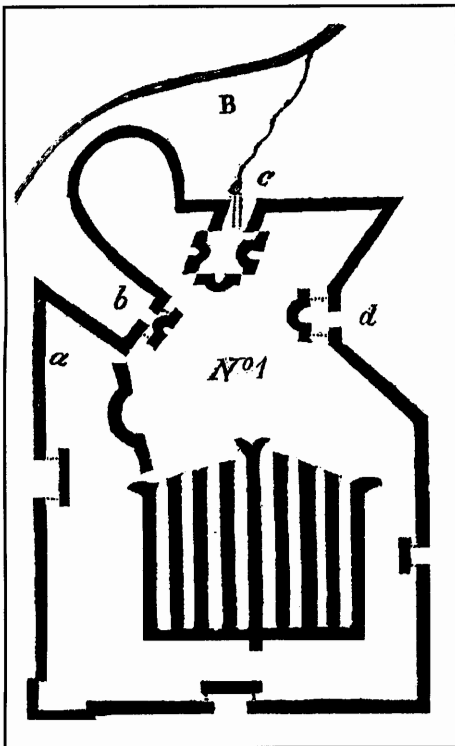


Figure #3. Williamson's illustration of the East Fork works (1811: 195). His captions follow:

- B. A branch of the Miami river.
- a. This wall, with the gate, is about 2100 feet long.
- b. A valley.
- c. A spring and covered way.
- d. Low ground. (1811: 193)

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correspond to Panels 1 and 2 of Squier and Davis's Plate 34, and are shown in my Figure 5. Warden's caption reads, "Ancient Fortifications on the banks of the Little Miami and its tributaries." He identifies the river in his Fig. 2 as the Little Miami, and the stream in his Fig. 3 as the East Fork of the Little Miami.

Warden's French text makes no mention of the General Lytle of Cincinnati who was supposed to have been his source, but instead states that his plate "is an exact copy of the original drawing which may be found in the Office of Topographic Engineers, at the United States Department of War, dated 18 July, 1823, and signed by Major Roberdeau, Corps of Engineers." (1834, Vol. 2: 25-26, my translation) According to the National Archives, Military Archives Division, which today houses the Army's nineteenth century records, this would be Isaac Roberdeau, rather than Roberdreau.

Isaac Roberdeau (1763-1829) was no amateur surveyor. He assisted in laying out the city of Washington in 1791, was in charge of surveying some

900 miles of the U.S.-Canadian border after the War of 1812, and in 1818 became chief of the Bureau of Topographical Engineers.

In 1823 he would have had access to state-of-the-art equipment and abundant staff. Roberdeau's 1823 map of the East Fork and Milford works is still on file in the Army Corps of Engineers records, in the Cartographic and Architectural Branch of the Military Archives Division of the National Archives, in Alexandria, Virginia. The full map is shown in Figure 6. The legend in the scroll identifies it as "A Sketch of several ancient fortifications situated on the Little Miami River & waters thereof, etc. The walls of them are of earth, from 5 to 10 feet high, measuring generally upwards of 30 feet across. No ditches. On the walls are Trees of various kinds & as large as generally found in the country." The 5-inch scale represents 2,000 feet.

This map, and not Williamson's, is clearly the source of Warden's illustration shown in Figure 5, and thence of Squier and Davis's illustration of the East Fork works. An earlier survey, presumably by Lytle, must have been the source of Williamson's 1811 diagrams. Evidently Maj. Roberdeau was following up on Gen. Lytle, however, he resurveyed precisely those earthworks Williamson had depicted.

The frontispiece shows Roberdeau's version of the East Fork works. His caption reads, "This work of Fortification is

altogether detached from the other military works, & lies on the east fork about 20 miles from its junction with the Little Miami R."

Squier and Davis took the exact outline of the earthworks themselves from Warden's diagram, the earthworks on which in turn precisely match those on the original map. There is therefore no reason to question Squier and Davis's illustration of the earthworks *per se*. Note, however, that Squier and Davis have greatly extended the terrace bank shown by Warden, to make a very distinctively shaped site. Only a small portion of this bank was indicated in Roberdeau's original survey. The rest is therefore imaginary. Unfortunately, Squier and Davis's imaginary terrain (whose authenticity Thomas did not question) has long been regarded as the best clue as to the precise whereabouts of the East Fork works.

Squier and Davis, following Warden, identified the stream. All the sources show it flowing immediately past the East Fork works as the East Fork itself. Note, however, that Roberdeau merely labels this as "waters of the E. Fork of the Little Miami R." The diagram therefore may not really be showing us the orientation of the mound relative to the East Fork, or even on which bank it is situated. All that is certain is that it is in the drainage of the East Fork, some 20 miles above its mouth, somehow measured, on the right bank of a flowing stream. Fowke

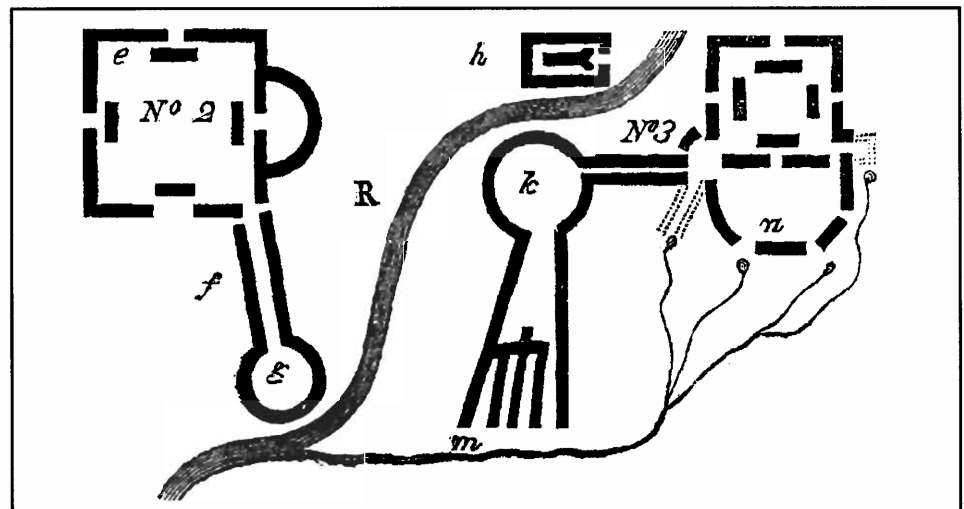


Figure #4. William's illustration of the Milford Group (1811: 197) His captions follow:

- e. This square fort encloses 60 acres, and stands on high ground.
- f. The river hill.
- g. The river bottom.
- h. A redoubt, enclosing about five acres.
- k. A round hill.
- m. A steep bank, 50 feet high.
- n. Between this fort and the several springs there is a steep bank and two covered ways.
- R. Little Miami river. (1811: 193)

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confidently placed the East Fork works in Clermont County, though from Roberdeau's description they could equally well lie in western Brown County.

Again, it is not clear from Roberdeau's diagram which direction is intended to be north. It is possible that he and Williamson have merely oriented their illustrations so that the salient "candelabrum" feature would be upright, just as Fowke turned it so that his "gridiron" would be more apparent.

William Mills (1914: 13) reproduced Fowke's rotated copy of Squier and Davis's illustration of the "gridiron," but in his map of Clermont County, he shows the mound with the "candelabrum" pointing north, and sites it on the left bank of the East Fork, opposite Blowville near the junction of Jackson Pike and McKeever Road. This is one of three or four sites along the pertinent stretch of the river that look like the imaginary terrain added by Squier and Davis. His text affirms the existence of the mound without reservation, but only in the past tense, so his location for it may well be entirely conjectural.

In Roberdeau's diagram, both the left and bottom walls were originally labeled as being 200 feet in length, but an additional zero has been squeezed in to make these read 2,000 feet instead. The latter dimension corresponds quite well to the scale of feet Roberdeau provides⁸.

It also corresponds well to Williamson's 2,100 feet for the left wall and area of 100 acres for the entire works. There is a discrepancy in this diagram, however, since it clearly gives the distance between each pair of arms in the "candelabrum" as 66 feet (not yards), which would make the interior structure 528 feet wide, or barely a quarter of the supposedly 2,000 foot length of the bottom wall. Yet the width of this structure is shown as being well over half the length of the bottom wall. Conceivably Roberdeau merely enlarged the interior structure relative to the outer structure in order to show its detail. However, this would not explain why Williamson would have happened to have shown the two structures in essentially the same proportions.

We turn now to Roberdeau's map of the Milford works, whose "impossible" circle and wing extension were the reason Thomas gave for brushing aside the credibility of the structure.

A detail of the Milford group is shown in Figure 7. North is not explicitly indicated on this part of the map. Generally, the upper portion of it, except for being rotated some 70' counterclockwise, looks much like Davis's survey of the Milford works. Roberdeau's captions identify the large square as being on "high commanding ground" and

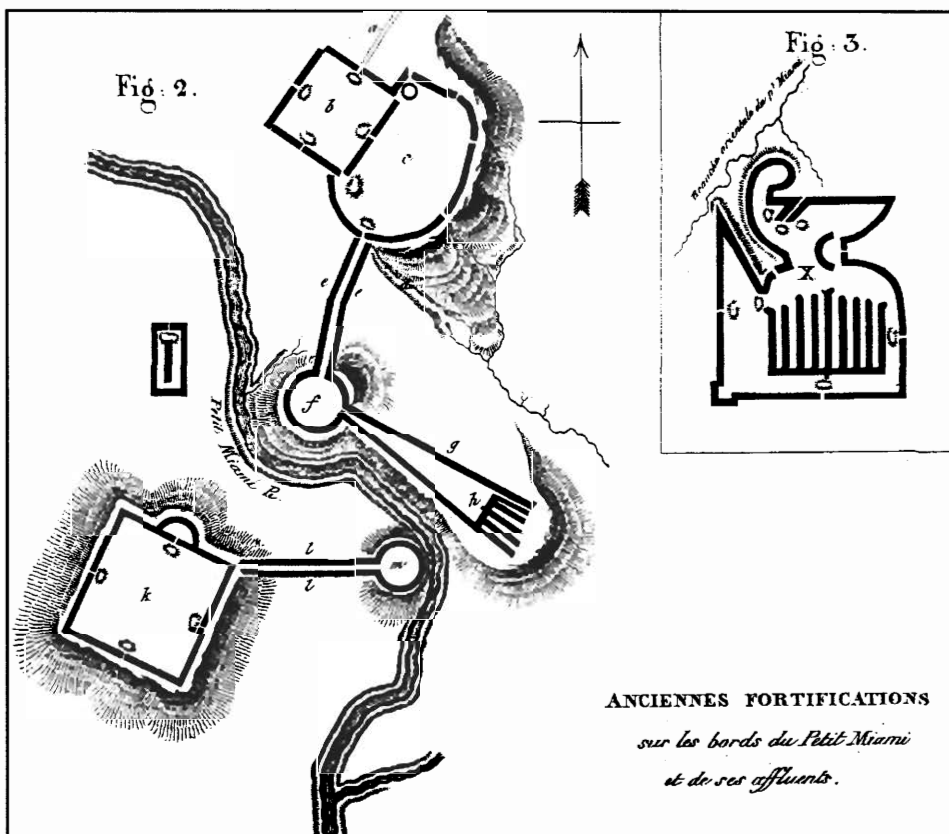
924 feet square, which matches Davis's 950 feet as well as might be expected. Emerging from the gate at the top is "a turnpike road, bottomed with stone, 25 feet wide, extending more than 3 miles," in approximately the same relative position as a portion of Davis's Chillicothe Milford Turnpike. Next to this, where the large circle meets the square, there is a "covered way" to a spring. Below the large circle, on the side opposite the square, is a "steep & very high bank" with two springs immediately below it. Further around the large circle, another "covered way" extends to a group of three more springs. These springs would be roughly at the base of the old river bank shown in Davis's diagram.

Here the close correspondence to Davis's survey ends, however. Roberdeau labels the parallel walls as being 165 feet apart and 1,650 feet long, whereas Davis begins them further around the circle, and makes them only about 1,125 feet long. Roberdeau's walls terminate in a much larger circle than Squier and Davis's, on "a high round hill or knob commanding a view of the Country for 3 miles round." In the parapet of this circle is written "1,915 Ft. round this work." This circumference corresponds to a diameter of 610 feet, whereas Squier and Davis's text clearly states that their connecting circle is "not more than three hundred feet in diameter."

A 250 or 300 foot circle would fit snugly at the northeast end of Robbie Ridge, but a 610 foot circle could not possibly fit there. Roberdeau then gives the diverging walls emanating from this circle as being 2,640 feet long, more than double Davis's 1250 feet, and shows them as terminating at the steep bank 50 feet high. The only "high round hill or knob commanding a view of the Country for 3 miles round" large enough to accommodate a 610 foot diameter circle, and on the left bank of the Little Miami just above the mouth of the East Fork is the high knob right in the center of Milford, to which Robbie Ridge ultimately leads after it turns and ascends. This knob stands approximately 130 feet above the surrounding terrace. It has no name, so I will simply refer to it as "Milford Knob."

If one thing is perfectly clear from Roberdeau's map of the Milford works, it is that his 610 foot connecting circle is on top of this Milford Knob, and not on Robbie Ridge at all. Squier and Davis were clearly mistaken as to its whereabouts.

If we assume that north was intended to be at the top of the Milford portion of Roberdeau's map, which would be natural given that the mouth of the East Fork, shown at the bottom of his map, lies almost directly south of Milford Knob, the large square and circle actually end up in the river, since the river



Figure#5. David Baillie Warden's illustration of the Milford Group and East Fork Works. (1834: vol. 3, part 2, plate 4, figs. 2 and 3). Copy courtesy Library of Congress.

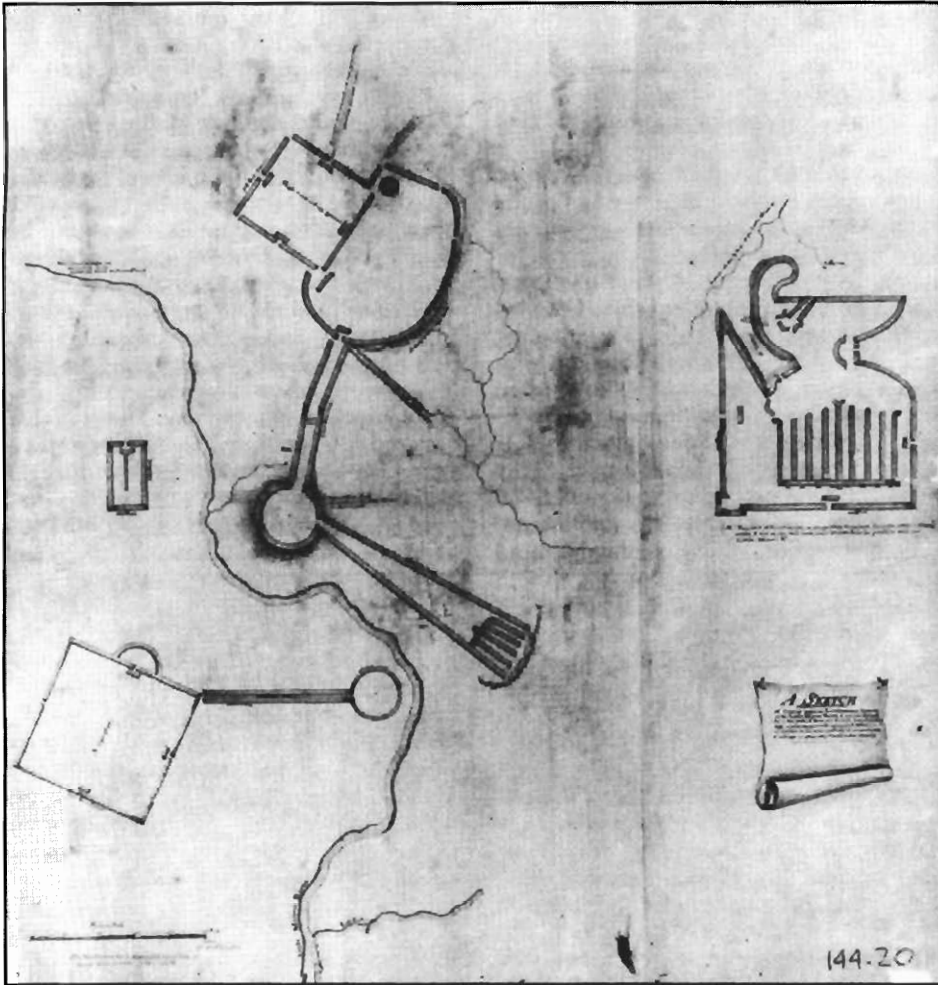


Figure #6. Issac Roberdeau's map of the Milford Group and East Fork Works (1823). The scale indicates 2,000 feet. National Archives photograph, RG 77, Dr. 144, sh.20.

swings northeast immediately above Milford Knob, rather than north and west as would then be indicated. By rotating the map some 20' clockwise relative to north, the square and circle can be situated on the plain of northern Milford, which is almost, though not quite, large enough to accommodate it.

This plain, however, is hardly "high commanding ground," except towards the river, being itself commanded by high hills on three sides. The only "steep & very high bank" on the south-east side of this plain is the northwest side of Robbie Ridge, which lies above the plain rather than below it as indicated on the map. The drainage indicated from the springs surrounding the large circle would not even approximately work on the site. Furthermore, there is no "turn-pike road" that would in 1823 have been gravelled for over three miles extending from the point indicated, if this is the correct orientation.

As previously noted, F.W. Putnam in 1882 confirmed the existence of a square and circle as shown by Squier and Davis in eastern Milford, even though he could find no traces of an extension on Robbie Ridge. In order for Roberdeau's square and circle to lie in northern Milford, we would therefore have to assume that there was a second square and circle in east Milford. While square and circle earthworks are common enough in Ohio, it seems unlikely that a second square and circle at Milford escaped every observer's notice.

All these problems are resolved, however, if we simply assume that the top of Roberdeau's map is approximately 70' of north, so that the square and circle lie in east Milford essentially as surveyed by Davis. It is unclear why Roberdeau would have done this, since in his day north was the standard convention for the top of maps. In antiquity, however, maps were often thus literally "oriented" with

the east (the orient) at the top. Perhaps Roberdeau was attempting to invoke the presumed antiquity of these works by using this archaic convention. Note that an orientation of approximately 70' east of north for the top of the map would also make the entire Milford group correspond well to Williamson's illustration, if Williamson's "up" is indeed intended to be north.

Although this orientation makes the river work well as it passes Milford Knob, its principal difficulty is that it places the mouth of the East Fork, which is explicitly labeled on Roberdeau's map, an impossibly high ground in Terrace Park. Although the Little Miami and East Fork would have frequently changed their precise channels since 1823, it is unlikely that the mouth of the East Fork has moved much from its present location some 8,000 feet south of Milford Knob in historical times. I would suggest, therefore, that this incidental part of Roberdeau's "Sketch" is simply inaccurate. Perhaps the draftsman was instructed to continue the river impressionistically to the south below Milford Knob and to show the mouth of the East Fork, but was himself unclear as to how the field notes of the earthworks were to be oriented, and therefore continued the river in the wrong direction. In any event, he shows the mouth as being only about 5,000 feet from the center of Milford Knob, instead of the actual 8000 feet, so that he has either compressed the scale to fit the East Fork on the map, or else this distance was never really measured.

Figure 8 shows my proposed approximate siting of the Milford works. This siting places the diverging walls in southern Milford, where there is ample room for their full 1,640 feet. It places a steep, 50 foot high bank on each side of the terminus of the diverging walls, though not precisely at its very end as indicated by both Roberdeau and Williamson⁹.

Note that with this siting, U.S. 50, the old Chillicothe-Milford turnpike, passes right in one gate of the large square and out the other, rather than cutting the walls as in Davis's map¹⁰.

This route may therefore have already been a heavily traveled trail to Paint Creek and Chillicothe in Moundbuilding times. Although with this siting, the large square is not "commanding" in all directions, it does strategically command the approach to Milford from this road.

According to Squier and Davis, the square work indicated by the letter A in their Panel 2, with its distinctive half-moon on one side and long parallel walls leading from an adjacent corner to a small circle, "is situated upon the opposite side of the Little Miami from that last

described. The plan, which is also from a survey by Gen. Lytle, sufficiently explains its character." (1948: 95) They show this work in a separate pane., with no particular relationship to the Milford works.

Roberdeau shows what is obviously the same work as being directly across the Little Miami from the connecting circle and diverging walls of the Milford works, in essentially the same relationship to them as had Williamson. According to Roberdeau's annotations, the large square with the half moon is 1,600 feet square, and is on a high plain. The parallel walls are 1650 feet long, and terminate in a circle 1500 feet round, i.e. some 477 feet in diameter. Roberdeau's measurement of 1,600 feet for the sides of the square accords well with Williamson's estimate of 60 acres (= 1617 feet square) for its area. Williamson likewise states that the square "Stands on high ground." According to him the parallel walls descend the river hill, and the circle lies on the river bottom.

It would appear from these two sources that the large square must have been on the high plain overlooking the river, to the south of Shawnee Run Road, as depicted in Figure 8. The circle would then have been in the northern part of Terrace Park, on bottom land that is nevertheless well protected from the river. If we turn these works somewhat counter-clockwise from this orientation, so as to match Roberdeau's map even better, we can place the circle on even lower bottom land, inside a bend in the river. However, it is unlikely that the circle could have survived for many centuries in such an exposed site. With either of these orientations, the half-moon can be placed either so as to block the approach to the square from the river up a ravine, or so as to dam the ravine, thereby creating a defensible water supply.

The positioning shown in Figure 8 places the West Milford works significantly further from Milford Knob than they are shown on Roberdeau's map, but makes the proportionate arrangement of the group, and the orientation of the West Milford parallel walls, more like that shown by Williamson.

The small rectangular work, which Roberdeau shows as being 660 feet long, and 330 feet wide, could either go on a small piece of bottom right next to the river, or immediately above on the high plain to the north of Shawnee Run Road, overlooking the river. The former location would be very exposed to erosion by the river, so the latter, depicted in Figure 8, is the more likely.¹¹

Whatever their precise siting, it is clear from Roberdeau and Williamson that the West Milford works, together with the hilltop circle and "wing" of the Milford works

proper and the small rectangular redoubt, strategically dominated the Little Miami River and the natural ford for which Milford is named. The square and large circle, in turn, controlled the approaches to Milford (and thence, via the ford, to Cincinnati) from the Moundbuilding centers to the east. It would therefore appear that Milford was a key link in the trading routes of ancient Ohio.

Note that although Warden has accurately copied Roberdeau's diagram of the West Milford works, Squier and Davis have inexplicably shown them in mirror image, as if a tracing of them had been placed on a light table and then recopied up-side-down. Nevertheless, it is clear that their inverted illustration is ultimately based on Roberdeau via Warden, and not on Lytle via Williamson¹².

Squier and Davis obviously had at least a tracing of Warden's map of the Milford Group at their disposal. Even though it is a faithful replica of Roberdeau's map of the earthworks and

the river, they must have found it confusing in many respects.

First of all, Warden took it upon himself to add an arrow to Roberdeau's map, indicating the top of the map as north, when in fact, as we have shown, the top is more nearly east.

Secondly, Warden gives no indication of distances on his map itself. His text does faithfully give all the important measurements Roberdeau indicates on his map (with the sole exception of the puzzling 66' distance between the branches of the "candelabrum" in the East Fork works), but given that Squier and Davis misspell Warden's name and were unaware that he attributed his map to Roberdeau rather than Lytle, they may never have had access to the text, which in any event was in French, and in a separate volume. They may have simply received the tracing from a correspondent, together with a brief and garbled explanation.

Thirdly, even if they had seen the text, they would have been doubly

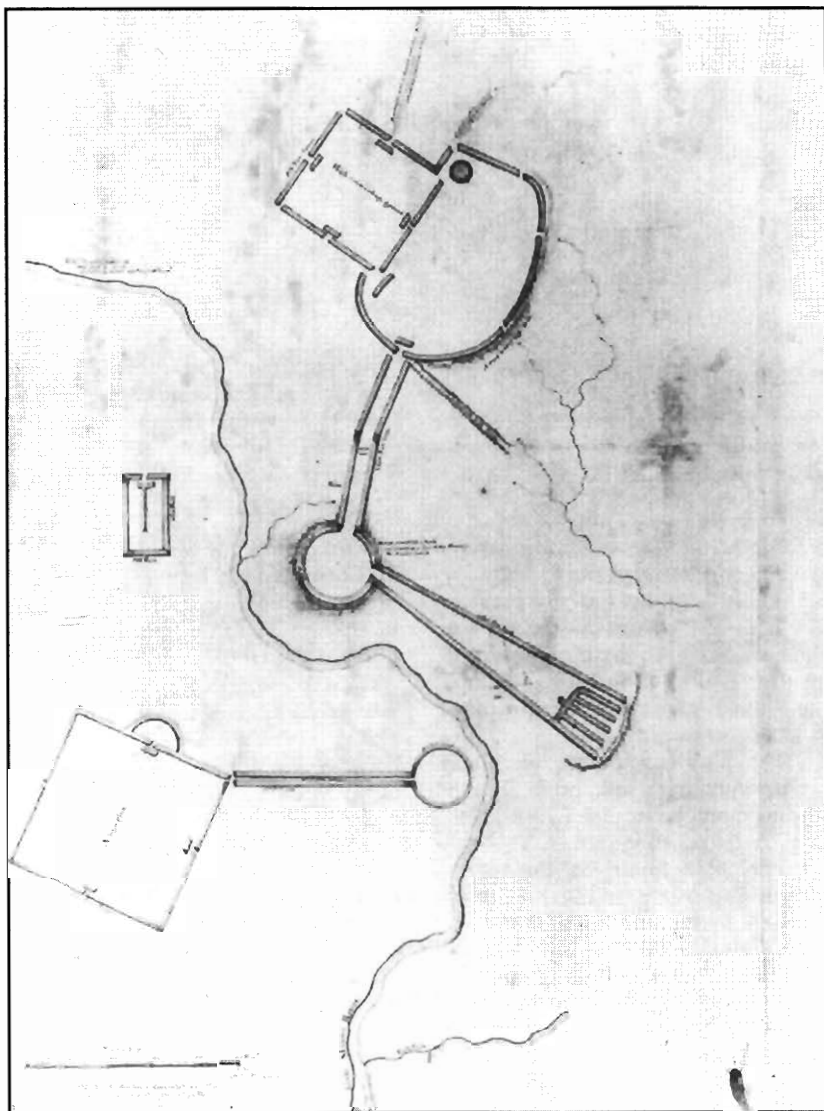


Figure 7. Detail of Roberdeau's map of the Milford Group. National Archives photograph.

confused by the fact that Warden clearly states that the works in his Fig. 2 lie 20 miles above (*au-dessus* in French) Fort Ancient along the Little Miami, which would place them in the vicinity of Xenia, somewhere between Spring Valley and Oldtown, when in fact Milford lies approximately 20 miles below Fort Ancient. Although Roberdeau does not show Milford itself on his map, he clearly identifies the tributary joining the Little Miami at the bottom of his map as the "East Fork" and indicates that the Ohio River is 9 miles further below this confluence. At the top of his map, a notation reads "20 miles higher up this river is work including about 100 Acres of Land," which must be a reference to Fort Ancient. Roberdeau's site must therefore be Milford. Although Warden showed the tributary, he did not identify it as the East Fork. Either he, his stenographer, or his typesetter evidently mixed up the French words for "above" (*au-dessus*) and "below" (*au-dessous*), which sound very similar to an English ear, and differ by only one letter.

Fourthly, Warden had taken the liberty of elaborating on the terrain indicated in Roberdeau's original survey, particularly in respect to the West Milford Works. Whereas Roberdeau (and Williamson) had merely indicated that the large square with the half-moon was on "a high plain", Warden places it on a mesa that exactly fits the geometrical outline of the enclosure. And whereas Williamson expressly stated that the West Milford circle lies on the river bottom, after the parallel walls have descended the river hill, Warden showed it as being on top of its own circular knob. Squier and Davis would have looked in vain for the two distinctive circular knobs on either side of the river and the square mesa shown in Warden's map, either at Milford or at Spring Valley!

And fifthly, even though Warden has faithfully copied the river from Roberdeau's map, the original map does not accurately position the mouth of the East Fork when the map is correctly oriented.

In short, Squier and Davis evidently were working from a tracing of a map, the original of which was misoriented, had imaginary terrain features, and gave no indication that any scale had ever been intended. They probably did not read the French text, but if they had, it would have sent them 40 miles from the true location of the group. Williamson's diagram of the Milford group would have confirmed that such a group existed and would at least have called into question Warden's topography and orientation, but it is not clear that Squier and Davis were aware of this particular diagram.

Gerard Fowke (1902: 212-13),

without explanation, turned the Milford works back the way Warden gave them (if we may assume that Fowke's top is intended to be north), despite the fact that he gave Squier and Davis as his only source for them. He actually took the trouble to redraw Squier and Davis's Panel 1, without the tell-tale Milford-Chillicothe Turnpike that positively identifies its location and orientation, and without the "old bed E. Fork Little Miami River" identified, despite the fact that he photographically reproduced their Panel 2B showing the East Fork works, rotated but without redrawing it, complete with the letter B on its ear. He evidently was attempting to distance himself from Squier and Davis's siting and orientation of the Milford works, though he still stated that they lay ten mile east of Milford.

William Mills (1914: 13) reproduced Fowke's redrawn illustration of the Milford, a.k.a. "Clermont," works. In his map of Clermont County he went on to place them in Fowke's orientation, approximately two miles south of Milford, straddling the East Fork of the Little Miami, so that the square and circle are now in Terrace Park Country Club, and the diverging walls are on the south bank of the East Fork on impossibly rugged terrain. It is not clear how Mills arrived at this location, or why he would prefer Fowke's orientation to that of Squier and Davis. He actually stated that the Milford works were first described by Squier and Davis, and gave no other source, despite their allusion to Lytle and "Worden" and despite the fact that he uses Fowke's, rather than Squier and Davis's, drawing. Mills' location essentially transforms the hillside that Squier and Davis had shown separating the square and circle from the extension into the East Fork itself! Recall that Thomas complained, for whatever reason, that the terrain made the diverging walls impossible. These walls, as foreshortened by Squier and Davis, would be cramped, but not impossible, on the narrow ridge they had erroneously placed them on. Perhaps Thomas already had Mills' siting of this work in mind, or Mills was actually following an unpublished suggestion by Thomas.

Cyrus Thomas to the contrary notwithstanding, there is no reason to question the one-time existence of the East Fork earthworks as depicted by Squier and Davis, somewhere on or near the East Fork of the Little Miami, about 20 miles above its mouth. Their diagram is ultimately based on an 1823 U.S. Army Corps of Engineers map by Maj. Isaac Roberdeau that is still on file in the National Archives, and which is corroborated by a much earlier survey by William Lytle of Cincinnati, published in 1811 by Hugh Williamson. There is some question as to whether the interior structure is

drawn to the same scale as the outer walls. But as Squier and Davis aptly put it, "Without vouching for the entire accuracy of the plan, we may be permitted to say that there can be no doubt of the existence of a work of this general and extraordinary outline, at the point indicated."

The distinctive terrain Squier and Davis show surrounding the East Fork works, as contrasted with the earthworks themselves, does appear to be largely imaginary and to have been added by them. The stream they show flowing past the mound exists, but may be a tributary of the East Fork rather than the East Fork itself. The orientation of the mound is unknown.

Davis's survey of the square and circle portion of the Milford works is an important primary source for their appearance. However, Roberdeau's map shows that their depiction of the parallel walls, connecting circle, and wing is entirely erroneous. The parallel walls are almost 50% longer than they indicate. The connecting circle was much larger than they show and was astride the high knob in the center of Milford, rather than at the north end of Robbie Ridge where they placed it. The wing was twice as long as they show, and extended from the knob down through southern Milford, rather than running along Robbie Ridge.

Squier and Davis's confusion was due to a number of inaccuracies in their reading of Warden's reproduction of Roberdeau's survey, and does not discredit either Roberdeau's survey of the Milford works or the alleged appearance of the East Fork works themselves.

Roberdeau's map also demonstrates that the West Milford works, which Squier and Davis show isolated, are in fact an integral part with them of a group that bestrides and dominates the Little Miami, at a strategic ford on what was probably the ancient route from the mound-building centers of Chillicothe and Paint Creek to that of Cincinnati. Squier and Davis show the West Milford works in mirror image, but otherwise accurately.

Today, the East Fork works, wherever they once were, have surely long since been completely obliterated by plowing, and would now be entirely invisible from the ground. However, such ancient structures will often remain visible from the air, under favorable conditions, as soil marks or as crop marks (Reeves 1936, St. Joseph 1977). It is therefore quite possible that an aerial search might one day locate their actual site. Such a search would, as Squier and Davis put it, be "an object greatly to be desired." ■

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I am grateful to Jackson Judge of

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Footnotes

1. The Temple menorah, a much more ancient symbol of Judaism unrelated to Hanukkah, has seven branches, three of which must curve out from either side of the central stem. (See *Exodus* 37.) Often the Hanukkah menorah has 4 branches curving out from either-side of a central stem holding the shammes, in imitation of the temple menorah, but this arrangement is not required.

2. Berry also thought that a Christian *chi-rho* symbol could be discerned in the mound. However, this inference was based on a confusion of the walls and terrain features, which are hard to tell apart in Fowke's reduced-quality reproduction of Squier and Davis's illustration of the mound,

3. The elder William Lytle, was a Colonel in the French War of 1750, as well as in the Revolution, but may have held the rank of General in the militia afterwards. His son, also William, was Surveyor-General of the Northwest Territory under General Jackson, and therefore a "general" of sorts. Robert T. Lytle (1804-1839), son of the younger William, was also Surveyor-General of the Northwest Territory, after 1834. Robert's son, William H., was a Major General in the Union Army, but could not have been the General Lytle to whom Squier and Davis referred in 1848. (*National Cyclopaedia of American Biography*, vol. 4, p. 338)

4. 17th Annual Report, Peabody Museum, p. 350.

5. In his 1891 bibliography of the Ohio Earthworks, Thomas gave the exact page reference for Warden's mention of the East Fork works, so that he must have had some knowledge of it, perhaps from a correspondent. However, he continued to spell the name "Worden," and to attribute Warden's information to Lytle, indicating that he must not have actually checked this reference. It is not clear he was aware that the pages he cited were in the 1834 French edition of DuPaix.

6. According to the *National Cyclopaedia of American Biography* (vol. 2, p. 14), he was promoted to major in 1813, and to colonel in 1818, but records in the National Archives show that he was not promoted from major (and then only to brevet lieutenant colonel) until 1823.

7. Although Warden clearly stated that the map had been signed by Roberdeau and dated 18 July 1823, there in fact is

no signature or date on the map itself, and the National Archives has no record of who made it or when. Nevertheless, given that the map was exactly where Warden said it would be and (except for the embellished terrain features) looks exactly like Warden's diagram, there is no reason to doubt his attribution of it to Roberdeau. Evidently the signature and date were on a letter or other material, now lost, that originally accompanied the map. The map is in the Army Corps of Engineers records, and its original file number (Civil Works, P9) is consistent with the approximate date given by Warden.

8. Although composed of two sheets pasted together, the two halves were obviously composed as a whole, since their captions refer to each other, and since they are done in precisely the same style. It is therefore reasonable to assume that the scale of feet is intended to apply to the East Fork works as well as the Milford group.

The caption under the scale reads "Israel Ludlow has a Cannon ball taken from one of these kind of works. Iron. 'Jt. 70 lb.'" However, this could merely be a relic from some forgotten engagement of the French and Indian Wars or the War of 1812, rather than an artifact originally present in the mound. John W. Southcombe of Blanchester has called my attention to a sharp conflict near Marathon in 1792 between the forces of Tecumseh and Simon Kenton, a scout.

9. I have turned the diverging walls a little so as to accommodate their full length. By turning them even more, so as to extend more nearly due south from the circle on Milford Knob, which is nearly their relative orientation in Williamson's diagram, the diverging walls would indeed terminate just before a steep bank 50, high, just as on Roberdeau's map, but would have to be a little shorter than reported. Note that 2,640 is precisely half 5,280, so that the reported length of these walls may merely be an approximate "half mile."

10. Using Roberdeau's scale of feet, the sides of this square are shown as being more nearly 1,100 feet long, rather than the 924 given. They are therefore not drawn precisely to scale. Shrinking the square back to scale would actually make it fit on the plain better, but would tend to make the road miss the gates, unless the gates were actually off center. All the other distances given do match the scale of feet well, with the exception already noted of the "candelabrum" inside the East Fork works, and of the small rectangular work, which should be slightly smaller than shown.

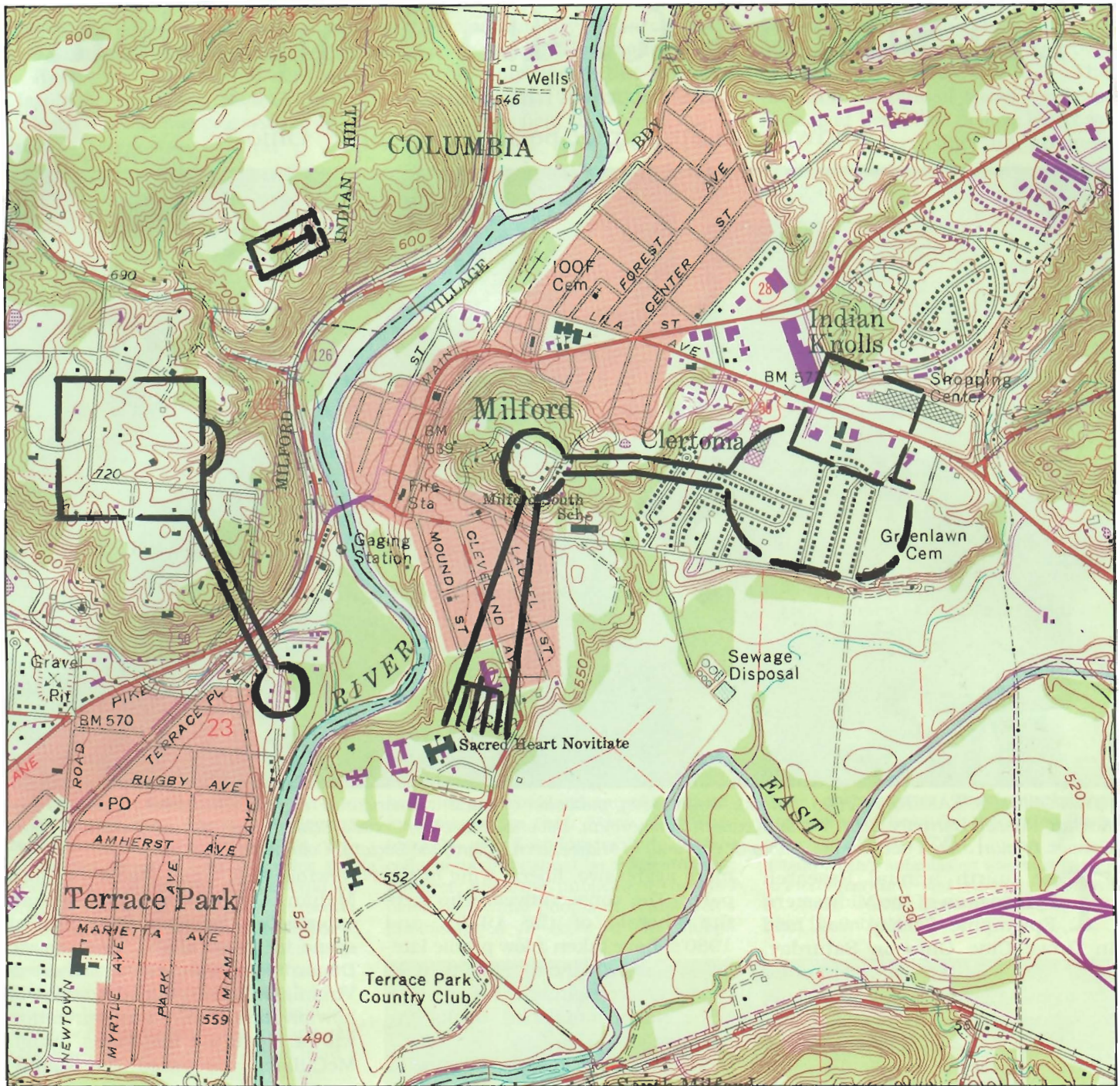
11. At the top of p. 95, Squier and Davis state, "About four miles above the Milford

work, on the East fork of the Little Miami, is a small rectangular work. It is entirely isolated. Its sides measure each seven hundred feet; and it has gateways at each corner and midway on each side." They go on to attribute "this work" to Lytle and "Worden", though this presumably refers back to the Milford works, just discussed, as neither Williamson nor Warden mention such a small square work. Or perhaps they were attempting to relate the small redoubt (which is almost 700 feet long, but only 330 feet wide, and with only one gate) to the remains of some other structure they had found four miles up the East Fork.

12. Charles Willoughby (1922: 1) identified Squier and Davis's Panel 2A as the "Camden Works," though he gave no indication as to what was known about the works by that name, that could be used to either confirm or disconfirm an identification of them with the West Milford works shown by Roberdeau and Williamson.

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Figure#8. Proposed siting of the Milford Group, superimposed on U.S.G.S. Madeira quadrangle. The two rivers shown are the little Miami and its East Fork. Scale 1:24,000. Photo ©, Huston McCulloch.

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Frontispiece. Maj. Isaac Roberdeau's 1823 map of the East Fork Works. This map is the ultimate source of Plate 34, Panel 2B in Squier and Davis's 1848 classic *Ancient Monuments of the Mississippi Valley*, and has recently been rediscovered in the Army Corps of Engineers. In 1894, Cyrus Thomas, who was unaware of this source, dismissed Squier and Davis's illustration of this earthwork as being "to a large extent imaginary." National Archives photograph.

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