NOTES ON THE ARCHITECTURE OF FORT McINTOSH AND
THE CONSTRUCTION OF A BLOCKHOUSE ON THE BEAVER RIVER IN 1788

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Introduction

The juncture of the Ohio and Beaver rivers was of strategic importance during the long years of the American Revolution. Here, along the stone terrace which forms the northern bank of the Ohio, General Lachlan McIntosh in the fall of 1778 constructed the fort which bears his name. Fort McIntosh remained an important outpost on the frontier throughout the American Revolution and into the post-Revolutionary period. Plagued by a lack of supplies, vandalism, and the forces of natural decay, however, the post's diminishing importance after 1785 prompted the construction of a blockhouse on the east bank of the Beaver River in 1788.

For many years, the physical appearance of Fort McIntosh and of the smaller blockhouse up the Beaver from the fort remained conjectural. The archaeological and historical research which has now been accomplished permits some statements to be made regarding the design and construction of both installations. Much of what is known about Fort McIntosh from diverse historical sources has already been published, but the reports of a succession of officers who commanded at the fort in the post-Revolutionary period offer additional information. These reports were discovered in the papers of Josiah Harmar, commander of the First American Regiment, and onetime commandant of Fort McIntosh. The study has also revealed a previously unpublished drawing of the blockhouse on the Beaver River prepared by Lieutenant Edward Spear in 1788.

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—Editor
The American Revolution and Fort McIntosh

The importance of constructing a military fortification to the west of Fort Pitt in 1778 must be understood in terms of British attempts to harass the settlers of frontier Pennsylvania and Virginia. Although the major actions of the Revolution were centered farther east, the British presence at Fort Detroit, in particular, posed a serious threat to the thirteen colonies. This danger took various forms, but none more terrifying than that of the surprise raid by a handful of warriors from one or another of the Ohio Indian tribes who had been displaced from their homes by the persistent western expansion of colonial settlements. Moreover, many of these tribes were heavily dependent upon the British for trade goods which were both desirable and which in many cases had become outright necessities of life.

In an attempt to counteract this menace, communities or groups of family settlements erected fortifications and blockhouses manned by militia units from Pennsylvania and Virginia. Responsibility for the overall defense of the area fell to the commander of the Department of the West, who in the summer of 1778 was General Lachlan McIntosh of Georgia. McIntosh considered a good offense the best defense and proposed a combined Continental Line and militia expedition against Fort Detroit; shortly after his arrival from Valley Forge he began to lay the groundwork for the undertaking.

General McIntosh was not content to use Fort Pitt as his base of operations. He believed that the inhabitants of the frontier would be safe only if it was possible to hold the Indians and their Tory allies at a distance, confining them to the northern or western banks of the Ohio River. In August 1778, McIntosh discussed the construction of a chain of forts extending east from the mouth of the Kiskiminetas River to the Susquehanna which could be augmented with another line of forts to the west and south along the east bank of the Ohio.1

There were other military considerations McIntosh had to take into account. The principal obstacle to a successful campaign against Detroit was supply. In order to sustain the expeditionary force and to retain control over the area through which it marched, McIntosh

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1 Lachlan McIntosh to the inhabitants of Westmoreland County, Aug. 15, 1778, Pension declaration files of Col. Thomas Gaddis, Microcopy 804, Roll 1039, Frame 0439, National Archives, Washington, D.C. (hereafter cited as NA). For a discussion of the construction of one of the forts along the Ohio River in present-day West Virginia by a militia unit under McIntosh, see Ronald C. Carlisle, "Fort Gaddis and the Construction of a Revolutionary War Fort at Beech Bottom, West Virginia," West Virginia History 39 (July 1978): 324-40.
undertook the construction of both Fort McIntosh and Fort Laurens, near present Bolivar, Ohio, in the fall of 1778.

Fort McIntosh was particularly important. It was erected by a force composed of militia units from both Pennsylvania and Virginia together with the Eighth Pennsylvania Regiment and the Thirteenth (later the Ninth) Virginia Regiment of the Continental Line. The fort was the first American post built on the northern or "Indian side" of the Ohio, and it had symbolic importance because its completion and the fact that American forces continued to hold it throughout the Revolution demonstrated the capability of the Americans to cooperate and to act effectively in their own behalf. Militarily, the establishment of the fort astride the Great Path — the principal overland route to Detroit — created a serious roadblock to British attempts to bring about a two-front conflict.  

The Architecture of Fort McIntosh: The Revolutionary Period

Unfortunately, we know very little about the actual above-ground appearance of Fort McIntosh. Work probably did not begin until after September 16, 1778, when McIntosh concluded a treaty with the Indians permitting his force to move downriver. There may also have been a matter of health to consider since McIntosh wrote to Colonel Thomas Gaddis of the Monongalia County (Virginia) militia

on September 2 cautioning him not to come into Fort Pitt "...as it is infected with the Small Pox."  

Substantially complete by the late fall of 1778, the post included a blockhouse adjacent to the main entrance of the fort on the side farthest from the river, four bastions, storerooms, barracks, officers' quarters, and perhaps, though less certainly, a "covered way" to the river in order to obtain water. In November, McIntosh led his expedition into the Ohio country, following Bouquet's 1764 route along the Great Path. Close to the spot where Bouquet had built a blockhouse, McIntosh’s force of 1,000 men constructed Fort Laurens, named for Henry Laurens, president of the Continental Congress and a close friend of the general.

Frank Carver, writing in 1975, has suggested that both Fort McIntosh and Fort Laurens were essentially similar in architectural style. To judge from archaeological evidence, however, there appear to have been important variations which reflected differences of terrain and geology. The Ohio Historical Society excavated Fort Laurens in 1972 and, although the location of the site suffered greatly from canal building and farming, made significant discoveries. Like Fort McIntosh, Laurens was situated on a terrace or bank overlooking a major waterway. It was of quadrilateral shape probably with one diamond-shaped bastion at each of its corners (only the northwest and southwest bastions were actually uncovered). The remains of what is thought to have been a firing platform were isolated in the northwest bastion. Oriented roughly north-south and east-west, the principal entrance was through a six-foot-wide gate in the western curtain. Inside the gate and fourteen feet south was a structure which may have been a blockhouse.

Although it probably shared with Fort Laurens some design attributes, Fort McIntosh differed in details of construction. Barracks and other buildings at Fort McIntosh are believed to have been integral with the curtain of the fort. No archaeological trace of vertically-implanted stockade posts have been recovered from Fort McIntosh, however, and this strongly contrasts to the architectural approach employed at Fort Laurens. There ten-inch diameter timbers were mounted in a palisade wall on the interior edge of a two- to three-foot-wide rectangularly shaped ditch excavated to a depth of

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3 Pension Declaration of Thomas Gaddis, Microcopy 804, Roll 1039, Frame 0486, NA.
4 Carver, It Happened Right Here, 38.
5 Ibid.
approximately three feet. No definite traces of such excavated outer-works have been found at Fort McIntosh. In addition to the presumed blockhouse at Fort Laurens, the excavations revealed eight additional structures within the enclosure varying in length from seventeen to ninety feet and in width from five-and-one-half to twenty-five feet. The reconstruction of the floors within these buildings suggests that halved-log floor joists were used to which boards were either nailed or pegged. Importantly, the archaeologist heading the excavation of Fort Laurens considered the possibility that the eastern wall of the fort may not have been stockaded at all since it overlooked the Tuscarawas River. This does not seem to have been the case at Fort McIntosh, where a coursed stone foundation was discovered running along the brow of the hill overlooking the Ohio River within six inches of the current edge of the precipice. Presumably, this supported horizontally-laid logs which may have formed at one time the back wall of one or more buildings within the fort and the outer wall of the fort itself.

As suggested above, one major reason for demonstrable architectural variations between the two posts may be geological. Fort McIntosh was constructed on top of a glacial outwash terrace deposited by runoff associated with the Wisconsin glaciation. The southernmost limit of the Wisconsin ice sheet was considerably to the north of the site, and glaciation does not directly account for the observed geological deposits. The deposits vary from 1 to 150 feet in thickness and consist primarily of igneous, metamorphic, and sedimentary rocks and cobbles ranging in size from three to sixteen inches in diameter. They are generally rounded to well-rounded in appearance, and collectively are part of the Carmichael Formation which also includes beds of tabular sandstone.

From the archaeological fieldwork at Fort McIntosh, it seems as though the geology of the site location affected and perhaps, to some extent, determined the choice of construction techniques employed. In several instances, larger, rounded cobbles were knapped on one or more faces and dry-laid in walls averaging eighteen inches in width. These, it is believed, supported the hewn timber beams

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6 In the description of the archaeologically recovered architectural data from Fort Laurens, I have relied heavily on a report prepared by the archaeologist, Dr. Richard Michael Gramly of the Peabody Museum, Harvard University. Alternatively, the eastern curtain and bastions may have been obliterated during the construction of the Ohio-Erie Canal.

7 Carlisle, "Preliminary Comments on the Archaeological Investigation of Fort McIntosh," 8, Fig. 6.
which probably constituted the major construction medium for both the curtain (or wall) of the fort and of the interior buildings. Quarried tabular sandstone blocks were also aligned with very little subsurface preparation of the ground to form the foundations for chimneys and small interior buildings. Thus subsurface excavation during the construction of the fort does not appear to have been extensive. The absence of a vertically-implanted stockade led to the assumption as early in the fieldwork as 1975 that the overall appearance of the fort may have been one of log buildings grouped into a rough quadrilateral configuration and joined by bastions of crib-and-earth construction. This conclusion is supported not only by the obvious speed with which the fort took shape but by the nearly impregnable rock and compacted sand subsoil of the site. Historical documents also suggest that this assumption is accurate. If so, both Forts McIntosh and Laurens reflect adaptation of prevailing European ideas of defense to distinct local geological conditions.

One of the officers who accompanied General McIntosh was a young French volunteer, Louis-Antoine-Jean-Baptiste, Le Chevalier de Cambray-Digny, born to French parents in Florence in June 1751. Cambray was trained in the French artillery and undoubtedly also received instruction in the design of military installations; in fact, another member of his family had written a treatise on the subject in 1689. That he did serve as overall director of the artillery in the western department is a certainty. It is also true that he was considered part of the infant Corps of Engineers commanded by General Duportail, and that following his brief stay in Western Pennsylvania he helped to plan the defenses of Charleston. On this basis it is reasonable to believe that Cambray had an active part in the design and construction of both frontier forts.

It was probably due to the speed with which McIntosh organized and began his expedition in 1778 that Cambray did not prepare detailed drawings of Fort McIntosh. Despite an extensive archival search in both this country and abroad, no such drawings, maps, plans, verbal descriptions, or allusions to them have been found.

Virtually the only architectural clues which Cambray did leave concerning the appearance of the fort are contained in his brief communications with Captain William Sommerville, who served directly

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8 Ibid., Fig. 5.
9 See the reconstruction of the appearance of the fort in Carver, It Happened Right Here, 39.
10 For a detailed account of Cambray throughout the American Revolution, see Carlisle, "Le Chevalier de Cambray-Digny."
under Cambray as conductor of the artillery. On October 10, 1778, Cambray wrote to Sommerville regarding the disposition of the artillery at the yet unfinished Fort McIntosh. Sommerville was advised to "... fit in the parc of the Artillery a proper place, with tents, or anysoever means, where the powder can be despos'ed in safety until the room for the Artillery stores are finished in the Fort." 11 Apparently, the magazine inside the fort was not completed by November 2, since on that date Cambray reminded Sommerville that Colonel Campbell had been ordered to prepare a "room, close and remote" inside the fort for the storage of ammunition. 12 Several months later, Cambray again wrote Sommerville regarding the care and storage of arms and ammunition. In this letter, Cambray emphasized that firearms should be hung on proper scaffolding at the fort. 13

From these small bits of information it is clear that artillery and ammunition arrived at Fort McIntosh prior to its completion, that these materials were stored originally away from the construction, and that eventually they were moved, perhaps temporarily, to a room inside the fort pending the completion of the magazine. This room may have been in one of the bastions, thereby "close" enough to be readily accessible and yet sufficiently "remote" to avoid complete disaster in the event of an explosion. Perhaps in this same room, muskets and other military equipment were hung on wooden pegs or scaffolds. 14

The day before leaving for Ohio, McIntosh instructed Lieutenant Colonel Richard Campbell to finish the construction of Fort McIntosh by completing the tower (blockhouse) and bastions. He was to hang the gates of the fort and to put his stores in order. 15 The workmanship on the buildings may have been very good since skilled shipwrights came from Fort Pitt to the Beaver in order to continue the building of Fort McIntosh. This supposition is further attested to by the observation of Ebenezer Denny, an officer who served at the post and later was the first mayor of the city of Pittsburgh. Denny noted in his journal that both Forts Pitt and McIntosh "... are handsome places." Arthur Lee confirmed Denny's remarks when he remarked that Fort McIntosh was constructed of "... well hewn logs." "The buildings," added Griffith Evans, "are made as sharp

12 Cambray to Sommerville, Nov. 2, 1778, ibid., 245-46.
13 Ibid., 261-62.
15 Carver, It Happened Right Here, 43.
and handsome as could be expected.” Washington himself was pleased with the post and received letters from Daniel Brodhead, among others, indicating that Fort McIntosh was as well suited as Fort Pitt to serve as the major western frontier base of the Continental army.  

Of the appearance of the fort during the Revolution very little more is known. The cutting of trees and removal of vegetation to aid in the construction and to create a clear field of fire must have covered a considerable area. Having moved his entire force of 1,300 men to the site, McIntosh would have needed to establish quarters for them. The troops probably set up bivouacs around the developing fort which was built “... by fatigue of the whole line.” Many tents may have sprung up as the trees fell.  

The daily routine of camp life naturally led to disciplinary problems as Colonel Daniel Brodhead wrote to Major General John Armstrong in April 1779 that Fort McIntosh was constructed by men “who would rather have fought than wrought.” Such problems naturally resulted in the construction of a guardhouse within the fort. Sanitation within the fort confines was also a matter of concern. Water had to be obtained from the Ohio River, and for some reason there seems to have been no latrine provided in the fort at this time.  

McIntosh's expedition itself was beset with constant problems of discipline and lack of supplies. Returning to Western Pennsylvania from Ohio in December 1778, most of the force which he had assembled was mustered out. Although Fort McIntosh continued to be occupied, no major events occurred there throughout the remainder of the Revolution. Indian attacks did prove a constant threat, however, with four men killed in July 1780, about five miles from the post.  

16 Ibid., 38.  
18 Carver, It Happened Right Here, 37-38.  
20 See McIntosh's letter to Vice President Bryan of the Supreme Executive Council in Agnew, History of Pennsylvania North and West, 221; also, the quote from Private James Littell in Williams, “Revolutionary Journal and Orderly Book of General Lachlan McIntosh,” WPHM 43: 162.  
21 Agnew, History of Pennsylvania North and West, 223.  
22 Regimental orders of February 1, 1779, stated that: “No person is to ease himself within one hundred yards of the fort on pain of immediate punishment.” See Louise P. Kellogg, ed., Frontier Advance on the Upper Ohio, 1778-1779 (Madison, Wisc., 1916), 456.  
At the conclusion of the Revolution in 1783, Fort McIntosh may have been abandoned by military personnel. The location of the fortification, however, was too important to allow the post to decay or to be vandalized. Accordingly, in September 1783, General William Irvine presented written instructions to William Lee and John McClure:

You are to take immediate charge of the fort, buildings and public property now remaining at Fort McIntosh, for and in behalf of the State of Pennsylvania, (except two pieces of iron cannon, and some water casks, the property of the United States,) . . . you will take care that no waste is committed, or timber cut down or carried off the premises, and prohibit buildings to be made or any persons making settlements or to reside thereon, or from even hunting encampments; nor are any more families to be permitted than your own to live in the barracks or on any part of the tract. . . .

Lee and McClure were also ordered to turn over the fort to higher military authority should the post once again become active. Interestingly enough, there must have been some permanent structures standing near to but outside of the fort itself at this time since the two men were told to “occupy the buildings without works” if the number of troops in any new force was too great to permit them and their families from living in the fort proper.

The Architecture of Fort McIntosh: The Post-Revolutionary Period

In March 1783, much of the land of northwestern Pennsylvania was set aside as the Depreciation Lands, territory for the redemption by Revolutionary veterans of the nearly worthless Continental currency. Before settlers could move into this land, however, it was necessary to conclude treaties with local Indian tribes which in effect forced them to sell this property to the United States. Much of this was accomplished at the Treaty of Fort Stanwix in 1784. A subsidiary treaty with the Delaware, Wyandot, Chippewa, and Ottawa was arranged to be signed at Fort McIntosh in January 1785. With this event, a second chapter in the history of the fort began.

The signing of the treaty meant that the fort had to be cleaned and put into good repair. The surveyors engaged by Thomas Hutchins to lay out the land north and west of the fort also needed to use the post as a base of operations and for protection against both Indians and perhaps against the British, who continued to maintain posts at

24 Agnew, History of Pennsylvania North and West, 223.
25 Bausman, History of Beaver County, 1: 104-5.
26 The Shawnee were not included in the treaty at Fort McIntosh and did not negotiate until the Treaty of Fort Finney in 1786.
Oswego, Niagara, Detroit, and Michilimackinac. Although the likelihood of continued bloodshed on the frontier was considerable, the American army had dwindled to a total of twenty-five men stationed at Fort Pitt and fifty-five men at West Point. The Congress therefore authorized establishment of the First American Regiment commanded by Josiah Harmar of Philadelphia, and one of his initial duties was to repair and garrison Forts Pitt and McIntosh. Colonel Francis Johnston ordered him in November 1784 to prepare “commodious quarters” to house the treaty commissioners.

Confusion and hardship dogged the heels of the men who had to carry out these orders. Tools and supplies were scarce, and discipline remained a problem throughout the cold winter months. Captain Walter Finney wrote to Harmar from Fort McIntosh on December 28, 1784, requesting several gimlets and augers to aid in the repair of the buildings, “...we have but one of each at present for all our business.” Finney penned a second letter to his commander the same day and reported difficulties in maintaining discipline. At 8:00 the night before, he said, without authorization a piece of artillery had been brought opposite the sally port of the fort and fired. Moreover, because of the intense cold, Harmar's room at the fort had not been finished nor had the “apartments” for the treaty commissioners. There had been some consideration given toward building a council house for the treaty negotiations “in the woods,” but the weather and lack of tools forced the abandonment of the plan.

During 1785, the only known map of Fort McIntosh was prepared by surveyor Alexander McClean as part of his mapping of the Beaver Reserve. McClean had a special interest in the fort, having served as a quartermaster in the force which built it. Unfortunately,

29 Finney to Harmar, Dec. 28, 1784, Microfilm Roll No. 5, Harmar Papers, Clements Library.
30 Ibid. Finney's mention of a sally port is an interesting architectural comment. Christopher Duffy, Fire and Stone: The Science of Fortress Warfare, 1660-1860 (New York, 1975), 186, defines a sally port as “a small gate, usually set in a curtain. ...” Quentin Hughes, Military Architecture (New York, 1974), 242, equates the sally port with the postern and defines it in a much more restricted sense as “... a small tunnel leading out of the fortifications.” At present, it is unclear whether Finney’s remarks refer to the main gate at Fort McIntosh, a smaller subsidiary gate, or to some as yet undiscovered tunnel. On the basis of the evidence at hand, a wider definition of the term seems more appropriate.
the map is not architecturally detailed, although it does indicate the post’s basic quadrilateral configuration.

The only other known contemporary graphic representation of Fort McIntosh appeared in the *Columbian Magazine*, printed in Philadelphia in January 1790. A short anonymous article appeared together with a not very accurate copperplate etching purported to be of the fort. The “lead” article of the issue, it was more accurate in its description of the structure than was the accompanying etching. In part, it noted that Fort McIntosh: “. . . consisted of a number of log buildings which altogether formed nearly a tetragon, at each corner of which there was a bastion. The Fort was entirely built of logs; — and the houses for the accommodation of the officers and soldiers were very commodious; they were roofed with shingles, and the windows were glazed.” 31

Very little else is contained in the article, the purpose for which is not at all clear. It seems reasonable to think that the etching may have been made by someone who had never seen the fort, perhaps from a verbal description. A “blockhouse” attachment to the river side of the fort and the absence of corner bastions are particularly serious errors. 32

By January 10, 1785, Harmar himself had moved to Fort McIntosh where he seemed content enough but lonely for his wife, Sarah, who apparently remained at Fort Pitt until repairs at McIntosh were more advanced. Harmar’s comments reflect not only on the architecture of the fort but on the man himself: “Here is a very pretty room, where at night I spend my dull hours — the soldier is lost in thought — the dear embraces of his only object constantly recurring — just heaven. This short separation how distressing. I am ordering a kitchen to be built and will then come for thee. . . .” 33

The repair work on Fort McIntosh went slowly in the long months of winter. By February, however, most of the work had been completed. Harmar was concerned that should his troops leave the post it would be plundered of nails, hardware, boards, and other useful material. He noted that this was precisely the situation in which he had found the post and was fearful that his hard work would come

32 The engraver of the representation of Fort McIntosh may have been John Trenchard who also served as the magazine’s publisher from 1789 until 1790. Trenchard is best known for his “Several Public Buildings in Philadelphia.”
33 Josiah to Sarah Harmar, Jan. 10, 1785, Microfilm Roll No. 5, Harmar Papers, Clements Library.
to nought.\textsuperscript{34} In the event that the post would be abandoned, Harmar requested that someone be retained to prevent future vandalism.

If Harmar was concerned that the post be kept intact for possible future military needs, others saw in it a capitalistic opportunity. David Duncan and John Finley appealed to Pennsylvania's Supreme Executive Council for a trading license and to allow them to operate out of Fort McIntosh where they promised to take "... care of the Garrison and Buildings at that place."\textsuperscript{35} Duncan renewed his appeal on April 6, and the Supreme Executive Council on the twenty-seventh ordered General John Neville to appoint someone to take care of the buildings and public property at the fort. The post was not abandoned at this time by Harmar's men, however, and Harmar himself was still writing from there in July 1785.

Mrs. Harmar had apparently left Western Pennsylvania sometime in the spring, possibly returning to Philadelphia. Again, Harmar's reflective and descriptive letters provide a revealing if brief glance into both the man and the architecture of his frontier surroundings:

Here am I sitting in our Old bedchamber (which I just repaired) writing by the front window overlooking the Ohio. . . . The doctor . . . sleeps below — we live very well — fish in the greatest abundance strawberries and cream our desert. The Earth is covered with the former, but we want the nice, Judicious female arrangement of the table, which I shall never find until we meet again — Hope, fond hope! Lend me thy aid that the [?] may not long be distant. That separation could thus affect me, I could not have thought — prey show my letters to no one they will certainly, from the tenor of them, pronounce me unfit for the military. \textit{The Bower, the two Mile run, the garden, the peach trees}, the everything remind me of our late happy state, and call forth pleasing painful reflections [emphasis added].\textsuperscript{36}

Harmar's observation on looking out the front window over the Ohio is important for it strengthens the argument that the back walls of buildings within the fort helped to form the curtain wall. The mention of a window confirms their presence as noted in the \textit{Columbian Magazine} article. If Harmar's description of his living arrangement

\textsuperscript{34} Harmar to President Dickinson of the Supreme Executive Council of Pennsylvania, Feb. 8, 1785. See Bausman, \textit{History of Beaver County}, 1: 110-11. Harmar noted that: "Previous to our arrival, they [i.e., those emigrating into Ohio and Kentucky by flatboat] had destroyed the gates, drawn all the Nails from the roofs, taken off all the boards, & plundered it of every article."

\textsuperscript{35} Duncan and Finley to Supreme Executive Council of Pennsylvania, Feb. 26, 1785, in Bausman, \textit{History of Beaver County}, 1: 111.

\textsuperscript{36} Harmar to Sarah Harmar, June 19, 1785, Microfilm Roll No. 5, Harmar Papers, Clements Library. The doctor was John McDowell, regimental surgeon. For more on the bower, see Bausman, \textit{History of Beaver County}, 1: 103.
with Dr. McDowell is correct, the barracks may have had bunk beds. Alternatively, when Harmar indicated that the doctor "lived below," he may have been referring to an entirely separate room. If so, this would suggest a two-story barracks building.

As early as June 30, Harmar received orders to proceed to the mouth of the Scioto River selecting only whatever stores were necessary for the trip. The remainder were either to be returned to Fort Pitt or were to be kept at McIntosh together with a small garrison to guard them. For whatever reason, Harmar and his troops remained at Fort McIntosh where they were visited in August 1785 by the three commissioners running the western boundary line of Pennsylvania.

Harmar and most of his troops finally left Fort McIntosh in November 1785, proceeding down the Ohio River and establishing several subsidiary fortifications at strategic locations. A small detachment continued on at the post, however, as witnessed in the journal of Joseph Buell who served in Major Wyllis's company. According to his testimony, the repairs which Harmar's men had made the year before were not durable: "Went into the old barracks which are very ruinous, being without roof and floors. Here we closed the month of December in repairing our barracks and trying to make ourselves comfortable for the winter." 37

Of life at Fort McIntosh during the following months, we have only the reports submitted to Harmar by several younger officers. As always, discipline and supplies were the main problems. Captain John F. Hamtramck reported that he had ordered the gates of the fort shut at the beating of retreat in an effort to keep down desertions. The men were restricted to the garrison, except by permission, even to obtaining water. 38 In September 1786, with winter fast approaching, the men were sent out to cut wood but had "... neither waggon or horses to haul it with. . . ." 39

If the situation was bad at Fort McIntosh, it was little if any better at Fort Pitt. In 1787, an Indian known as the Pidgeon Hunter had been killed by a white named Regan who in turn had been seized by David Duncan and others. Richard Butler, the superintendent of Indian affairs, wrote to Harmar from Fort Pitt on March 11 and suggested that Regan be transferred to the guardhouse at Fort Mc-

37 Reproduced in Bausman, History of Beaver County, 1: 101-2.
38 Hamtramck to Harmar, July 15, 1786, Microfilm Roll No. 5, Harmar Papers, Clements Library. This information underscores the fact that fresh water was apparently not available from a well or cistern inside the fort itself.
39 Ferguson to Harmar, Sept. 16, 1786, ibid.
Intosh which was in better repair than that at Fort Pitt. The man had friends in the area, and there were plans to rescue him. His wife had also apparently been applying some pressure to secure his release. Captain William Ferguson, at Fort McIntosh, was on his guard and was prepared to defend the fort should Regan's friends attack. Important to our understanding of the architecture of Fort McIntosh, Ferguson wrote to Harmar that: "... I am busily employed in Fraiseing the bastions to guard against any sudden attack they should make."

This comment offers the best proof yet discovered that the bastions of the fort were of crib-and-earth construction. Fraises were long pointed poles embedded in the earth between the cribs with their pointed ends projecting outwards. Unfortunately, it is impossible to say whether Ferguson was constructing fraising for the first time or whether he was simply replacing rotted poles. The chances are probably good that the bastions had fraises during the Revolution as well, though this remains unsubstantiated.

Although the post was never attacked by Regan's friends, Ferguson continued to have considerable trouble keeping the post intact. He wrote to Harmar, now at Fort Harmar (Marietta, Ohio), on May 2, 1787, and apprised him of the fact that a windstorm had blown down the southwest curtain of the fort: "... as low as the inner logs of the Barricks and had it not been for the joist below, it would have leveled the whole with the ground." The ultimate disposition of the fort was obviously undecided at this time since Ferguson went on to note that he was "... uncertain whether this would be continued as a post." He had accordingly "... repaired it in a slight manner until I have ... orders respecting it."

By August 1787, Ferguson had been replaced by Lieutenant Mahlon Ford. Not only had Ford inherited Ferguson's difficulties with the dilapidated fort, but the threat of Indian attack was far from over. Ford's letter to Harmar on August 16 succinctly explained the situation:

I live very lonesom here and not with [out] apprehensions that the Indians will be very troublesome this Fall. I have seen them once or twice skulking about

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40 Butler to Harmar, Mar. 11, 1787, ibid.
41 Ferguson to Harmar, Apr. 1, 1787, ibid. The use of a United States military installation to retain a white prisoner accused of killing an Indian and the preparation of that installation to repel an attack of white residents of the area seems an implausible but true scenario. Note that Knox's orders regarding the evacuation of the fort were countermanded on March 13, 1787. See Knox to Harmar, Mar. 13, 1787, ibid.
42 Ferguson to Harmar, May 2, 1787, ibid.
this [place] — and have been informed from Fort Pitt that they want to get some prisoners for they will be as good as letters for them. I keep my men close and don't suffer them to go out unless it be for necessaries. The old garrison is tumbling down fast. I expect every [day] when the salliport will fall down, and two more breeches will soon take place in the walls. I have put my magazine in a state of defense and have all the empty casks filled with water and intend if I should be attacked to spin out my existence as long as possible. Duty is very severe here. If I could be favored with seven or eight more men it would be very agreeable. Col. Killbuck sent me an express yesterday from the Salt Lakes that there was one hundred and seventy warors of the Gibways which meant to strike here or at Fort Pitt. I hope you are in peace and plenty.\(^{43}\)

The fall came and went without incident, but by January 1788, Harmar had become convinced that the fort was no longer defensible. Obviously the communication problem north toward Lake Erie was fast becoming of more concern. Secretary of War Henry Knox was well aware of the importance of the Beaver Valley to north-south communications and travel. Indian problems to the west of the Beaver could be better handled by new posts farther down the Ohio. Knox had informed Harmar that Fort McIntosh “. . . being within the State of Pennsylvania ought on that account to be evacuated.” Clearly, both the disintegrating condition of the fort and the fact that the frontier had now progressed some miles west were combining to bring about the post’s demise as an active installation. In this same letter, Knox had requested Harmar to have an officer examine the Beaver River valley for a location for a blockhouse.\(^{44}\)

Harmar wrote to Knox on January 10, 1788, that the fort was no longer tenable and that it should have been evacuated the preceding spring. He proposed moving the small garrison stationed there back to Fort Pitt. The hewn timbers of Fort McIntosh were still apparently valuable, for Harmar stated that in the spring he would send a party to dismantle the fort and raft whatever timbers could be salvaged down the Ohio for use in other installations. Significantly, the prospect of building a blockhouse on the Beaver River as a replacement for Fort McIntosh was again raised. Lieutenant Ford was informed of these decisions by Harmar on January 29.\(^{45}\)

Food storage was a problem at this time, particularly during the winter months at the fort as noted in Lieutenant Ford’s letter to Harmar on February 1, 1788. Several areas of the fort were then serving a function for which they were not originally intended. Ford noted that the corn was partly stored in the blockhouse near the main

\(^{43}\) Ford to Harmar, Aug. 16, 1787, *ibid.*

\(^{44}\) Knox to Harmar, May 12, 1786, *ibid.*

gate. Although the blockhouse corn was stored on the ground, the remainder had been placed in the garrison where it was in worse condition "... owing to the badness of the roof." 46

In the spring, Harmar's suggestions to Secretary of War Knox took more formal shape. Although it was clear that Fort McIntosh could not be continued, the threat of Indian warfare in the area was yet sufficiently strong to warrant construction of a blockhouse on the Beaver River to be garrisoned by an officer and fifteen or twenty men. Fort McIntosh, meanwhile, was to be dismantled and the material in it disposed of "... in the manner most conducive to the public service." 47

Before the report to Knox was officially accepted in October, Harmar had begun work on the blockhouse which was to replace Fort McIntosh. Lieutenant Edward Spear arrived at McIntosh on June 20, 1788, and reported from there to Harmar on the site selected by Major John Doughty for the location of the blockhouse, at that time already under construction:

... [it] is on a second bank on the east side of Beaver about 300 yds below the lower shoots of the Falls, 90 yds from the water; and about three miles from mouth of Beaver; the House is 20 feet square and building of the plan the Major informs you had approved of. I shall have it ready for covering in five or six days; by the advise of Major Doughty I shall engage a team a few days to haul the timber which will be the greatest distance from the house — I will demolish this place tomorrow, and move to the Falls the day following. 48

There is nothing to suggest when or if Lieutenant Spear may actually have demolished Fort McIntosh. However, a letter from Major Isaac Craig to Henry Knox on July 5, 1793, indicates the structure no longer existed. Craig wrote respecting the deposit of some supplies that the fort site had "... not a building of any kind ... nor within three miles of it on that side of the Ohio. ..." But the tradition persists that in 1795 one wing of one of the buildings was still standing and that Samuel Johnston and John Wolf used it for temporary shelter that summer. A similar tradition states that the barracks stood until the turn of the century when the timbers were used in the construction of Coulter's Tavern. While these traditions, and the similar one that several chimneys from the fort were still

46 Ford to Harmar, Feb. 1, 1788, Microfilm Roll No. 5, Harmar Papers, Clements Library.
47 Bausman, History of Beaver County, 1: 113.
48 Spear to Harmar, June 20, 1788, Microfilm Roll No. 5, Harmar Papers, Clements Library. Spear was not specific about whether the Beaver River blockhouse used any timbers from Fort McIntosh itself, but considering the previous plan to raft them down the Ohio, it does not seem unlikely.
extant in 1840 may be apocryphal, Judge Daniel Agnew was able to describe something of the topographical irregularities of the fort site in 1829 and to attribute them properly to the fort. Agnew pinpointed the locations of former bastions and of a cobble “pavement,” portions of which have been uncovered by archaeological excavations at the site.

John Wolf, mentioned above, purportedly described Fort McIntosh to Judge Matthew Quay. He claimed that it was built “... with a double row of stockades with a ditch around the outside and a banquette inside and a gate in the rear.” The double row of stockades may refer to opposing log walls forming the cribs of the bastions, but the accuracy of this description is hard to assess. Even as late as 1904, Joseph Bausman believed that he could discern the position of one of the bastions while all the other features were obliterated by “... the formless ruin of oblivion.”

Lieutenant Spear was overly optimistic about the completion of the blockhouse on the Beaver River. By August 4, he had moved to the falls from Fort McIntosh and reported to Harmar that rain had delayed the blockhouse construction. He anticipated having the lower story finished by the following day, however.

Construction was still not complete at the end of the month, but Spear did make a drawing of the blockhouse which he forwarded to Harmar (Figure). There were particular difficulties with sickness among the men and a lack of skill in laying the floors of the blockhouse and in “covering” it. The soldiers under Spear’s command were apparently so inept that he was forced to pay a local man for six days to help in finishing the structure. This had delayed the completion of the job even further, pushing it up to September 31. Nor was this deadline met, for Spear wrote on October 6 that he expected to move in the following day. For whatever reason, the move was not undertaken until October 20 when Spear notified his commanding officer that the two lower stories of the blockhouse were complete. The location of the blockhouse was a good one since it effectively commanded a principal water route into Western Pennsylvania. In

49 Bausman, History of Beaver County, 1: 93 n 15.
50 Ibid., 115.
51 Spear to Harmar, Aug. 4, 1788, Microfilm Roll No. 5, Harmar Papers, Clements Library.
52 Spear to Harmar, Aug. 31, 1788, ibid.
53 Spear to Harmar, Sept. 6, 29, Oct. 6, 20, 1788, ibid. Spear also said in his Sept. 29 communication that he borrowed a canoe from the man whom he had hired to help move baggage and stores. It is unclear whether he was referring to moving them from Fort McIntosh.
Lieutenant Edward Spear's map of the blockhouse on the Beaver River. This structure replaced the decaying Fort McIntosh in 1788. Note that a portion of the blockhouse was subterranean. This version of the map was redrafted by the author from a Xerox copy of the original which is housed in the Josiah Harmar collection of the William L. Clements Library, University of Michigan, and with whose permission it is reproduced here. In the original, the outline of the blockhouse appears in dashed lines.
March 1789, Lieutenant Spear reported that he had flour, pork, vinegar, soap, and candles enough to last for nearly a month. The garrison at that time consisted of twelve men.\(^{54}\)

There was one major drawback to the location, and that involved the drastically fluctuating water level in the Beaver River. Low-water periods had hindered the provisioning of Fort McIntosh, but an overland route from Fort Pitt — the Brodhead Road — could be used in such emergencies. Such was not the case at the Beaver blockhouse, where in October 1789, Ensign Nathan McDowell, who had taken over from Lieutenant Spear, complained that the Beaver did not contain enough water to float a canoe for more than a mile from its mouth. This predicament had prevailed for the previous four weeks and had severely hampered McDowell's efforts to provision the post. Low water persisted until October 25, and McDowell reported that by November 1, the Beaver had risen three feet.\(^{55}\)

McDowell continued on at the blockhouse until 1790 when Captain George Stephenson succeeded him. Although it was never attacked, the blockhouse was garrisoned at least until the summer of 1793, when Sergeant Major John Toomey and nineteen men were stationed there.\(^{56}\) A number of soldiers died while on duty and were buried close to what was to become Third Avenue, just south of Fallston Alley in present-day New Brighton.\(^{57}\) The location was supposedly marked by the Winship family home at the end of the nineteenth century.\(^{58}\) The blockhouse itself may have stood on lot 92 along the west side of Third Avenue below Fourteenth Street which was occupied in 1872 by James W. Thorniley.\(^{59}\) A small stream, a tributary of the Beaver River which was south of New Brighton, is known as Blockhouse Run, but the blockhouse itself never seems to have been given a formal name.

The growing importance of commerce in the area insured that the blockhouse on the Big Beaver would not remain a solitary structure for long. As early as 1791, it appears that at least two traders,

\(^{54}\) Spear to Harmar, Mar. 23, 1789, ibid.
\(^{55}\) McDowell to Harmar, Oct. 3, Nov. 1, 1789, ibid.
\(^{56}\) A muster roster for Toomey's troops is given in Bausman, History of Beaver County, 1: 114-15.
\(^{57}\) Frank S. Reader, History of New Brighton, 1838-1938 (Butler, Pa., 1938), 13.
\(^{58}\) Frank S. Reader, History of New Brighton: A Souvenir of the Twenty-Fifth Anniversary of the "Beaver Valley News" (New Brighton, Pa., 1899), 6.
\(^{59}\) Richard and Henry, History of Beaver County, 443.
William Wilson and John Hillman, were active in the area. Aside from the drowning of Major General Samuel Parsons in the Beaver River in 1789 after a short stay at the blockhouse and the massacre of a party of nine Indians by Captain Samuel Brady in 1791, very little else occurred in the vicinity except for Anthony Wayne's military preparations against the Indians in 1792. At that time Ensign John Steele commanded at the blockhouse. It is not known when the blockhouse disappeared or was abandoned by the army, but it physically survived at least until 1796 because it is then mentioned in a property description for a transaction between John McKee and Levi Stuart.

In summary, there are several points which one may make about the architecture of Fort McIntosh and the Beaver blockhouse. Fort McIntosh was of considerable size, measuring approximately 300 feet along its southern wall near the river. Although the details of its above-ground appearance remain dim, the fort was of irregular quadrilateral shape. While constructed quickly it was of well-hewn logs. The interior buildings of the post most probably also formed portions of the curtain wall. The four bastions are thought to have been constructed of log cribs filled with earth and stone, and they were equipped with fraises, at least in the post-Revolutionary period. No remains of a stockade or of a stockade trench have been recovered archaeologically. The buildings of the fort included both officers' and enlisted men's barracks, a blockhouse inside the main gate, a powder magazine, and undoubtedly some smaller structures such as the blacksmithing hut recovered in the southwest bastion in 1974. The commandant's quarters overlooked the Ohio River, and the fort had kitchen facilities. Water seems always to have been obtained from the Ohio and not from any interior well or cistern. Casks may have stored water for the garrison in times of emergency. Fort McIntosh was an important defensive position for the western frontier during the Revolution, and it played an equally important role after the war. Despite renovation and repairs, the structure suffered severely from the natural forces of decay. These, combined with its diminishing strategic importance, eventually led to the post's abandonment.

The much smaller Beaver blockhouse which succeeded Fort McIntosh was designed to insure the continued defense of Western Pennsylvania in the ensuing years after Fort McIntosh's abandonment. Lieutenant Spear's 1788 drawing and verbal description indicate that it was a well-constructed building with both above-ground and subterranean portions.
In the preceding, I have attempted to organize and present a body of architectural information drawn from diverse sources rather than to cover the larger history of both of these fortifications. This study has synthesized data from both historical research and archaeological investigation in order to achieve a fuller understanding of the physical appearance of these frontier posts and the complex series of interconnecting social networks which surrounded them.
IN COMMEMORATION
GIFT
IN MEMORY OF
MILES HUMPHREYS JONES
FROM
MRS. JULIA ELLIS JONES

IN COMMEMORATION
GIFT
IN MEMORY OF
ROBERT L. WILSON, JR.
FROM
HIS FRIENDS IN "THE SCORPION, INC."

Correction: The October 1978 issue of the Western Pennsylvania Historical Magazine erroneously listed a gift in memory of Mr. John G. Buchanan. It was to have noted a gift from Mr. and Mrs. Eugene B. Strassburger in honor of Mr. Buchanan's ninetieth birthday. We apologize for any embarrassment this may have caused Mr. Buchanan or his friends and family, but any discomfiture they may have felt could not have exceeded that of the editor, who apparently must continue his search for the "perfect" publication.