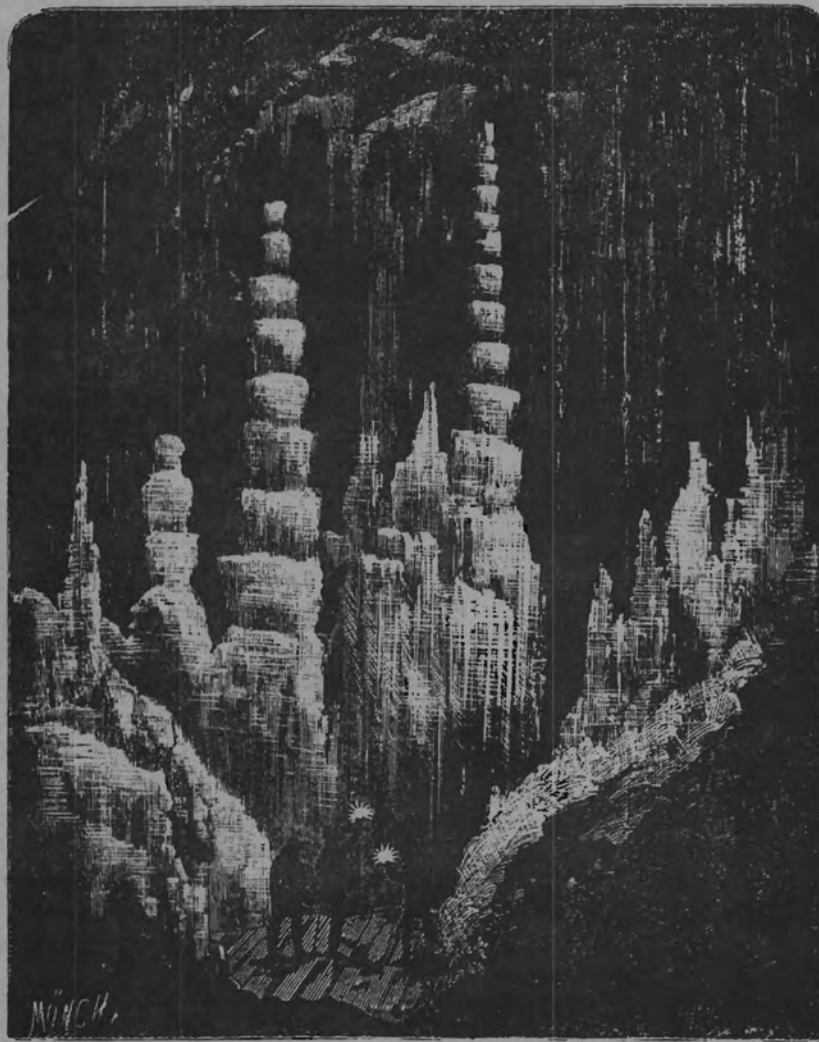


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THE ASSOCIATION

The American Spelean History Association is chartered as a non-profit corporation for the study, dissemination, and interpretation of spelean history. All persons who are interested in those goals are cordially invited to become members. Annual Membership is \$5.00. Family Membership is \$6.00, and library subscriptions are \$4.00. Meetings are held in conjunction with the annual convention of the National Speleological Society and sometimes at West Virginia's Old Timer's Reunion.

\* \* \* \*

COVER:

A 1903 view of Luray Cavern, Virginia, from a Hungarian publication, compliments of Hadobás Sándor, a member of the Hungarian Spelean History Society.

\* \* \* \*

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THE JOURNAL

The Association publishes the Journal of Spelean History on a quarterly basis. Pertinent articles or reprints are welcomed. Manuscripts should be typed and double-spaced. Submissions of rough drafts for preliminary editing is encouraged. Illustrations require special handling and arrangements should be made with the editor in advance. Photos and illustrations will be returned upon request.

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## EDWARD DRINKER COPE'S CONTRIBUTIONS TO SPELEOLOGY

Frederick V. Grady

Edward Drinker Cope (1840-1897) was raised by wealthy Philadelphia Quakers. Early in life he decided to make natural history his life's work. Cope apparently was doing volunteer work at the Smithsonian Institution in 1867 when he made his first caving trip. Cope spent about two months in the summer of that year exploring and studying cave faunas in southwestern Virginia. On July 20th, Cope wrote to his father, saying he had explored 6 caves, finding a bear's lair in one and numerous bones in another (Osborn, 1931). He also mentioned having caught a carnivorous blind cave beetle and centipedes with eyes. On September 8th, Cope found a rich breccia with land snails and bones, including tapir and (probably) peccary (Osborn, 1931). Caves visited by Cope on this trip included Erharts Cave in Montgomery County and Spruce Run and Big Stoney Creek caves in Giles County.

In 1868, Cope had the good fortune of being informed of a quantity of cave earth containing bones from the island of Anguilla, that had been brought to a manufacturer of phosphates for the purpose of determining its richness in calcium phosphate (Cope, 1883). Cope examined the bones and teeth and named a new species of giant rodent as a result. Cope also learned of a physician on a neighboring island who was interested in natural history. This man was persuaded to find the source of the cave earth, and Cope received several parcels of material from him, later describing the remains in several papers.

In 1869, Cope went to Tennessee to explore more caves and wrote: "There are numerous caves in Jefferson County many very large. I hear of blind fish and of bones and Indian remains etc." (Osborn, 1931). He found a cave with breccia containing bones of a cave rat and a deer. Later, on the same trip, Cope reportedly explored a cave for some two miles, finding "some nice cave insects and centipedes" (Osborn, 1931).

In 1871, Cope went to Wyandotte Cave, Indiana, where he described in a letter to his wife the various different sorts of speleothems seen during an exploration of some nine and a half miles (perhaps an exaggeration). He described the fauna in several papers. This turned out to be Cope's last cave exploration.

Also in 1871, Charles Wheatley was shown the tooth of a mastodon discovered in a cave uncovered by limestone miners in eastern Pennsylvania. Wheatley informed Cope, who soon described a fauna of thirty-four species of mammalian fossils, thirteen of them new to science, from the Port Kennedy Cave, as the site became known (Cope, 1871; Wheatley, 1871). In succeeding years, additional fossils were described from this locality by Cope.

After 1871, Cope moved on to other interests, such as modern fish, amphibia, reptilia, and, especially, fossil vertebrates from the rich, new fossil localities being discovered by surveyors in the western states. Nevertheless, Cope continued to write occasional papers on cave faunas, in particular on fossil bones.

Near the end of his life, in the 1890's, the Port Kennedy site started producing more fossils, and Cope became interested once more, describing, among other species, a diminutive saber-toothed cat. Several men worked the site under Cope's direction, including Henry C. Mercer, who is also noted for contributions to speleology. One of the workers, believing he had found a human tooth, wired Cope "Homo saps perhaps." (Witte, 1957). Cope came out to the site and discovered the tooth was from a peccary, but kindly told Witte: "You did the right thing in sending for me."

Incapacitated by illness, Cope continued working on a monograph of the Port Kennedy fauna, which was published posthumously (Cope, 1899). Cope also identified fossils collected by Mercer from a number of other caves in the United States and Mexico.

Sadly, many of the specimens collected by Cope from caves have deteriorated or

have been lost. Many, however, remain as a legacy of Edward Drinker Cope, zoologist, paleontologist, and speleologist.

EDWARD DRINKER COPE'S SPELEOLOGICAL PUBLICATIONS

1867

Remarks on the Cave Contents in Southwestern Virginia: Philadelphia Academy of Natural Sciences, Proceedings, 19:137-38.

1868

Observations on the Living Fauna of Caves in Southwestern Virginia: Philadelphia Academy of Natural Sciences, Proceedings, 20:85-86.

1869

Remarks on a New Series of Fossils from the Limestone Caves in the Southern States: Philadelphia Academy of Natural Sciences, Proceedings, 21:3.

Synopsis of the Extinct Mammals of the Cave Formations of the United States, with Observations on some Myriopoda found in and near same, and on some Extinct Mammalia of the Caves of Anguilla, W. I., and other localities: American Philosophical Society, Proceedings, 11:171-92.

1870

Fossils from West Indian Caves (Abs.): American Philosophical Society, Proceedings 11:608, and also American Journal of Science, Ser. 3, 1;385.

1871

Cave Mammals in Pennsylvania: American Naturalist, 5:58.

The Port Kennedy Bone Cavern: American Philosophical Society, Proceedings, 12:15-16.

Preliminary Report on the Vertebrata Discovered in the Port Kennedy Bone Cave: American Philosophical Society, Proceedings, 12:73-102.

Life in the Wyandotte Cave: Annals and Magazine of Natural History, Ser. 4, 8:368-70.

On the Fauna of the Wyandotte Cave in Southern Indiana: Philadelphia Academy of Natural Sciences, Proceedings, 23:297.

1872

Report on the Wyandotte Cave and its Fauna: American Naturalist, 6:406-22, also Indiana Geological Survey, Annual Report 3/4:157-82.

1878

Observations on Wyandotte Cave and its Fauna: Indiana Geological Survey, Annual Report 8/9/10:489-506.

1879

The Cave Bear of California: American Naturalist, 13:791, also Annals and Magazine of Natural History, Ser. 5, 5:260-61, also American Journal of Science, 19:155.

Remarks on Arctotherium simus and Xantusia riversiana at the California Academy of Sciences, November 3: American Naturalist, 13:800-801.

1881

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1883

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1895

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1896

Mercer's Cave Explorations in Yucatan: American Naturalist, 30:255-58.  
Remains of Extinct Animals found in the Port Kennedy Bone Fissure: Science, ns4: 81,83.

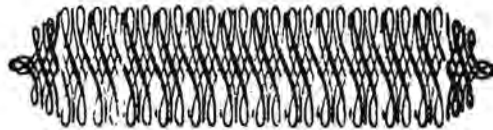
New and Little Known Mammalia from the Port Kennedy Bone Deposit: Philadelphia Academy of Natural Sciences, Proceedings, 48:378-94.

1899

Vertebrate Remains from Port Kennedy Bone Deposit: Academy of Natural Sciences, Journal, Ser. 2, 11:193-267.

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#### NICKAJACK CAVE ON A PRE-1796 MAP OF THE UNITED STATES

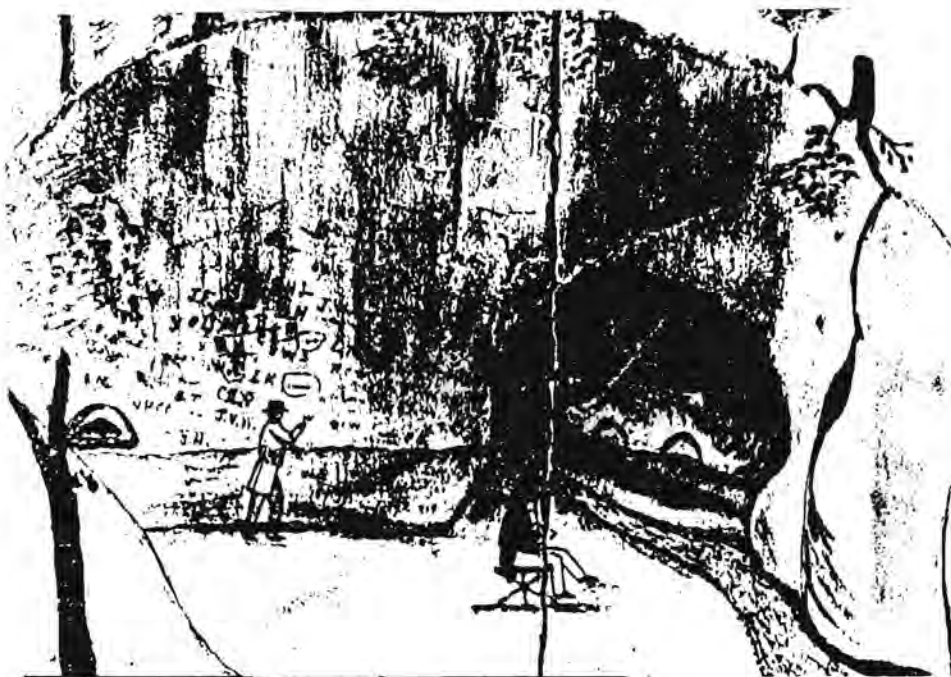
William R. Halliday

The fold-out map of The United States of America in the 1816 sixteenth edition of Benjamin Workman's Elements of Geography (Philadelphia: William McCarty, 1816) is of interest for several reasons. Its content matches the text of the sixteenth edition quite poorly. For example, it fails to show the existence of the state of Tennessee, which dates the map as pre-1796. Also, it is not clear whether Kentucky is part of Virginia, a separate state, or part of the Southern Territory. The boundaries of such states as South Carolina (extending to the Mississippi) appear odd to modern viewers, but, at one time, that was the way they were. The text, incidentally, does give valid 1816 bounds for South Carolina and due descriptions of the states of Kentucky and Tennessee.

One of the most interesting divergences between the fold-out map and the text is their approach to celebrated caves of America. The fold-out map contains the word Cave precisely at the location of Nickajack Cave (although the location of the Tennessee River is a bit off). The caves text on page 88, instead, is a rehash of the pre-Mammoth Cave commonplaces about Madison's and Blowing caves, Virginia, and about "amazingly large caves in Kentucky" in general, plus the "subterranean lake near the head of Salt River."

The map yields no clues about its origin or its draftsman other than using the meridian of Philadelphia for its base. If anyone has seen a similar map in other

formed by an arch about eighteen feet high and thirty feet wide. The stream of water comes through this cave, into which I advanced about forty paces, when the water became too deep. I heard a rumbling sound, at a distance, of falling water, and threw stones in at random, it being dark; which fell into deep water, as I could ascertain by the sound. After advancing a few paces into the cave it loses its dimensions, being little more than six feet high and about ten feet wide. The rock is composed of a white crumbling sandstone, easily cut with a knife. The cave, like most others, appears to owe its origin to a spring of water which passes through it. The Indians have cut many of their hieroglyphics upon the rock.



Fountain Cave in the mid-nineteenth century.

Winchell (1884, p. 58) pointed out that Featherstonhaugh actually was describing not Carver's Cave but Fountain Cave. Featherstonhaugh's other cave (p. 134), just downstream from Fountain, the entrance to which according to the Amerinds recently had been covered by debris from the cliff, is Carver's Cave.

There exists a persistent rumor of saltpeter caves in Minnesota, traceable to the now lost journals of LeSueur (as quoted by Benard de la Harpe Hill, et al., 1981, p. 84 ). While Featherstonhaugh says nothing about the saltpeter caves, he does have bitter words for LeSueur's "discovery" of a copper mine in Minnesota.

LeSueur claimed to have found a minable copper deposit at an outcropping of Blue Earth siltstone along the Blue Earth River. Patchy deposits of Blue Earth siltstone occur in the vicinity of Mankato. They lie between the top of the Jordan sandstone and the base of the Shakopee (Oneota) dolomite and either fill sinks and caves in the pre-Cretaceous karst surface (Upham, 1884, pp. 429-39) or are intruded into an interstratal karst horizon between the Shakopee and the

publications or can check earlier editions of this text to see if they contain the same map, other readers of the Journal would probably be as interested in further information on this spelean oddity as I.



And, why Nickajack?

It was in September, 1794, that Colonel James Ore led the destruction of the two Cherokee villages near the cave. But I have not seen any reference at that time to the importance of the cave itself. We know that the cave impressed Ore enough that, after peace was made, a few years later he went back and explored it in detail. Did he write something printed in a Philadelphia paper in 1794 or 1795 that would have led a textbook cartographer to conclude that Nickajack Cave was the most important in America?

Good hunting!



G. W. FEATHERSTONHAUGH ON THE CAVES OF MINNESOTA

James Hedges

Contemporary speleohistorians have excitedly rediscovered Jonathan Carver's description of the cave now named for him in Ramsey County, Minnesota (Carver, 1778; pp. 39-40 of the 1796 Philadelphia edition). Sixty-five years after Carver's explorations, Carver's Cave and nearby Fountain Cave were re-visited by pioneer geologist G. W. Featherstonhaugh\*(1836).

Featherstonhaugh (pp.134-35) provides a detailed account of Fountain Cave, as follows:

Somewhat higher up, and only a few miles from Fort Snelling, is another sandstone bluff, with a narrow ravine, down which trickles a small stream of good water. I followed this ravine about 200 paces, and found that it led to the cave which Carver has so accurately described. The Nacotah Indians call it Waukon Teebee, or House of the Great Spirit. The ravine ends at a circular wall of very soft sandstone, about forty feet high to the left; to the right is the cave the entrance to which is

Jordan (Trowbridge, 1935, pp. 177-82). Amerinds mined the Blue Earth for body paint. The modern American place names "Blue Earth River," "Blue Earth County," and "Blue Earth" (city) reflect the uniqueness of these deposits.

Featherstonhaugh attempted to find LeSueur's alleged copper mine in 1835, but could locate only the Amerind's paint mine. Arriving at the site and finding no copper, Featherstonhaugh became extremely ticked off. He wrote (pp. 144-45):

. . .and reading on the spot, what had been said of M. LeSueur, his mountains and his copper mines, I found myself obliged to come to the conclusion that these discoveries were fables invented to give him influence at the Court of France.

Winchell (1884, pp. 17-18) charitably supposes that LeSueur had mistaken the blue siltstone for copper carbonate. However, the facts that LeSueur's alleged saltpeter caves have never been found, and that their stated location is far beyond the climatic and floristic limits of known saltpeter caves, taken together with his report of a copper mine far from any known occurrence of copper, suggests that both caves and mines were, as Featherstonhaugh concluded, cut from whole cloth.

\*The name is pronounced "Fanshaw."

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#### MONK ESTILL AND THE GUNPOWDER CRISIS AT FORT BOONESBOROUGH

Angelo I. George

#### INTRODUCTION

Some saltpeter caves and gunpowder installations employed slaves as part of their primary work force. Very few of the actual sites are known, and fewer are the names of the slaves working in such operations that have been recorded.

Monk Estill was a Revolutionary Era slave of James Estill. History has distinguished Monk by granting him knowledge of the secret of gunpowder manufacturing. Monk learned his craft by working in the installations of the Estill family and later used his knowledge during the gunpowder crisis at Fort Boonesborough while under siege by Indians.

Few black men have ever received notice of their deeds in the annals of Kentucky. Monk is remembered for his heroic service in the defense of Fort Boones-

borough and Estill Station. J. Winston Coleman, Jr., (1940, p. 6) said this was a time when "master and slave often fought side by side in the defense of their homes and loved ones against their common enemy, the red man."

#### ESTILL FAMILY

James Estill was born on November 9, 1750, on the family homestead of his father, Wallace Estill, located along Bullpasture River in Augusta (now Highland) County, Virginia. His brother, Samuel, was born five years later, on September 10, 1755.

Part of Wallace Estill's land holdings were adjacent to Fort George, at the head of Bullpasture River (Carlyle v. Estill, 1759). James and Samuel Estill grew up in the shadows of Hupman, Burnsville (Breathing), Trout Rock, and Clarks saltpeter caves. Wallace Estill and his family lived in this valley from 1745 to 1773, before moving to Indian Creek on the New River (Morton, 1920, pp. 252-53).

In 1772, at the age of twenty-seven, James Estill married Rachel Wright and later moved to an "exposed settlement" in the Greenbrier Valley (Ranck, 1901, p. 113).

James Estill's son was named after his grandfather, Wallace, and he wrote accounts of his ancestors' activities. In answering correspondence from Lyman C. Draper, Wallace Estill said that his father (James) and Samuel did not leave any manuscripts or letters outlining their early pioneer activities. The narrative on the life and activities of James Estill was obtained from Monk, and Samuel provided anecdotes on his own pioneer life.

#### GREENBRIER SETTLEMENT

There were two main settlements in the Greenbrier Valley: Muddy Creek and Big Levels. Indian hostilities from 1763 to 1769 caused these settlements to remain uninhabited. In 1769, "Captain John Stuart and a few other young men began to settle and improve the country" of the Greenbrier (Price, 1956, p. 157). I suspect James Estill probably established his homestead in the Big Levels settlement that was protected by Fort Lewis. Fort Lewis was near present-day Lewisburg, West Virginia.

In the spring of 1778, Fort Donnally, near present-day Franklin, West Virginia, was under attack by a superior force of 300 Indians (Estill, 1846a). A volunteer relief force of 66 men was called from the environs of Fort Lewis (Estill, 1846a; Price, 1956, p. 139). The relief force was led by Col. Samuel Lewis and Capt. Stuart. Wallace Estill's (1846a) account of the happening states that the pioneer army was led by James Estill. Samuel Estill, an Indian fighter in his own right, accompanied the expedition. The rescue was effective, and the Indians were routed.

Estill (1846a) relates that, during the time between that battle and the defense of Fort Donnallys far to the south in Greenbrier County, their family moved to Boonesborough, Kentucky. And at the same time, "Saml Estill was more or less employing himself in the woods Hunting or in Manufacturing Gunpowder."

This may have been the period when the slave, Monk, was purchased by James Estill. James may have rented Monk to Samuel to work and learn the trade in the saltpeter mines. There is no clear evidence of Monk's training by Samuel Estill in the art of saltpeter and gunpowder manufacturing. More research is needed on this point.

James Estill did own 700 acres of land in the Greenbrier locality (Kegley and Kegley, 1938, p. 38). Efforts so far have failed to identify the saltpeter cave(s) used by the Estills. The best known site in the area is Clark's Cave. It has a mining history dating back to 1740 (Faust, 1964, p. 42). Fort Lewis was above the cave.

An increase in Indian hostilities after 1774 against the two Greenbrier settle-

ments may have been one of the reasons for James and Samuel Estill's move to Kentucky. James Estill (Estill, 1846a) had

. . . visited Kentucky in 1776 , returned home to Greenbrier Coty the Same year and in the year of 1778 Removed his family to Boonborough , the 1st Emigrants after its noted siege by the Indians. . . . Capt. James Estill started to Kentucky in the fall of the year 1778 arriving at Boonsborough Shortly after the noted siege by the Indians. . . .

The siege began on September 9, 1778, and lasted until September 18, 1778 (Collins, 1847, p. 420). James Estill (1778) was still in the Greenbrier settlement on October 11, 1778, as shown by a receipt he signed for sixty-one pounds of lead to be used for Captain Henderson's Company of militiamen on the Greenbrier. He and Samuel Estill must have departed shortly thereafter for Boonesborough. Once they settled in at the fort, James Estill sent for his remaining two children, Benjamin and Wallace. They arrived in the spring of 1779 (Wilson, 1944, p. 133).

#### BOONESBOROUGH SETTLEMENT

In 1775, Daniel Boone and the Transylvania Company of frontiersmen pushed through the Wilderness and established Boonesborough along the banks of the Kentucky River. On more than one occasion, Boonesborough ran short of gunpowder. The concern for having an experienced powdermaker was not very great, as is evident from reading John Williams' "Report of Transylvania affairs to the proprietors in North Carolina," dated January 3, 1776. Williams finishes his letter with these statements:

Another circumstance is that our ammunition grows scant. I do not think there is enough to supply this place till the last of March; supposing we should have no occasion of any to repulse an enemy. If we should, God knows how long it will last.

If any powder can possibly be procured it would certainly be advisable to do it; if not, some person who can manufacture the materials we have on the way for the purpose of making the powder. Most part of those are at the blockhouse, or at least within two or three miles of there -- the rest in Powell's Valley. Those (if we had any person who knew how properly to manufacture them into gunpowder) it would be necessary to have at this place. We have no such person, and of course they would be but little service here. Notwithstanding, I should have sent for them before now; but people here expect the most exorbitant wages for trivial services. Not less than a dollar a day, which will prevent my sending till I find the necessity greater or men to be hired cheaper.

Williams' letter makes mention to "some person who can manufacture the materials we have on the way for the purpose of making the powder"; it is still unclear who this powdermaker may have been. Apparently, the powdermaker never arrived, and ammunition continued to be in short supply.

On June 6, 1776, a meeting was held at Harrodstown over the question of dwindling powder supplies (Smith, 1895, p. 68). Major George Rogers Clark and Reverend David Jones were sent to Williamsburg, Virginia, for 500 pounds of powder "for defense of the stations in Kentucky" (Smith, 1895, p. 68). An order was finally issued, and the powder was shipped to Fort Pitt.

In September, Clark and Jones returned to Fort Pitt, to transport the powder back to Kentucky. As they were returning down river, a war party of Indians intercepted their boat convoy near Limestone Creek, in Marion County. The powder was

hidden in the woods, and Clark's men went overland to get reinforcements. They had reached Hickson's cabin on the West Fork of Licking River, when, learning of a nearby detachment of men under Captain John Todd, Clark and his men waited for Todd's force to return. After a while, Clark decided to press on to Harrodstown for help. Todd's force of ten men arrived later and set out to retrieve the powder.

Near the Blue Licks, they were attacked by the same party of Indians who were following Clark. Jones and several others were killed, and the Indians made prisoners of some of the less fortunate. Smith (1895, p. 71) finishes by saying, "Clark hastened back from Harrodstown and safely brought in the coveted military supplies under convoy of an armed party, which he led." This "powder question" to Williamsburg, Virginia, represented a turning point and catalyst that would guarantee statehood.

In the fall of the year, a second trip to Fort Pitt was made, led by Colonel Robert Patterson. On their way, Patterson and his six men were ambushed near the mouth of the Hockhocking River. Three men (including Patterson) were injured, two men died, one man disappeared, and one escaped unhurt (Collins, 1847, p. 509; Smith, 1895, pp. 75-76). The June and October powder expeditions are consistent with earlier blasé statements about dispatching a party of frontiersmen for this project. The powder expeditions cost lives, injuries, and time spent in mounting rescue parties, but Boonesborough and the Transylvania Company saved the \$1/day per man needed to mine saltpeter and process it into gunpowder. This sort of negative management persisted well into the 1780's at Fort Boonesborough.

Daniel Boone and his frontiersmen in 1777 had saved the day by making powder from a stash of raw ingredients secreted away by Richard Henderson at the fort (Ranck, 1901, p. 61). Ranck says:

Late in the fall . . . once the gunpowder was entirely exhausted, and the whole garrison got heartsick, when a little hoarded store was remembered of the brimstone and saltpeter that Henderson brought in. Some charcoal was made, and Boone and a couple of frontiersmen, who, like himself, had taken lessons from dire necessity, soon manufactured enough powder, scant as that was, to tide the settlement over the emergency.

In early 1779, John Williams' worst fears became reality when another powder crisis occurred. This time, no Daniel Boone came to the rescue. Boone had departed the fort in October of 1778 to fetch his family, and he did not return until October of 1780 (Ranck, 1901, p. 106; Filson, 1784, p. 73; Allen, 1872, p.31). James Trabue wrote to his brother, Daniel, that Colonel Richard Callaway was on his way to their mother's house on Tomahawk Creek, in upper Chesterfield County, Virginia. Daniel Trabue (1827, pp. 67-68) recalls:

After a while I Received a letter from my Brother James from Kentucky. He informed me Col. Richard Callaway would be at my mother's house in the spring of the year, and he wished me not to come back to Ky. until Caleway would come and help him to pack out powder and lead.

I took a negro boy with me and went with Col. Calleway. We gethered 40 pack horses, got some powder in the Magezene near where I lived, got the lead at the lead mines on New River.

The powder magazine referred to is located near Richmond, Virginia; the lead mines were owned by William Byrd III and the estate of John Robinson in Montgomery (now Wythe) County, Virginia (Young, 1981, p. 173). Callaway "brought in a good supply of lead and plenty of gun-flints for the garrison, but only a small quantity of powder, as that material was badly needed just then by the Continental troops of the seaboard" (Ranck, 1901, p. 112).

Ranck (1901, p. 113) says, "the gunpowder that Colonel Callaway had brought in

was spun out as long and as carefully as possible, but it was nearly exhausted before the spring of 1780 opened."

Samuel and Monk Estill were at the fort during this last powder crisis. Although Monk may have been sent to transport the rest of James Estill's family back to Kentucky in the spring of 1779, it is suspected the Estills were holding out for the \$1 per day to mine saltpeter and make gunpowder.

#### ESTILL STATION

In February, 1780, James Estill established a station about four miles east of Adams Saltpeter Cave. Aside from farming, he built the first tannery in Kentucky (Collins, 1874, p. 514). This was a small tanning trough constructed near a spring adjacent to the station. Monk ran the tan trough in the spring of 1780 (Collins, 1874, p. 514; Conkright, 1924, p. 313; Staples, 1933, p. 255).

Monk possessed a robust physique, stood five feet, five inches, and weighed 200 pounds (Yates in Smith, 1895, p. 194). Battle, et al (1887, p. 750) gives the following profile:

His descriptive powers were vivid and great; in conversation, anecdote, genuine wit and humor, he was unequalled. His laughter was wonderful, and once heard could never be forgotten. It was clear loud and ringing, and musical as a silver bell, and spread joy all around and put all in a good humor. He was always exceedingly polite, bland and kind to all, and considerate of the feelings of all, even the most humble, even to his own servants, who actually loved him, and they would get up at midnight at any time cheerfully to do what he wanted, without murmur or complaint.

He was a man of peace, and never trampled rudely upon the rights or feelings of others, but knew no fear. Once aroused or mistreated, or any member of his family, and his anger and fearlessness were like those of the wild, untamed lion.

Monk had three successive wives and thirty children, and is thought to have died in Shelbyville about 1835 (Yates in Smith, 1895, p. 194).

Monk knew the secret for the manufacture of saltpeter and gunpowder, and because of this "he was a person of greatest importance from the further fact that he alone of all in the new country could make gunpowder" (Brown, 1887, p. 56). Monk had learned the art of saltpeter and gunpowder making in an exposed settlement in the Greenbrier Valley of Virginia (Ranck, 1901, p. 113). There are numerous saltpeter caves situated in this valley. Brown (1887, p. 56) says, "the cave where 'Monk' leached the earth for saltpetre, and combined his dangerous mixture, is one of the well-known spots of historic interest in Madison County. Z. F. Smith (1895, p. 193) identified this as Payton Cave, which is now known as Adams Saltpeter Cave (George, 1983, p. 5), although another source (Anonymous, n. d.) says Great Saltpetre Cave was the most probable site. However, no historic data has been found to link Great Saltpetre as Monk's mine.

When Estill Station was established in February, 1780, Monk was separated from his wife, who was owned by another master at Fort Boonesborough. Periodically, Monk would journey the fifteen miles northward to the fort and visit her. It was on one of these visits in the spring of 1780 when Monk learned that powder supplies had again run short and the pioneers were uneasy about the situation (Ranck, 1901, p. 113).

Monk volunteered to manufacture the powder, and "to the relief of everybody he did it, and was highly regarded and favored for it" (Ranck, 1901, p. 113). Everyone was relieved the powder crisis was over and he received a nice pat on the back for a job well done. During the next few years he made powder for the garrisons of Estill Station and Fort Boonesborough.

The powder was probably manufactured inside the secure confines of the forts. Historical accounts say that Monk took the initiative and "volunteered" to make gunpowder at Boonesborough. This is probably just a tradition. In reality, Monk probably reported the powder shortage to his master, and James Estill issued the order for Monk to oversee the production of saltpeter and gunpowder. More research is needed on this subject.

Brown (1887, p. 57) says, "the powder made by 'Monk' was no doubt below the standard of even those rude days." However, no historic documentation has been found which states that powder made by Monk was in any way inferior to that made by his white counterparts. John Mason Brown may be repeating some family traditions connected with the Monk story. Brown's great uncle was the Lexington, Kentucky, saltpeter-gunpowder entrepreneur, Dr. Samuel Brown, whose Great Saltpetre Cave in Rockcastle County was one of the paramount saltpeter sites prior to and during the War of 1812.

#### BATTLE OF LITTLE MOUNTAIN

On March 19, 1782, Wyandotte Indian activity increased in the Boonesborough-Estill Station area. Captain James Estill led a detachment of twenty-five men to track down the raiding Indians. On March 20, Jennie Gass and Monk were outside the fort doing chores. A band of hostiles circled back and surrounded Estill Station. Gass was killed and scalped, the animals slaughtered, and Monk was taken prisoner. The Indians interrogated him as to how many men were inside the fort. Tradition says Monk craftily counted out forty on his fingers (Smith, 1895, p. 189), and indicated the men were busy making bullets in preparation for battle. The Indians, thinking the fort a superior match, decided to retreat, and took Monk with them. In actuality, only four wounded men along with the women and children were in the fort (Smith, 1895, p. 189). The Indians also did not know they were traveling in the same direction so as to intercept Estill's returning scout party.

On March 22, 1782, the two war parties of twenty-five each clashed at Little Mountain near present day Mount Sterling. During the three hour battle, Monk is reported to have yelled to James Estill, "Don't give way, Massa Jim; there's only about twenty-five of the redskins, and you can whip 'em!" With this inspiration the "Kentuckians fought on to the last" (Smith, 1895, p. 193). Monk escaped his captors early in the battle (Estill, 1846a) and circled around the fight. He was directed by his master to aid Lieutenant William Miller and his men, and was given charge of holding the horses. Miller and his men panicked and ran from the battle scene. James Estill was killed along with a third of his force, and the battle became known as Estill's Defeat.

After the confrontation, Monk crept over the battlefield and found James Berry of Harrodsburg. Berry had been injured in his thigh by a rifle ball and was unable to walk. Monk carried him back to Estill Station for medical treatment, an over-land distance of twenty-five miles (Smith, 1895, p. 194; Coleman, 1940, p. 8).

According to tradition, not long after this incident, Monk's new master, young Wallace Estill, gave him his freedom for heroic service exercised during the battle (Collins, 1874, p. 513; Smith, 1895, pp. 193-94). Take note that Wallace was only seven or eight years old when the battle took place (Estill, 1846b), and because of this age limitation could not have immediately given Monk his freedom. Wallace felt duty bound to give Monk a place to stay and to feed and clothe him for life (Smith, 1895, p. 193). Much of what Wallace heard about his father's defeat was related to him by Monk (Estill, 1846b).

#### CONCLUSION

Historians stemming from Collins and Collins (1874, p. 513) attribute Monk as

as the first person to make gunpowder in Kentucky. As shown, Daniel Boone and his men made the first gunpowder at Boonesborough before Monk's arrival at the fort. Monk is still an important historic figure because the records investigated show him to possess a four-fold Kentucky distinction of being: (1) the first to make saltpeter from a Kentucky cave; (2) the first black man to make gunpowder in that state; (3) the first freed slave; and (4) fathered the first black child (Jerry), born in Fort Boonesborough (Collins, 1874), p. 513; Yates in Smith, 1895, p. 194).

Black men are seldom remembered by name in the published annals of Kentucky history. It is uncommon to have the good fortune to connect a name (Monk) as a saltpeter-gunpowder maker, and better yet, to target the cave and approximate time it was worked. Brown (1887, pp. 56-57) says, "his chemical secret--how to make gunpowder--was never divulged by him, and insured him a consequence proportioned to the value of that indispensable article in a settlement of hunters and Indian fighters." Monk's unsung spelean importance stands side by side with the explorations of Mammoth Cave's Stephen Bishop.

#### ACKNOWLEDGMENTS

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### THREE KENTUCKY SPRINGS

Gary A. O'Dell

#### ROYAL SPRING, SCOTT COUNTY

In the summer of 1774 a party of eight men were surveying land along the North Elkhorn, marking off tracts to be granted to American veterans of the French and Indian wars. On the 7th of July two of the party, John Floyd and William Nash, split off temporarily in a speculative attempt to locate a good spring. Less than a mile up a sizable side branch of the Elkhorn they found exactly what they had sought. A thousand acres of land about the spring were surveyed for Floyd on July 20. Floyd's Spring, as they then called it, was found to "have a fall of thirteen feet and seven inches" and was "the largest . . . ever seen in the country, and forms a creek of itself."<sup>1</sup>

In the fall of 1775 Robert Patterson, who three years later would help establish the settlement of Lexington beside a different spring to the south, went with the McClelland family and six other men to the spring claim that had been arranged for Floyd. They called it then by the name of Royal Spring, so impressive was its flow and setting. There they built a cabin and thus spent the winter at McClelland's Station. In the early summer of 1776 John Floyd learned that John McClelland had settled on his claim "at the Big Spring." He then "went determined to drive him off, but on seeing his wife and those small children who must have been distressed, I sold it for 300 pounds."<sup>2</sup>

In that same summer the increasing threat of Indian attack led to the decision to fortify McClelland's Station. Among those helping to raise the blockhouse on the bluff above the spring were Robert Patterson, John Todd, and Simon Kenton. This was a strategic location, being then the only fort north of the Kentucky River.<sup>3</sup>

Supplies were desperately low in that summer of 1776, particularly powder and shot. In September, Patterson and six others set off to Pennsylvania to bring back the needed items, but were attacked by Indians. Patterson was badly wounded

and two others of his party were killed. George Rogers Clark and Gabriel Jones, who earlier had set out from Harrodsburg on a similar mission, were more successful, although they also were attacked. They managed to hide the powder and make their way to the fort at Royal Spring in December; not finding enough men there to retrieve the powder, Clark traveled on to Harrodsburg. After his departure the men at McClelland's Station decided to go after the powder themselves, but were attacked by Indians on Christmas day. With two killed and two captured, they retreated in defeat back to McClelland's. The next attack came on the 29th of December, and was made against the fort itself by a group of forty or fifty Indians led by Chief Pluggy. John McClelland and Charles White were wounded, and both died within a few days. With these disheartening events the year 1776 closed, and on the 30th of January the fort at Royal Spring was abandoned.<sup>4</sup>

It was not until 1786 that the land by the spring was again settled, this time by a party led by Elijah Craig, who three years officially purchased the tract containing the spring and the stream that flowed from it to the North Elkhorn. A town began to grow about the spring, which kept the inhabitants well-supplied with water and also provided power to operate industry. Turned by the flow from Royal Spring were the first paper mill in the region and a fulling mill. Water from the spring also supplied a distillery operated by the Reverend Craig that has sometimes been credited with producing the first bourbon whiskey in Kentucky.<sup>5</sup>

Water was carried daily from the "Big Spring," as it came to be called by the inhabitants; those bringing water up brought three buckets, one for each hand and one to balance atop the head. The half-mile stream from the spring was dammed in several locations, and a bridge, still standing, of rock and earth was erected to span the watercourse. The scenic locale in the midst of the small community became popular for recreation and social events such as baptisms.<sup>6</sup>

William H. Perrin wrote in 1882 that "Some of the cavernous spaces in the limestones near Lexington are supposed to have subterranean inter-communication with [Georgetown] . . . since it is believed by some that substances thrown in at Lexington have made their appearance in the springs at Georgetown." The studies made in recent years under the direction of Dr. John Thraillkill of the University of Kentucky's Department of Geology have shown that this is indeed so. The course of Cane Run in northern Fayette County is normally dry for much of its initial length; dye traces have shown that the flow is diverted underground through numerous inlets to the spring at Georgetown.<sup>7</sup>

A municipal waterworks was constructed at Georgetown in 1889, using the spring as its source of supply. Today, the community is still faithfully served by the same spring that has played such a prominent part in its history.<sup>8</sup>

#### McCONNELL'S SPRING, FAYETTE COUNTY

Tradition has long held that the city of Lexington received its name several years before any settlement was made. In April, 1775, a party under the leadership of William McConnell (who had been in Kentucky the previous year) came to the Kentucky interior for the purpose of land selection and "improvement" to qualify for land grants from the Virginia colony. They traveled by canoe from the Ohio River down the Kentucky River and had reached the forks of Elkhorn by May. The company traveled up the North Fork of the Elkhorn, camping at McCracken's Run, and built several cabins on various branches of the stream. They then went southward to the Middle Fork, later known as the Town Branch, and established a camp at a sinking spring. This spring was to be included in William McConnell's claim and to be called McConnell's Spring. During the time that the company remained at that location, news came to them of the opening battle of the Revolution fought at Lexington, Massachusetts. To commemorate this American victory, the name "Lexington" was chosen to designate that place in the Kentucky wilderness.

Four years later, in April, 1779, the blockhouse of Lexington was raised at a spring on the waters of Town Branch.

Uncertainty shrouds the identity of the exact spring at which the news of the momentous battle was received. The Bluegrass region abounds with hundreds of springs which scarcely can be distinguished from one another without some additional referent. In the few square miles adjacent to the Lexington fort were several springs of copious flow in addition to the spring at the site of the blockhouse. The accounts seem to agree that the camp was not at this latter spring, but rather one located some distance away.

Adding to the confusion has been the similarity of names of several of the first settlers. The encampment at which the naming took place was on land that was claimed by William McConnell. However, in the company were no less than three related McConnells, all of whom made improvements in the area. The site came to be called simply "McConnell's camp" or "McConnell's Station," but there were actually two McConnell's Stations.

For over a century the famed spring was generally designated to be near the former McConnell's Station on the original improvement of Francis McConnell; this later became known as the Royle or Royal Spring (not to be confused with the Royal Spring at Georgetown!). Generations of historians perpetuated this belief with embellished retellings of the episode. This location was apparently first seriously questioned by George W. Ranck in 1879, one of those who had appeared previously in print supporting the Royle Spring site. While investigating a second spring on land that had been settled by William McConnell, he was struck and killed by a train.

The strong circumstantial evidence pointing to (William) McConnell's Spring as the more likely location was first published in 1975 in a slim volume by Carolyn M. Wooley, The Founding of Lexington: 1775-1776. Favoring this spring is its location on the claim of William McConnell as opposed to Francis' and that the historic location matches far more closely in terms of stated distance from the Lexington fort. There is additional substantiation, enough so that this writer is in agreement.<sup>9</sup>

Even though McConnell's Spring was not considered to be the historic site, the abundant flow of its underground waters assured it a solid place in Lexington history. It is reported that the stream issuing from this spring powered a large powder mill during the period of the 1812 war. The Reverend Spencer Cooper did manufacture gunpowder at this location in the early 19th century, but as he did not come into possession of the property until 1818 there may have been an earlier powdermaker on the site. In 1879 the remains of this mill were reported to still be visible.<sup>10</sup>

In 1858 the firm of Headley and Farra built a distillery on the Old Frankfort Pike and piped water from the spring through a five-inch pipe. This distillery operated until about 1873, when it was destroyed by fire and replaced by the Gilbert Company's Blue Grass Pork House. The spring at this time was owned by John N. Wilson and had come to be generally known as "Wilson's Spring."<sup>11</sup>

As well-known as the Wilson Spring had become, it was to rise to even greater prominence in the storm of controversy that preceded the building of the city waterworks in 1884. Many possible water sources had been suggested to supply the city, with the greatest attention given to the numerous large springs that lay within or near the city limits. "Wilson's Spring" was the site most often suggested. An investigation was to be made of this spring and other possible sources by experts. As often occurs when proposed large expenditures are involved, politics dominated the situation and the citizens of that century proved that people of any era can be equally narrow-minded and self-serving.

So it was in that summer of 1879 when the two leading newspapers of the city squared off on opposing sides of the issue, each bringing forth article after article laced with heavy sarcasm and dripping with venomous innuendo, so heated had the

waterworks controversy become. The Lexington Daily Transcript supported the construction of a modern waterworks, while the editors of the venerable Kentucky Gazette were strongly opposed to any change or expenditure of public funds, holding that "Waterworks are a luxury for towns more wealthy than Lexington."<sup>12</sup>

The editorial dispute warmed markedly in July. On the 15th of that month an engineer from the Holley Water Works of New York visited the Wilson's Spring to make an estimate of its potential. On the day of the inspection, the Transcript noted that Wilson's Spring was

a basin of water about one hundred feet in depth, and containing a great quantity of water, while a continual stream wells up. Sometimes hundreds of large and beautiful fish may be seen on it, and then they disappear again for weeks. The water is pure and clear, and just such as the citizens of Lexington would delight to have in their homes, and places of business. It is as cold as ice. The center of the spring has been sounded for hundreds of feet, and no bottom ever reached. . . . All who have seen this wonderful spring agree that it is the outlet of a subterranean lake or river, and that an inexhaustible supply of water may be obtained from it.

The next day the paper reported that the engineer had ascertained that Wilson's would indeed be suitable and provided his estimate of the cost of a city waterworks using this source.<sup>13</sup>

The rival Gazette had a markedly differing opinion of the spring and expressed it on July 19th in a biting rebuttal:

A good many cock and bull stories have been told about [Wilson's] spring. . . . One person asserted that he had sounded it to the depth of 700 feet and failed to reach bottom, and it was not impossible to find a man who believed that it was the deepest hole in Kentucky. . . . Two friends of ours, of practical turn of mind, visited Wilson's spring on Thursday afternoon July 18 and sounded its mysterious depths, and will it be believed, they did not even find 70 feet of water. With pole, and reel, and lead, and one hundred fifty feet of line, they approached its margin and sounded every square foot of the pool, and all the depth they could find . . . scarcely twelve feet, and from the pool issued a little rill scarcely sufficient to cleanse the filth out of the gutters on Broadway.<sup>14</sup>

The Gazette, not yet satisfied, took another dig at Wilson's Spring on the 23rd, reporting that a Barney Shiddell had also plumbed the spring, more than fifty years earlier, and had found only fifteen feet of depth in his soundings.<sup>15</sup>

Despite the diligent efforts of the Gazette to the contrary, Lexington did ultimately construct a waterworks. The source selected, however, was not Wilson's or any other spring, but rather a man-made reservoir and later, the Kentucky River.

The belief that John Wilson's spring was virtually bottomless was common in the nineteenth century; it is a fairly large spring, welling up in a broad pool. The owner had himself reported having "sunk a fishtrap sixty feet," and a surveying party from the Louisville, Cincinnati and Lexington Railroad were said to have lost long poles into the deep pool in an attempt to probe its depths. And, for one Mr. A. J. Oots, a flatiron with 400 feet of line attached proved, as reported, insufficient to reach the bottom. An attempt by this writer in 1980 to equal the feat of Mr. Oots with a weighted line, instead, like those gentlemen "of a practical turn of mind" could find no more than twelve feet of depth.<sup>16</sup>

In that same year of 1879 James E. Pepper and Company purchased the Gilbert establishment and began making whiskey. The Henry Clay Distillery, as it was known, used the water from the spring, supplied at a rate of up to 700 gallons per minute by two pumps. This distillery continued to operate for nearly a century, and was finally destroyed in a 1978 fire.<sup>17</sup>

# OLD PEPPER WHISKY,

ESTABLISHED 1780,

DISTILLED ONLY BY JAS. E. PEPPER & CO., Lexington. Ky..

*Under the same formula for more than 100 years,*

IS ABSOLUTELY THE PUREST AND BEST IN THE WORLD.

- - TRY IT - -

*And beware of fraudulent imitations and refilled bottles. Jas. E. Pepper is the only one bearing the name of Pepper who has been engaged in the Distilling business, in this country, for more than twenty-five years. All genuine barrels, cases and bottles (when unbroken across the stopper) bear this signature,*



Water from the McConnell's Spring was used in the manufacture of the James E. Pepper company's whiskey.

McConnell's Spring, today on the property of the Central Rock Company, forms a segment of a rather extensive groundwater network which in recent years has been partially traced. Downstream from the spring the water follows the surface for about a hundred feet, sinking beneath a low ledge. The stream then follows an underground route for 200 feet, visible briefly as a pool in a small but deep sink atop a rise, and resurges near the base of a limestone bluff on the opposite side. In this second appearance the spring boils out of the ground so vigorously that even under normal weather conditions the upflow creates a turbulent swell above the surface of the pool. In wet weather it nearly geysers. The stream from this point flows another 300 feet and again vanishes with a rush through an impenetrable tangle of trash, wire, and old truck tires in a deep sink. The waters of McConnell's Spring are next seen on the surface a half-mile distant, issuing from the mouth of Preston's Spring Cave. They continue uneventfully from here to mingle with Wolf Run to the west.

The origin of the McConnell's Spring flow has long been a mystery. Many of the early inhabitants of Lexington believed that the city was underlain by a vast underground lake that gave rise to the numerous springs. Others, more observant, noted that "It has an underground connection with the sink at Headley & Peck's Distillery, and when the distillery is running the water to the spring becomes so foul that neither man nor beast . . . could drink it." More recent and less odious water tracing studies have shown that at least a portion of the flow comes from the waters sinking at the Big Elm Golf Course, well over a mile south; this is the site of the former Peck distillery.<sup>18</sup>

## MAXWELL SPRINGS, FAYETTE COUNTY

There is now no surface trace of the old Maxwell Springs, but for more than a century they were one of the landmarks of Kentucky's Bluegrass region. Today thousands of students at the University of Kentucky daily tread over their buried locations, unaware of the important role played by these springs in the everyday life of the early inhabitants of Lexington.

John Maxwell, for whom the springs are named, was one of the original founders of the city of Lexington. Born in Scotland, Maxwell came to the Kentucky wilderness

in 1774, before any settlements had yet been established. In 1776 he assisted Robert Patterson and others in building two rough cabins in the Lexington area. In a trading arrangement with Patterson, Maxwell obtained an excellent tract adjacent to the future townsite and containing several fine springs.<sup>19</sup>

There were originally at least three springs feeding an attractive west-flowing stream. The initial spring was located near present Rose Street, down the slope from the residence of the university president; another was two hundred yards west, near Euclid Avenue; and the largest was on the north side of Euclid to the rear of Patterson Hall, almost directly opposite the second spring. In the frontier days of Lexington the major spring was called the Sinking Spring, which "gushing from a hillside, runs a distance of two hundred yards or so, never going dry, to disappear in a natural well in the ground. In the course of several hundred yards it reappears in a group of gently bubbling springs, a stone's throw from one to the other." The area about the springs was a wilderness of trees, cane, and ferns, and even as late as 1812 was described as a place where pawpaw and grapevine thickly grew, with deer plentiful in the woods. The springs were evidently a favored campground for Indians, for it was reported that artifacts were still abundant at the locale a century after the town was settled.<sup>20</sup>

Maxwell and his wife Sarah were the first to be married at the blockhouse in Lexington, and built their cabin near the largest spring. Here he also constructed a stone springhouse, directing the flow of the spring into a rock basin for easier access. Maxwell's original holding at the springs had encompassed a thousand acres, but before his death in 1819 the greater part of this land had passed into other hands. Fourteen acres around the easternmost spring, called Maxwell Place, had been given to his son James, but only a year after his father's death the younger Maxwell sold that parcel to satisfy a debt of one hundred fifty dollars. The Maxwell's daughter Sarah inherited from her parents the remaining portion that included the other springs. During Sarah's ownership a bottling works was established and bottled water from the springs achieved widespread fame.<sup>21</sup>

From the earliest days the Maxwell Springs, as they became known, were a popular gathering place for the local inhabitants due to the cold, clean, plentiful water and the aesthetic appeal of the locale. Picnics, parades, political rallies; nearly any occasion was sufficient for the citizens to celebrate at Maxwell Springs. The Lexington Light Infantry was organized in 1789 and used the area by the springs as their parade ground for many years. When news came of the annexation of the Louisiana territory in 1804, a grand celebration was held on the tract with a barbeque; salutes were fired by four military companies, and endless toasts were drunk, each more imaginative than the preceding as progressive inebriation stimulated flowery oration. The most time-honored tradition at Maxwell Springs was the annual Fourth of July celebration. Many of the most renowned figures in Kentucky on one occasion or another came to speak to a gathering at these springs.<sup>22</sup>

The Kentucky Racing Association, one of the first organized horse racing efforts, used the Maxwell Springs property for many of their racing meets until about 1840, when that association was disbanded. In 1850 a more stable organization was formed with the intent to purchase or otherwise acquire property upon which a meet could be held in the following autumn. The committee charged with acquisition recommended the Maxwell Spring tract to the Board of Directors; a parcel totaling twenty-four and a half acres could be obtained from Sarah Winslow for the sum of \$5,000. The organization thus created was called the Maxwell Spring Company and held meets on the beautiful acreage for many years. Shortly after its formation, an agreement was made with the Kentucky Agricultural and Mechanical Association to allow provisional use of the Maxwell Springs property for annual exhibitions. Many improvements were subsequently made, including the erection of a large amphitheatre and other buildings, and the property was landscaped with plantings of trees and shrubs. A series of fairs were held and greatly enjoyed until the advent of the Civil War.<sup>23</sup>

In the fall of 1861 the buildings and grounds were occupied by Federal troops, with thousands of pieces of armament there in storage preparatory to campaigns in

Kentucky and Tennessee. As the season grew colder and the absence of firewood became critical, when a request to the quartermaster for fuel was declined, the commanding officer gave the order for all the trees in the woodlands of Maxwell Springs to be felled. By the next day the forest had vanished. In December the amphitheatre was gutted by fire, and soon all other buildings save the commandant's residence had been torn down. This latter building was used as a hospital.<sup>24</sup>

After the war, a lien and mortgage were enforced against the heavily indebted Association. The property was sold in 1870 to the city as the site for a city park in order to preserve the historic grounds from development. Willows, maples, and evergreens were planted, but with insufficient funds to make further improvements, a high fence was erected and the property remained idle. When a location was sought for the Agricultural and Mechanical College, recently separated from the Kentucky University, the park acreage was offered by the city of Lexington. Thus the Maxwell Springs came to form the core of the present University of Kentucky.<sup>25</sup>



The City Park in 1877, showing the two southernmost Maxwell Springs and the small lake fed by them. Note that on this map, Mulberry and Winslow streets are now Limestone Street and Euclid Avenue.

The spring-fed watercourse winding peacefully beneath the trees to a small lake was a pleasant area for relaxation and activities for the students. During the summer months swimming was popular, replaced by ice-skating in the colder months. For a number of years, students cut and sold ice from the lake.<sup>26</sup>

As the landscape was developed and rearranged, the springs eventually disappeared. The large spring north of Euclid, over which had been built a stone dairy house with crocks of milk and cream cooled by the springwaters, was filled in near the beginning of the twentieth century. In 1929 the springs on campus still poured forth into the placid stream, but by the middle of the next decade the continued building on the University grounds had buried the historic springs.<sup>27</sup>

No surface trace remains of the site of which Henry Clay reportedly said, "No man can call himself a true Kentuckian who has not watered his horse at Maxwell Springs."<sup>28</sup>

#### FOOTNOTES

1. Ann Bolton Bevins, The Royal Spring of Georgetown, Kentucky (Georgetown, Ky.: Scott County Historical Society, 1970), 7-10.
2. Charlotte R. Conover, Concerning the Forefathers (New York, 1902), 141; Bevins, Royal Spring, 14; Draper Manuscripts 16J44.
3. Lewis Collins, Historical Sketches of Kentucky (Cincinnati, 1847), 237-38, 509; Bevins, Royal Spring, 18-22.
4. Ibid.
5. Bevins, Royal Spring, 25-31.
6. Ann Bolton Bevins, The Big Spring of Georgetown, Kentucky.
7. W. H. Perrin, History of Fayette County, Kentucky (1882), 32; Lawrence E. Spangler, Karst Hydrogeology of Northern Fayette and Southern Scott Counties, Kentucky (MS thesis, U. Ky., 1980).
8. Bevins, Big Spring.
9. Carolyn M. Wooley, The Founding of Lexington: 1775-1776 (Lexington, 1975).
10. Fayette County Deed Book R, p. 50, dated January 2, 1818, and recording boundaries of tract purchased by Spencer Cooper; Lexington Herald, September 15, 1901; Lexington Daily Transcript, July 15, 1879.
11. Perrin, History of Fayette County, 206.
12. "Mark-Twain-Scant," Kentucky Gazette, July 19, 1879.
13. Lexington Daily Transcript, July 15, 16, 1879.
14. Kentucky Gazette, July 19, 1879.
15. "Wilson's Spring," Ibid., July 23, 1879.
16. Perrin, History of Fayette County, 206-7.
17. Ibid., 207.
18. Kentucky Gazette, July 19, 1879; Lawrence E. Spangler, 1987, personal communication.
19. Wooley, The Founding of Lexington, 24-28.
20. M. A. Scovell, "Maxwell Springs," Lexington Herald, December 19, 1915.
21. Ibid.; Elizabeth M. Simpson, Bluegrass Houses and Their Traditions (1932), 46-47.
22. Perrin, History of Fayette County, 403, 442.
23. Ibid., 120-21; G. W. Ranck, History of Lexington, Kentucky (Cincinnati, 1872), 277.
24. Scovell, "Maxwell Springs."
25. Ibid.
26. The Kentuckian (1938 yearbook, University of Kentucky).
27. Scovell, "Maxwell Springs"; "Buildings and Grounds: University of Kentucky" (campus maps 1920, 1929, 1934, 1937).
28. Scovell, "Maxwell Springs."



JOHANN GEORG KOHL ON MAMMOTH CAVE, 1857

James Hedges

"When one makes up his mind to travel to America, when he wants to see what America really has to offer, there are two places which must be seen: One is Niagara Falls, and the other is Mammoth Cave." So begins Johann Georg Kohl's chapter on Mammoth Cave in his 1857 travelogue, Reisen im Nordwesten der Vereinigten Staaten (New York, Appleton, 534 pages). Kohl also visited and described Fountain and Carver's caves in Minnesota.

The circumstances of Kohl's life and of his book are described by Frederic Trautmann in a 1984 article in Minnesota History (Volume 49, pages 126-39). The Reisen is an important pre-Civil War historical source, although it is rarely cited and apparently is little known today. Kohl was an acute observer who wrote in great detail. His German, however, is simple and flowing, a pleasure to read.

Kohl devoted fifteen pages to Mammoth Cave. His description seems never to have been translated and reprinted in the JSH. If anyone would like to prepare a translation, please speak up! I can provide a photocopy, if none other is available to you.

