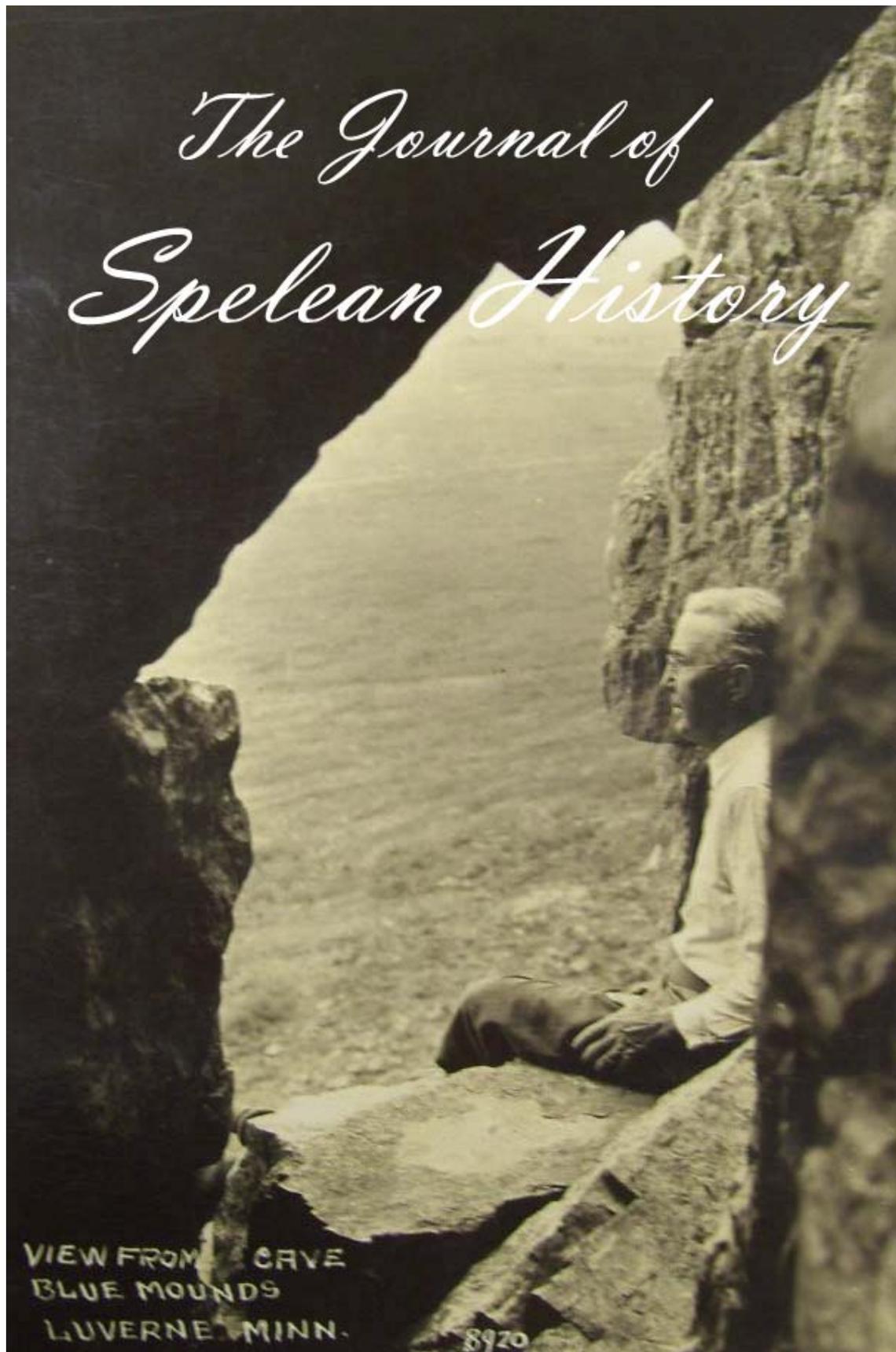


*The Journal of  
Spelean History*



July – December 2008

Vol. 42, No. 2, Issue 134

# *The Journal of Spelean History*

Official Publication  
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## The Association

The American Spelean History Association (ASHA) is an Internal Organization of the National Speleological Society and exists for the study, dissemination, and interpretation of spelean history, and related purposes. All persons who are interested in these goals are cordially invited to become members. Dues are \$2 per issue of the *Journal of Spelean History*. Dues can be paid for up to 20 issues (\$40). Checks should be made payable to “ASHA” and mailed to the treasurer.

## The Journal

*The Journal of Spelean History* (JSH) is the Association’s publication and is mailed to all members. JSH includes articles covering a wide variety of topics relating to man’s use of caves, including historical cave explorations, saltpeter and other mineral extraction, and show cave development. Members are invited to contribute material and to comment on published material. ASHA assumes no responsibility for statements made by contributors.

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Front Cover: Postcard (no postmark) of a cave in the quartzite outcrops of Blue Mounds, near Luverne, Minnesota. Until the discovery of this postcard in the Gordon Smith Collection, National Cave Museum, no caves had been historically documented in southwestern Minnesota. Reprinted courtesy of Gordon Smith. See the article by Gary O'Dell on using historical archives to discover forgotten caves, in this issue.

## THREE NINETEENTH CENTURY ACCOUNTS OF HOWE CAVERNS

Donald B. Ball

The early history of Howe Caverns remains obscure and—not unexpectedly—clouded in some degree of inconsistency. As summarized by Cudmore (1990; see also Clymer 1937), it appears that the cave was known to area Native Americans although there is no indication that it was utilized for habitation, mineral extraction, burial, or ceremonial purposes. While it is possible that Jonathan Schmul (or Shmull), an area resident, “discovered” the cave and took refuge there in the 1770’s, it should be noted that there are several other caves in the vicinity which may have served such a purpose. There is considerably less doubt that Lester Howe, an area farmer, discovered a “blowing cave” on May 22, 1842, and in February 1843 purchased the property for \$100 from Henry Wetsel, a neighbor. Later that same year, Howe built the first cave house hotel near the mouth of the cave and began to offer guided tours to the paying public.

When his hotel burned in 1847, Howe rebuilt and placed the new structure directly above the mouth of the cave to take rare advantage of the natural air conditioning which it afforded. As an early publicity stunt, on September 27, 1854, Harriet Elgiva Howe, his daughter, wed Hiram Shipman Dewey in a loft called the Bridal Chamber situated just within the caverns’ entrance (cf. Howes 1996). The second cave hotel burned in January 1872. Shortly thereafter, he sold partial interest in the property to attorney and railroad magnate Joseph H. Ramsey and two other partners to finance the construction of a third hotel (Figure 1). About 1884, he sold all rights to the property to Ramsey who would later focus on developing the land as a limestone quarry, activities which would eventually result in the destruction of about 300 feet of the entry to the cave. Unhappy with having sold “his” cave, Howe reportedly began a search for an even more impressive cave in the area and later claimed that he had found one, but without divulging its location (Downey 1979a). The precise date at which Howe’s Cave was closed to the public remains unclear in light of the 1885 release of a booklet entitled *A Summer Home: The Pavilion Hotel, Howe’s Cave, Schoharie County, N.Y.* (Howes Cave Association 1885) and a subsequent guidebook entitled *Howes Cave* (Stoddard 1889). However, there is little doubt that the cave was closed to tours by 1890 and would remain so until May 27, 1929, when it was reopened to the public as Howe Caverns under corporate ownership (Holt 1993).

During its early “heyday” under Howe’s ownership, the cave was second only to Niagara Falls as a frequent tourist destination. In addition to descriptions of its natural wonders which appeared in various popular publications (discussed below), it also received at least passing mention in tour guides of the era (e.g., Anonymous 1873: 75) and at least one detailed guide book (Anonymous 1865) specifically concerned with the geology and features of the cave appeared during this time. In a summary of “Donations to the State Cabinet in 1862,” the Regents of the University of the State of New-York (1863: Appendix A, pg. 13) reported “Mr. HOWE, of Schoharie county, N.Y.—Two large Stalactites, from Howe’s Cave,” a gift likely intended to afford a small degree of publicity for the cave. Tourism at the cave increased after 1865 with the construction of the Albany and Susquehanna Railroad (Holt 1993: 61; see also Boyd 1869: 62; 1872: 1,039) and a small settlement was established nearby, appropriately called Howe’s Cave. Steinwehr (1874: 413) noted “Howe’s Cave, p. o. in Schoharie co., N. Y.” suggesting that a post office was opened soon after as a convenience to both guests and local residents.



**Figure 1. “The Cave House” at Howe’s Cave (reproduced from Roscoe 1882: 407).**

The three early accounts of Howe Caverns (Anonymous 1851a; 1862; Colt 1871) reprinted herein are of note from several perspectives. Beyond the informative (albeit sometimes exaggerated, particularly Anonymous 1851a) descriptive remarks they offer concerning the cave, discussions of the cave clothing offered to guests, Mr. Howe serenading tourists with his violin deep in the cave, conducting tours with the passageways flooded, allowing visitors to remove geological specimens at will, and the nature of the meals served at his cave hotel are simultaneously delightful vignettes and insightful commentaries on the daily operation of a show cave in an era long past. Of these accounts, Anonymous (1851a) was also published in two other magazines in 1851 (Anonymous 1851b; 1851c). Downey (1979b: 73) identified one Simeon North as the author of this article, an attribution subsequently questioned by Shaw (1993). The original spelling and punctuation has been retained in each article.

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### **VISIT TO HOWE’S CAVE (Anonymous 1851a)**

[Alluding to the following article from Sharpe’s Magazine, the New York Evening Post thus speaks:]

Few of our readers, we fancy, are aware that, within twenty miles of Albany, there is a vast cave, far exceeding, in its extent and novelty, the Mammoth Cave of Kentucky, which has been explored over eleven miles; is traversed by a small river, from one end to the other; which contains a deep lake, nearly a mile square, and an amphitheatre of equal dimensions, over which hangs a dome, the height of which has never yet been calculated, but which rockets of the largest size have entirely failed to make visible or to reach.

We have ourselves seen an intelligent gentleman of this city, whom we know personally, and who has visited the cave himself. He confirms the report made by these English gentlemen, and

states that nothing can be more startling and impressive than the revelations which were made to him during his excursion. He has seen the great cave of Kentucky, which he thinks possesses a far inferior interest in every point of view.

[Beginning of the account] ON the morning of August 7th, 1850, I was one of a party of eight gentlemen who rode over from Sharon Springs to Cobleskill, to visit Howe's Cave. The region through which our road lay presented few features of interest beyond the fact that, as we approached the end of our ride, we noticed that the fields were indented with frequent circular holes, partly filled up with stones and soil. The fancy was expressed that the country had here suffered an attack similar to the small-pox, and had come off with a pitted face. A rude gate-way, with "Howe's Cave" painted on its front, drew us aside from the main road, and in a few minutes we alighted at the house of the great cave-explorer. We found him a pleasant, well-informed Yankee, familiar with the leading facts of geology, proud even to idolatry of his subterranean property, and with a tinge of bat-and-owliness in his visage, which betrayed that he was more at home in doing the hospitalities of his cave than those of his hotel. We had left Sharon before breakfast, and our first item of preparation for the day's work was to fortify ourselves internally with a heterogeneous three-meals-in-one, which opened with coffee and cucumbers, and ended with blackberries, cream-cake, and custard-pie. Howe next threw open a wardrobe containing jackets and trowsers of coarse sacking, made so as to button close to the person. They had already seen much underground service, and were thickly plastered with Stygian mud. We now began to catch the spirit of our adventure, and, throwing aside our broadcloth and linen, we plunged into the overhauls. A cheap leathern skull-cap finished the uniform, and but for a sprinkling of spectacles and pallor, we might have been easily mistaken for a platoon of jolly hod-carriers. It was a matter of lament that we could not have then stood for a daguerreotype, and thus furnished our wives and sweethearts with a new study on the "Philosophy of Clothes."

We were ready now to move, and each armed himself with a tin lamp of the petticoat species, and half a dozen Lucifers, which he was cautioned to keep dry. The mouth of the grotto is not over fifty paces from the house. Eight years ago, when it was first discovered, the opening was so small that visitors were forced to forego the use of their legs, and for a considerable distance to imitate the locomotion of Eve's seducer. Since then, the entrance has been so enlarged by blasting and removing the black limestone, that one walks in erect. The first feeling is that of exhilaration. It is like entering a new world without undergoing the pangs of death. A cool and delicious oxygen is welcomed to the lungs. The sound of a distant water-fall is elaborated into exquisite music by the echoing arches. As you push forward, the light of your lamp seems to be thrown back upon you by a wall of impenetrable blackness. With the solid rock on either side of you, above and beneath, your desire to know what lies in front soon rises to a delightful eagerness for discovery that would neither stop to see nor fancy a danger. The general features of the cave are soon understood. By some convulsion of nature, which happened far back in the waste of unhistoried centuries, the rocky hills drained by the Cobleskill were rended and fissured in many places. One of these fissures now forms what is called Howe's Cave. A stream of water, often swollen to a torrent, has been rushing through its entire length for uncounted ages, wearing it deeper and broader; while the lime-water, dropping through its broken roof, has displayed an amazing ingenuity and patience in the slow work of forming stalactites and stalagmites. In dry seasons, the first three miles of the cavern are traversed with comparative ease. A foot-path has been made alongside the stream, which is crossed, when necessary, on plank-bridges, or by leaping. Even ladies not unfrequently leave their autographs eight miles from the entrance, without meeting with alarm or over-fatigue.

Our visit to the cave was under circumstances less propitious. A heavy rain had fallen the night before, and a second shower commenced at the time of our entrance, which continued from

two to three hours. It was remarked by Howe that the cave stream was unusually high. In several places it had already overflowed the path. Especially was this observable in a narrow passage called the Harlem Tunnel, about a mile from the entrance. Yet this caused no uneasiness in any one of our party, and if our guide was disturbed, he kept his alarm to himself. Most likely he felt no alarm; for the moment we parted from the daylight, he appeared a new and different creature. Out of his cave he was awkward and uneasy, like a sailor on pavements; but no sooner were its rocky walls about him than he straightened into a commanding presence, and gave us full assurance that he was at home. The sound of the unseen cataract came to his ears like that of the trumpet to the war-steed. With light limbs and unhesitating step, he led the way to the remote regions of this inner world.

A mile or so beyond the Tunnel brought us to a spot where the loose rocks have dammed the stream, and formed a deep, long pond, which has been appropriately named the Stygian Lake. Our guide now put on a new character. "Portitor ille, Charon." Seizing his ferry-pole, he sprang into a low, long, slimy boat (Figure 2), and beckoned us to follow. We could now help ourselves to a reason why his chin was so badly neglected; why his eyes glared so strangely in the dismal lamp-light; why his back was so partial to a sordid garment. It was that he might personate the Stygian ferryman, so as to fill out the description of Virgil:

[pg. 277] Sant lumina flamma:  
Sordidus ex humeris modo dependet amictus.

The infernal craft parted from its moorings with six hearty, flesh-eating ghosts for passengers. Six I say, for already two of our number, having either sated their curiosity or exhausted their courage, had slyly slipped away and returned. We stood erect in the boat, as it moved over the sluggish waters. Our Charon soon lighted a flambeau, and, holding it aloft, disclosed a rapid succession of sights which at once amazed and delighted. The cavern was here spanned with roof-work of every conceivable pattern, and the whole was studded with countless stalactites, each differing from another in size or form:

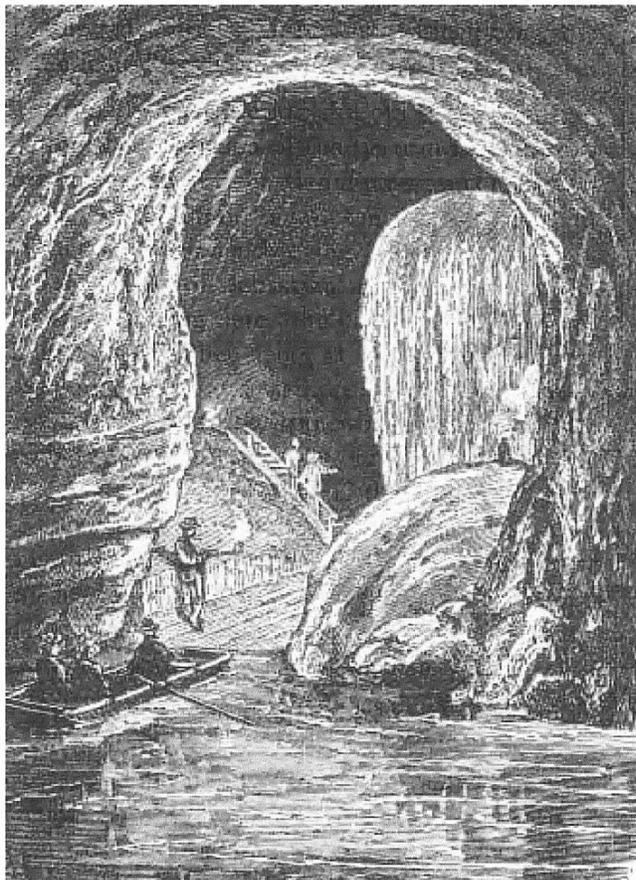
From its curved roof the mountain's frozen tears,  
Like snow, or silver, or long diamond spires,  
Hang downward, raining forth a doubtful light.

Now we passed beneath a flat ceiling, so low that we could grasp the pendent limicles with the hand. Now there opened in the roof so high an arch that the flame of a torch vainly strove to reach its key-stone. Here the limicles were round and ribbed, like the rattlesnake's tail; there they had shaped themselves into graceful festoons, mocking the upholsterer's skill. Even animate creatures were imitated with startling accuracy. Infant crocodiles were weeping calcareous tears, and mute birds were roosting on the branches of trees that grew downward, like shadows thrown from the steep bank of a river. On this side stood Lot's wife, petrified in the act of taking the prohibited retrospect. Yonder, the Phrygian Niobe, "whom, like clasping ivy, a stony shroud overgrew, moistened the rocks with her ceaseless weeping."

The Stygian Lake: may be half a mile in length, and is soon crossed. Beyond it stretches an immense chamber, called Musical Hall. Its roof is vaulted and groined, like that of a cathedral. Yet no cathedral was ever constructed with the power of playing such fantastic tricks with sound. Our Protean guide here became ambitious, and, like Salmoneus of old, undertook to rival the thunders of Jupiter. His firmament was comparatively narrow, and the fulminating machinery somewhat primitive, but there was nothing contemptible in the reports of his thunderbolts. A heavy plank he raised on end, and, throwing his weight upon it, brought it in sudden contact with the rocky floor. The nearest arches at once caught up the sound, split it into ten thousand fragments, multiplied

them into each other until they became a deafening peal, cuffed them this way and then the other way, until they deepened into the angry bellow of an earthquake, and sent them through the long-drawn aisles of immense apartments, until every rock in those miles of cavern was gifted with a voice of thunder. We stood still with astonishment. We had not a syllable to utter; our small voices were quenched within us by the oceans of thunder that submerged us. If Jupiter Tonans could have found any fault with the report of that fulminating plank, his idea of good thunder must have been different from ours.

**Figure 2. Crystal Lake, Howe's Cave (reproduced from Roscoe 1882: 409).**



A second experiment in acoustics was not less brilliant. Howe had brought a mysterious box under his arm, shaped like a baby's coffin, from which he now took out a violin, and, resigning the insignia of Jove, he stepped abruptly into the character of Ole Bull. Howe, the thunderer, had petrified us into speechlessness, converted us into momentary fossils:—but Howe, the fiddler, reëxecuted the old Orphean feat, and made the human rocks caper about him, in wild excitement. His music went to the heels quicker than champagne ever went to the head. It thrilled along the tendon Achilles like electric influence. The chattering of those grave geologists up and down that sepulchral hall, by the dim, weird light of those six petticoat-lamps—“*pars magna fui*”—was a sight to see! And the music! that was an audience never to be forgotten. By the magic power of the place, the humble instrument was transformed into something divine. It was no longer constructed of wood, and glue, and catgut. It was now a thing of soul, and living nerve, and quick intelligence. Close your eyes, and the player was no longer Lester Howe, the cavern guide, but Ole Bull, the wild and wondrous Norwegian. More than this: the ear was not misled with the skill of a single artist, but a thousand Ole Bulls woke the melody of a thousand instruments. Ole Bull made a mistake when he undertook to dramatize the Falls of Niagara with his fiddle bow. He should have tried his hand at Howe's Cave. Here was a fit subject within the grasp of his genius; and the very place was one that would have exalted,

reduplicated, idealized his genius. I can imagine nothing more sublime and beautiful in harmony than a concert in Musical Hall by the mighty artist of Norway.

But we have still four miles of hard walking before us, and we must not tarry. Soon after leaving the boat we are confronted by a pile of immense angular rocks, thrown loosely together, and rising upward of a hundred feet. This difficult pass is inevitable. We can neither go beneath it nor around it. We are obliged to pick our upward way cautiously and slowly. Every step is a study; every foot of advance is a conquest. For the rocks are wet and slippery. They are intersticed with yawning chasms. A mis-step might end in the splash of a bruised body deep down where the sullen waters complain in the dark. It was a picturesque sight to see our party toiling in a line over these weary rocks, each surrounded by his little space of lamp-light. Seldom was a word spoken. Now and then a loose rock would slip from its perch, and, after bounding from cliff to cliff, with a succession of harsh grating thunders, would find its wet grave in the current below. We began now to appreciate the greatness of our undertaking. The excitement of the first three miles had evaporated; an enlarged conception of the grandeur of the cavern superadded itself to our sense of weariness, and made us solemn and mute. It was, in one sense, a Sabbath-day's journey—that solemn climbing of the "Rocky Mountains!" The sermon preached by the stones, and the compact darkness, and the funeral waters, told in the words, but with more than the eloquence, of Masillou, that "God only is great!"

At the summit of these rocks was a platform—welcome to our tired feet—which served as an ante-room to various side-chambers, each curious and peculiar. These we had not time to visit. The sermon of the rocks did not deter us from violating the sanctuary in which it was preached. We had come to geologize as well as to adore, and had brought our hammers amid baskets with us, as well as our hearts and ears. We turned iconoclasts in a twinkling, and broke the images of the temple to which but a moment before we were paying devout homage. We atoned dearly for the [pg. 278] sacrilege. While we were wasting the time in cool speculation over the anatomy of a shattered stalactite, the angry waters beneath us were gathering for revenge.

The descent of the Rocky Mountains again brought us alongside the Styx. By this time we were thirsty as well as tired. The water was cool, clear, and inviting. Like Gideon's picked men of old, we lapped it with the tongue, as a dog lappeth, putting the hand to the mouth.

Howe hurried us onward, for reasons which we afterward understood, and we soon reached the "Winding Way," which, on several accounts, is the most singular locality in the cavern. It is formed by a narrow fissure in the solid lime-stone, and has a smooth, dry under-foot. The sides of the fissure are thickly and deeply indented. The indents answer to each other like the teeth of a steel-trap, so that, while passing through it, one keeps dodging from right to left, and back again ceaselessly. There is no visible roof to the Winding Way; but a lamp held over the head discloses, here and there, a rocky wedge, caught in the teeth of this stupendous trap, and threatening ruin to those beneath. A sight of one of these wedges, apparently just tottering to its fall, quickened our steps with something like a general shudder. Beyond this passage there is an immense circular room, so lofty, it is said, that a rocket has been thrown up without reaching its ceiling. The entrance to this rotunda was so nearly filled with water that our guide thought it imprudent to attempt going further. Thinking, doubtless, that students ought to be fond of meditation, he bade us be seated in a circle, and to forbear talking. He then extinguished the lamps, and for five eternal, voiceless minutes, we were entombed in a darkness so profound, that one of the party ventured the opinion that charcoal would make a white mark! We were six miles from the sunshine, and so pleasant was the re-lighting of the lamps, that we showered blessings on the man that invented Lucifer-matches.

At this point the ceiling of the cave was quite low, and covered with autographs and classic symbols, done in lampsmoke, which showed that undergraduates had been here before us, and that their college feelings had survived the difficulties of the way. Here, as elsewhere, the characters Sigma Phi, Alpha Delta Phi, Psi-Upsilon, &c., were tying hard to out-smoke each other; and here, as

elsewhere, it is hard to tell which carried the night. These Greek characters were a tough mystery to Howe. They troubled him more than Geology. He would have them repeated, once and again. I could notice that his lips were busy the while, as if he was trying to fix them in his memory.

Our steps were turned toward the daylight. We had soon wriggled through the Winding Way, and were near the further base of the Rocky Mountains. Before commencing the ascent, our guide told us that the water had risen twelve inches. He had climbed but a few rods, when a dull splurge, a cry, and a struggle in the current arrested his attention. "Hold on, guide! and help your friends. S. has lost his lamp!" Howe turned back with hasty strides, evidently vexed and alarmed. His agitation and words convinced us of what we were before ignorant, that our return was attended with real danger. "The man who drops his lamp is a madman. It should be the last thing surrendered in such a fix as ours." S. needed his lamp more than any other one of the party. He was a pale, short-sighted student from New York, whose steps had seldom encountered any worse impediment than a crack in the flag-stones in Broadway. He was now taken under Howe's immediate care in the van of the party, and again we moved upward. The summit was safely passed, and the hither side of the rocks was nearly left behind, when there was another splurge, a cry, and a struggle. This time our oracle in geology had fallen—he of the hammer, and the carpet-bag full of rocks. The image-breaker of the sanctuary was getting his retribution.

He remembered that a lamp was worth more than a limb, and by clinging to the former both were disabled. He held fast to his lamp, but could not keep it from the water. It was quenched, and filled with oil's inveterate enemy. His knee struck upon a sharp cliff, and the wound was severe. Matters were now growing serious. There were two lampless adventurers, where light was literally life; one half-blind and the other a cripple. Howe found it easier to get out of his patience than out of his cavern. He gave us a round scolding; bade us keep close together, and be-brother each other as well as we could with light and assistance.

At the hither base of the rocks it was necessary to cross the stream. Howe declared the bridge, it had been swept away by the current. There was no time to lose. He gave a spring and landed on the opposite bank, prostrate in a soft bed of mud.

We followed him as well as we could; some falling into the water, and all of us getting goodly bemired. Then followed a mile of dreary and tedious pilgrimage. Sometimes, like [a] Christian in the Valley of Shadows, we were walking upon a path with the edge turned up, and deep chasms on either side; sometimes we were crossing narrow bridges with two feet of rushing water above them; sometimes we were clinging to the sides of precipices, like Shakspeare's [sic] samphire-gatherers, feeling that sense of danger which sublimates the breathless moment.

It was a glad time when we reached the Stygian Lake, and Charon's occupation came again. The old mud-scow was a floating palace. For the world, we would not founder so precious a craft so we threw ourselves heels uppermost to drain our boots. Then we sprang aboard, and as the boat parted her moorings, we all sang the Canadian boat-song

Row, brothers row; the stream runs fast;  
The rapids are near, and daylight is past.

The song appeared to have been written for the very place, and the very hour. As our voices rose wild and strong, mingled in the roar of the near waterfall, and were sent back to us from a thousand echoing vaults and secret chambers, our hardships were all forgotten, and the voyage was one of unmixed enjoyment.

Our spirits kept their elevation until we came in sight of the Harlem Tunnel. This passage is half a mile long, and not more than five feet square. On entering the cave, we had passed the Tunnel on stones thinly covered with water. Now the stream had risen so high that there was only a foot of

space between its surface and the roof of this passage. Howe drew near to the opening, and so held his lamp that we could clearly see the torrent rushing through the Tunnel. "There," said he, [pg. 279] "we must either wade through that passage or retrace our steps and pass the night on the summit of the Rocky Mountains." The water was fast rising, and in twenty minutes would fill the Tunnel. Before us were a warm supper, dry bedding, daylight, wives and sweethearts. Behind us, darkness, hunger, cold, wet rocks, and a fearful looking-for of death by flood or precipice. We gave the "onward" word, and followed our leader. The passage was well-nigh a tragic affair, yet we managed to extract fun from it, notwithstanding We had only to look well after our lights, avoid butting the rocks with our foreheads, and the rest was simple wading. The passage of the Tunnel was the last of our difficulties. We drained our boots, and pressed forward without obstruction. We might have been a hundred rods from the entrance, when our eyes were greeted with a soft, pale-blue light, which grew larger, and whiter, and warmer, as we advanced, until our lamps became dim, and we were again bathed with the glad and yellow sunshine. We emerged from the earth's bowels just in time to see the sun go down. A recent shower had hung the forest trees with heavy water-beads, and below us rolled the Cobleskill with a swollen and turbid flood. The next two hours were filled up with the shifting of garments, the restoring of complexions damaged by lamp smoke, the drying of watches and bank bills, and the quenching of hunger. Dr. E——'s elbow was glad to be released from a basket of Aragonite, weighing some fifty pounds, which he had brought from the Winding Way. Howe held a special thanksgiving at his fiddle's escape from the under-ground deluge; while there lingered in all hearts,

A deep feeling, like the moan  
Of wearied ocean, when the storm is gone.

In one of his well-known odes, Horace celebrates his escape from the wiles of a treacherous mistress, by saying that she has "suspended dripping garments to the potent god of the deep." I have done likewise. I had the simplicity to believe that there could be nothing deceitful, or dangerous, or unamiable, about a cavern. I have a shirt and a pair of pantaloons that will prove the contrary: "Suspendi uvida vestimenta."

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### **HOWE'S CAVE (Anonymous 1862)**

FEW persons, perhaps, are aware that Schoharie County, N.Y., contains a cave said to be nine or ten miles in extent, and, in many respects, one of the most remarkable in America. Its visitors are few,—owing, probably, to its recent discovery, together with its comparative inaccessibility; — yet these few are well rewarded for its exploration.

In the month of August, 1861, I started, with three companions, to visit this interesting place.

I will not weary the reader by describing the beauty of the Hudson and the grandeur of the Catskills; yet I would fain fix in my memory forever one sunrise, seen from the summit of a bluff on the eastern bank of the river, [pg. 423] when the fog, gradually lifting itself from the stream, and slowly breaking into misty fragments, unveiled broad, smiling meadows, dark forests, village after village, while above all, far in the distance, rose the Catskills, clear in the sunlight.

After two days crowded with enjoyment, we arrived in Schoharie, where we passed the night. Having given orders, to be called at five, we took advantage of the leisure hour this arrangement gave us to view, the next morning,

## AN OLD FORT.

In reality, the 'fort' is a dilapidated old church, used as a shelter during the Indian wars, and also in the days of the Revolution. On the smooth stones that form the eastern side are carved the names of the soldiers who defended it, with the date, and designation of the regiment to which they belonged. I deciphered also, among other curious details, the name of the person who 'gave the favor of the ground.' I would gladly have indulged my antiquarian tastes by copying these rude inscriptions; but the eager cries of my companions compelled me to hurry on.

The western portion of the structure has also its story to tell. The traces of besieging cannon balls are still to be distinctly seen, and in one place I observed a smooth, round hole, made by the passage of a ball into the interior of the fort.

As I stood on the walls of this ancient building, surveying the valley it overlooked, with its straggling village lying at our feet, and the fair Schoharie Creek, now gleaming in the sunlight of the meadows, or darkening in the shade of the trees that overhung it, the past and the present mingled strongly in my thoughts.

The Stars and Stripes, that on this very spot had seen our fathers repelling a foreign foe, now waved over their sons, forced from their quiet homes, not to contend with the stranger and the alien, but to subdue those rebellious brothers whose sacrilegious hands had torn down that sacred flag, reared amidst the trials and perils of '76. Not less noble the present contest than 'the past, nor less heroic the soldier of to-day than the patriot of the Revolution. We continue to-day the fight they fought against injustice and oppression—a conflict that will end only when every nation and every race shall lift unshackled hands up to God in thanksgiving for the gift of freedom. A deeper love of my country, and a firmer trust in the God of truth and justice, sank into my heart as I turned away from those rude walls, sacred to the memory of departed valor.

We hurried back to the breakfast that awaited us, and then drove to

## THE CAVE,

which lies six miles from the village of Schoharie. The entrance is at the base of a heavily-wooded mountain that shuts in a secluded little valley. The only opening from this solitary vale is made by a small stream that winds out from among the hills. The entire seclusion of the place has prevented its earlier discovery; but the inevitable 'hotel' now rears its wooden walls above the cave to encourage future adventurers to explore its recesses.

In the absence of the proprietor of the hotel, who usually acts as cicerone, we took as guide a sun-burnt young man, with an economical portion of nose, closely cut hair, and a wiry little mouth, which we saw at a glance would open only at the rate of a quarter of a dollar a fact. He proved himself, however, shrewd, witty, and, withal, good-natured, and as fond of a joke as any one of us all. Bob, for so our new companion named himself, showed us at once into a dressing-room, advising us to put on, over our own garments, certain exceedingly coarse and ragged coats, hats and pants, which transformed us at once from rather fashionable young men into a set of forlorn-looking beggars. Each laughed at the appearance of the other, unconscious of his own [pg. 424] transformation; but Bob, with more truth than politeness, informed us that we all 'looked like the Old Nick;' whence it appeared that in Bob's opinion the Enemy is usually sorely afflicted with a shabby wardrobe, and that, in the words of the sage,

'Poverty is the devil.'

Being furnished with small oil lamps, we descended to the mouth of the cave. This opens at once into an entrance hall, one hundred and fifty feet in length and thirty in width, and high enough for a tall man to enter upright.

I inquired of Bob when the cave was discovered. 'In 1842,' he replied. 'And by whom?' I continued. 'Why,' rejoined our guide, 'Mister Howe was a huntin' for caves, and he came across this one.' Rather a queer thing to be hunting for, I thought, though without comment; but in future I allowed Bob to carry on the conversation as best suited himself. He plunged at once into a dissertation on the state of the country, gravely stating that 'Washington was taken.' At the involuntary smile which this astounding piece of news called forth, Bob confessed 'he might be mistaken in this respect, as his paper came but once a week, and frequently only once in two weeks.' Finding him a stanch Union man, and inclined to serve his country to the best of his ability, we undertook 'to post him' up' on the present state of affairs, for which the poor fellow was truly grateful.

Entrance Hall leads into Washington Hall, a magnificent apartment, three hundred feet long, and in the lowest part upwards of forty feet high. Our guide favored us at every turn with some new story or legend, repeated in a sing-song, nasal tone, ludicrously contrasting with the extravagance of the tales themselves. Yet he recited all alike with the most immovable gravity. It was a lively waltz of three notes.

Old Tunnel and Giant's Chapel, two fine cave-rooms, were next explored. On entering the latter, Bob favored us with the rehearsal of an old story from the Arabian Nights, which unfortunately, not one which will bear repetition—he wished us to believe actually happened in this very locality.

I may here confess that, when we came to 'the dark hole in the ground,' I felt some slight reluctance to trust myself therein. Bob, observing this, immediately drew from his lively imagination such an astonishing increase of the perils of the way, looking complacently at me all the while, that my alarm, strange to say, took flight at once, and I pushed onward defiantly. The journey is, however, one that might justly inspire timidity. Above our heads, and on each side, frowned immense rocks, threatening at every instant to fall upon us; while the dash and babble of a stream whose course we followed, increasing in volume as we progressed, came to our ears like the 'sound of many waters.' We crossed this stream a hundred times, at least, in our journey. Sometimes it murmured and fretted in a chasm far below us; again, it spread itself out in our very path, or danced merrily at our side, until it seemed to plunge into some distant abyss with the roar of a cataract.

We emerged from the windings of our tortuous path into Harlem Tunnel, a room six hundred feet in length. In its sides were frequent openings, leading into hitherto unexplored parts of the cave, but we did not venture to enter many of these. Never have I seen such rocks as we here encountered; at one time piled up on one another, ready to totter and fall at a touch; at another, jutting out in immense boulders, sixty feet above our heads, while, in the openings they left, we gazed upward into darkness that seemed immeasurable.

From Harlem Tunnel we came into Cataract Hall, also of great length, and remarkable for containing a small opening extending to an unknown distance within the mountain, since it apparently cannot be explored. Applying the ear to this opening, the sound of an immense cataract becomes audible, pouring over [pg. 425] the rocks far within the recesses of the mountain, where the Creator alone, who meted out those unseen, sunless waters, can behold its beauty and its terror.

Crossing the Pool of Siloam, whose babbling waters sparkled into beauty as we held our lamps above them, we entered Franklin Hall. Here the roof, although high enough in some places, is uncomfortably low in others; whereupon Bob bade us give heed to the caution of Franklin, 'Stoop as you go, and you will miss many hard thumps.'

We arrived next at Flood Hall, where a party of explorers were once put in great peril by a sudden freshet in the stream. They barely saved themselves by rapid flight, the water becoming waist-deep before they gained the entrance. We had no reason to doubt the truth of this story, as there were evidences of the rise and fall of water all about us.

Congress Hall now awaited us, but I will omit a description of it, as Musical Hall, which immediately succeeded, contains so much more that is interesting. On entering, our attention was first directed to an aperture wide enough for the admission of a man's head. Any sound made in this opening is taken up and repeated by echo after echo, till the very spirit of music seems awakened. Wave after wave of melodious sound charms the ear, even if the first awakening note has been most discordant. If the soul is filled with silent awe while listening to the unseen waterfall in Cataract Hall, it is here wooed into peace by a harmony more perfect than any produced by mortal invention. A temple-cavern vaster than Ellora with a giant 'lithophone' for organ!

The second wonder of Musical Hall is a lake of great extent, and from ten to thirty feet in depth. The smooth surface of these crystal waters, never ruffled by any air of heaven, and undisturbed save by the dip of our oars as we were ferried across, the utter darkness that hid the opposite shore from our straining sight, the huge rocks above, whose clustering stalactites, lighted by our glimmering lamps, sparkled like a starry sky, the sound of the far-off waterfall, softened by distance into a sad and solemn music, all united to recall with a vivid power, never before felt, the passage of the 'pious Æneas' over the Styx, which I had so often read with delight in my boyhood. I half fancied our Yankee Bob fading into a vision of the classic Charon, and that the ghosts of unhappy spirits were peering at us from the darkness.

At the end of the lake is Annexation Rock, a huge limestone formation in the shape of an egg. It stands on one end, is twenty-eight feet in diameter, and over forty in height.

We were now introduced into Fat Man's Misery, where the small and attenuated have greatly the advantage. We emerged from this arrow and difficult passage into the Museum, half a mile long, and so called from the number and variety of its formations. We did not linger to examine its curiosities, but pushed on over the Alps, which we surmounted, aided partly by ladders. Very steep and rugged were these Alps, and quite worthy of the name they bear. We descended from them into the Bathroom, where a pool of water and sundry other arrangements suggest to a lively imagination its designation. It certainly has the recommendation of being the most retired bath-room ever known. That of the Neapolitan sibyl is public in comparison to it.

We then entered Pirate's Retreat. Why so named, I can not guess, for I doubt if the boldest pirate who ever sailed the 'South Seas o'er' would dare venture alone so far underground as we now found ourselves.

Leaving the Pirate's Retreat, we were obliged to cross the Rocky Mountains, similar in formation and arrangement to the Alps. The Rocky Mountains lead into Jehoshaphat's Valley, one mile in length. Like its namesake, this valley is a deep ravine, with steep, rugged sides, and a brawling brook running at the bottom.

Miller's Hall next claims our attention. [pg. 426] here we take leave of the brook, which, with the cave, loses itself in a measureless ravine, where the rocks have fallen in such a manner as to obstruct any further explorations.

From thence, turning to the right, we enter Winding Way, a most appropriate name for the place. The narrow passage turns and twists between masses of solid rock, high in some places, and low in others. The deathlike silence of the solitude that surrounded us impressed us with a vague feeling of fear, and we felt no disposition to tempt the Devil's Gangway, especially as, in consequence of a recent freshet, it was filled with water. Our guide informed us that beyond the Gangway were several rooms, among which Silent Chamber and Gothic Arch were the most noteworthy. The portion of the cave visited by tourists terminates in the 'Rotunda,' eight miles from

the entrance; although explorations have been made some miles further. The Rotunda is cylindrical in shape, fifteen feet in diameter, and one hundred feet in height.

We were now in a little room six miles from the mouth of the cave, and thought the present a good opportunity to try the effect of the absence of light and sound on the mind. Extinguishing our lights, therefore, we resigned ourselves to the influences of darkness and silence. To realize such a state fully, one must find one's self in the bowels of the earth, as we were, where the beating of our own hearts alone attested the existence of life. We were glad to re light our lamps and begin our return to upper air.

I have already mentioned Annexation Rock; near it is another curious freak of nature, called the 'Tree of the World's History. It resembles the stump of a tree two feet in diameter, and cut off two feet above the ground, upon which a portion of the trunk six feet in length, is exactly balanced. A singular type of the changes which time makes in the world above-ground.

In the Museum, whose examination we had postponed till our return, we were lost in a world of wonders. It were [sic] vain to attempt to describe or even enumerate half of the various objects that met us at every turn. Churches, towers, complete with doors and windows, as if finished by the hand of an architect; an organ, its long and short pipes arranged in perfect order; Lot's Wife, a figure in stone, life size; in another place two women, in long, flowing garments, standing facing each other, as if engaged in earnest conversation, and a soldier in complete armor, — these were among the most striking of the larger objects. The vegetable world was also partly well represented. Here was a bunch of carrots, fresh as if just taken from the ground, sheaves of wheat, bunches of grain and grass hanging from the walls and roofs. Interspersed were birds of every species, doves in loving companionship, sparrows, and hawks. I noticed also in one place a pair of elephant's ears perfect as life. Indeed it was not difficult to believe that these stony semblances had once been endowed with life, and, ere blight or decay could change, had been transmuted into things of imperishable beauty.

While waiting for our guide to unmoor the boat, which was to take us over the lake a second time, I ran up the bank to look at the stalactites that hung in the greatest profusion above the water. The light of my lamp shining through them produced an effect as surprising as it was beautiful. But no words can do justice to the scene. Imagine an immense room whose ceiling is studded with icicles forming every conceivable curve and angle, and you will have only a faint idea of the number and variety of these subterranean ornaments.

A mile from the entrance we found some stray bats,—the first living creatures we had met. We endeavored to attract them by holding up our lamps, and succeeded so well that we were glad to leave them behind us as soon as possible.

It is a singular fact, noted by other cave-explorers, and confirmed by our own experience, that while within a [pg. 427] cave one's usual vigor and activity appears augmented. A slight reaction takes place on coming out into the upper world, and renders rest doubly refreshing and grateful.

Let me, in closing, advise other visitors to Howe's Cave to choose fair weather, and take time enough for their visit, as the windings of the cave and its curiosities are alike exhaustless [emphasis in original].

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## THE TOURIST'S GUIDE THROUGH THE EMPIRE STATE (Colt 1871: 118-119)

Three miles from Schoharie is Howe's Cave. This cave was named in honor of its discoverer in 1842, Mr. Lester Howe.

Mr. Howe must also have been fond of caves. From the various cavernous indications he imagined that there was a large cave in this vicinity, and at leisure intervals for more than a year made search for it. His visions were more than realized by the beauty of the subterranean world which he discovered. Its arches and walls reach away for miles, and Howe's Cave is probably still half unexplored. When the entrance was discovered the passageway was almost completely closed for almost a mile with gravel, clay and rocks. By closing the side water-courses these obstructions were washed away which otherwise it would have required years of labor to remove.

Over the entrance stands the Cave House, a pleasant hotel, and here from June to October a stream of visitors are constantly coming to see the cave. We are of the opinion that Howe's Cave will attain still a more extended fame. It is certainly the best worth seeing of anything of a similar nature in this part of the country. It is the Queen of the cave region of the Helderbergs [pg. 119] where caves are plentiful, and range from the size of a quill to a mammoth.

Dressing for the exploration is always a comical affair—many ladies assume a guise unnecessarily ugly when we consider that the cave is usually dry during the summer months.

The first apartment visited in Howe's cave is the Lecture Room; forty feet wide—next comes Washington Hall—then the Bridal Chamber, where more than one wedding has “come off,” including the nuptials of two daughters of its Discoverer. More than forty names have been bestowed upon different points here, and many of the places are well named, as Stygian Lake, over which we sail to Plymouth Rock.

Stalactites abound here and many of the fine effects of torch light illuminating walls and arches, columns and stalagmites, which are described by those familiar with the Mammoth Cave, are to be seen here. Howe's Cave is said to rival or excel the Kentucky Cavern, but as we are not fond of caves and have never visited the latter we leave those wiser than ourselves to decide the mooted question.

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# USING HISTORICAL ARCHIVES TO DISCOVER FORGOTTEN CAVES

Gary A. O'Dell

## Introduction

Those of us who are interested in either cave exploration or cave research are, naturally, very interested in locating significant landscape features in a given karst terrane, such as caves, springs, and sinkholes. The assembly of an inventory of such features for a particular locale allows us to understand the “big picture” of regional karst development, correlating the pattern of mapped cave passages with data derived from geophysical methods. The more information we have about such features, the more complete and reliable our knowledge and interpretation becomes. Karst terranes, however, are not static but are dynamic, and landscape features appear and disappear over time, a process that is accelerated by human activity.

A full appreciation of karst development in a region thus requires knowledge of landscape change through time. Disciplines within the social sciences and the physical sciences are often considered antithetical, an erroneous perception. History is capable of informing geology, and a grasp of landscape processes provides the context for the historical record. In working toward a common goal, the respective methodologies of the historian and the karst scientist can be complimentary.

Cave entrances—and even entire caves—can be “lost” when knowledge of their location or existence fades from collective popular knowledge. Caves disappear as a result of natural processes or human activity that may disguise, cover, or even destroy these features. Frequently, however, significant karst features have been documented in some manner, and the researcher’s task becomes that of discovering obscure references within archival materials. Such research can reveal entirely new or “forgotten” caves that can then be explored, surveyed, and correlated with known karst features. This paper describes and evaluates some of the primary archival sources for locating information about “forgotten” caves; these same resources can also be used to construct histories for known caves and springs. Finally, illustrative case studies from the Inner Bluegrass karst region of Kentucky are provided, showing how different resources can be correlated during the course of an investigation.<sup>1</sup>

## Dynamic Karst: Now You See It, Now You Don’t

Karst terranes are dynamic. What we might observe, on any given day, is but a snapshot in a continuous process of landscape evolution. With the passage of time,

subterranean conduits within the network of a karst drainage system increase in diameter and complexity. As local base level is lowered by deepening stream and river valleys, groundwater flow develops new pathways at lower elevations and older conduits are abandoned. Reduction of the land surface by weathering and erosion gradually diminishes the thickness of the carbonate rock overlying those conduits nearest the surface, weakening its structural integrity. During this process, cavern passages are breached through sinkhole subsidence, collapse, and the widening of valleys. Cave entrances appear and are buried, high-level springs diminish and dry up, and new springs appear lower in the topography. Ultimately, through the millennia, conduit systems develop in sequence and are destroyed as the rock in which they occur is removed, until the given carbonate rock unit is entirely eliminated.

The natural processes at work in a karst terrane are also influenced by human activity, often to considerable extent. This is particularly true in urban karst, where the landscape may be deliberately and profoundly altered as the community develops. Springs, once cherished as water-supply sources, may be filled in or the flow diverted through storm drains so that the land may be used for other purposes. Sinkholes and cave entrances are covered to provide level land for development. In rural areas, springs tend to retain value as water sources for livestock and are thus usually preserved, though often modified with protective enclosures, retention basins, artificial channels, mill dams, and other structures intended to provide greater utility of the resource. Steep-sided sinkholes in the rural landscape are typically viewed as unusable land, since they cannot be farmed nor grazed, and often end up as dump sites for farm and household waste or fill materials. Alterations made to springs and sinkholes may disturb the natural drainage, surface and subsurface, to such an extent that flow pathways in the conduit network are rerouted, breaking out as new springs in unpredictable locations or accelerating sinkhole development through collapse or subsidence.

Throughout human history, society has generally attached more importance to natural springs, as invaluable sources of water and power, than to caves. Major springs were landmarks in the wilderness of early America, focal points of networks of trails used by native Americans and early pioneers. Mineral springs were of particular significance, the salt-encrusted earth on their margins attracting game animals and the waters, when boiled down in iron kettles, providing salt for the settlements. The distribution of springs was partly responsible for the pattern of settlement in

pioneer Kentucky. Spring water was (and so remains, today) perceived as superior to any other water source. Early explorers and settlers were eager to claim land containing a significant spring, which became the sites of pioneer stations and communities; as one old pioneer recalled: "It was very common for 4 or 5 families to be settled together by some good spring. It was so here. And so Kentucky was settled."<sup>2</sup> Lexington, Georgetown, Versailles, Lancaster, Harrodsburg, and many other cities and towns of the Bluegrass region owe their location to the presence of a spring during the settlement era that was considered sufficient for a community water supply.

Large springs were also in high demand as industrial water sources, powering water wheels at mill dams and the machinery used to grind corn and wheat, and in the manufacture of various articles. The perceived superiority of spring water led to its use in manufacturing operations where water quality was an important factor in the finished product. This was particularly true for the distillation of whiskey; in 1810, Kentucky had more than 2,000 individual distillers, many of whom, perhaps most, relied upon spring water.<sup>3</sup> Many distillers used this fact in their advertising, such as the famous Pepper Distillery in Lexington. An 1891 advertisement for "Old Pepper" whiskey included the statement, "all the water used is from the celebrated 'Wilson Spring' on our premises, which is the largest Natural Spring of Pure Limestone Water in Central Kentucky."<sup>4</sup> Although the Pepper Distillery was located along a surface stream, the owner chose to lease the water rights from a spring nearly a mile distant, and constructed a pipeline to bring the water to the distillery.

The social and economic importance of natural springs has provided a wealth of archival material of various kinds for many such features. In contrast, caves have usually been considered as curiosities with little perceived value other than a few folk usages, such as natural refrigeration or livestock shelters. The primary exceptions to this tendency have been the few, relatively brief, periods of American military history when the caves of this nation were valued as sources of nitrates ("saltpeter") used in the manufacture of gunpowder. The War of 1812 era, in particular, probably represented the most intensive period of cave exploration and description prior to modern times.<sup>5</sup> In general, however, archival material relating to karst features tends to refer more to springs than to caves per se; but, of course, in karst terranes springs are often indicators for cave systems. Thus, in early records we may see references to various "cave springs," where the characteristic of interest is the spring itself, and the "cave" in the designation is simply a way to describe the type of spring.

Just as today, however, in the distant past, caves were often explored simply for recreation, and accounts of such subterranean sojourns may be found

in diaries, personal correspondence, popular and scientific journals, newspaper items, and other sources. The earliest known description of a cave in Kentucky was published in 1790 in Lexington's *Kentucky Gazette*. The newspaper provided a few brief but informative sentences about a cave in present-day Scott County. According to the account, the exploration was ostensibly motivated by a desire to locate a missing calf, but more likely was simply to see what lay beyond the entrance.<sup>6</sup> A longer and more detailed account of an 1820 trip to Russell Cave, near Lexington, published in an early scientific journal, made no pretensions that the exploration was anything but recreational. The account not only provided a good description of the cave but also some insights as to cave exploration techniques of the era. After having made "copious draughts" from a bottle of madeira, the tipsy members of the party "stripped off our coats, tied handkerchiefs round our heads, girded our waists...some of us adopted the oriental custom of paying our homage barefooted, and left our shoes behind."<sup>7</sup>

Of course, a great many caves known today are "new" features, which may be of great geologic age but that have little or no social "history." The dynamic processes at work in a karst landscape, as noted, are constantly modifying the terrain so that formerly inaccessible conduits may be opened to the surface, permitting new discoveries by the legions of indefatigable modern-day cave enthusiasts who spend a great deal of time "ridge-running" or otherwise scouting karst terrain. Nearly every local chapter of the National Speleological Society has one or more individuals who are dedicated to excavating, by various means, sinkholes and fissures thought likely to yield an enterable passageway.

The discovery of an historic reference to a cave or significant karst spring, "lost" in the present day and time, is only the first step in the process of location and verification. The challenge facing the researcher is compounded first by the fact that reference points of the physical and cultural landscape are often quite different today than those that may appear in old deeds and documents or have been given different names. Another significant problem for the researcher is that toponyms associated with karst features also tend to evolve over time. The change may be as simple as an alternate spelling; for example, Royle's Spring in Lexington, Kentucky, became Royal Spring in 1851 after passing out of the hands of the Royle family in 1841.<sup>8</sup> During execution of a further conveyance, the county clerk simply spelled the name phonetically, and there was no Royle present to correct him. Aside from corrupted spelling, association of a cave or spring with a deceased owner may persist for a time beyond his lifespan, but unless the linkage is widely known and accepted in the local neighborhood, and the feature has held that name for a substantial

period of time, the cave or spring will likely soon come to be known by the name of the new property owner. Thus, turning again to Lexington, a spring that was known as McConnell's Spring during the pioneer era became widely known as Wilson's Spring in the mid-nineteenth, and then, in 1993, again assumed the name McConnell Springs (note the pluralization) when the land was acquired for a city park.<sup>9</sup>

A more complex evolutionary process is involved in the case of the Royal Spring, Georgetown, which was known first as Floyd's Spring at the time of its discovery in 1774; became Royal Spring in 1775 upon the founding of the short-lived McClelland's Station; after the founding of Georgetown in 1787 was also known at various times as the Republican Spring or the Big Spring; and is today again called Royal Spring. Furthermore, since caves and, especially, springs in Kentucky were so abundant through the countryside, unless the feature was of some particular note it often remained without an official name, simply being the "big spring," or the "cave spring" at the head of some stream.

The challenge for the researcher in search of new discoveries is therefore twofold: First, to identify references to caves and springs in the historic archives, and, second, to determine the location of these features in the landscape. The latter is an often tedious process that may require the researcher to trace the feature through generations, and possible name changes, correlating such documents as land grants, surveys, deeds of conveyance, wills, and old maps, until sufficient information has been obtained to determine an accurate position. The final step is to take to the field, interviewing neighborhood residents to retrieve any lingering memories, and to inspect the potential location to see if the feature still exists, or whether there are remaining physical traces of its former existence.

### **Archival Resources for the Cave-Hunter**

The historical archives for a single state, let alone the nation, are an ocean so vast that to go fishing at random is unlikely to be very productive. The cave-hunter's efforts are more likely to be rewarded if the search is concentrated on a specific area known to contain karst features. Historical research is easier today than ever before, because a great many source materials formerly isolated in the collections of individual institutions are now available in digital form through the Internet, and more will become available in the future as conversion continues.

Some caveats are, however, in order here. The greater bulk of archival materials by far still remains in the original paper form, and without exception institutions do not send out on interlibrary loan original documents, or even published materials, if rare and

valuable. This may also apply to records that have been placed on microfilm or microfiche, although policies vary with the institution or the record type. Old newspapers on microfilm, for example, can usually be obtained through interlibrary loan. Most local governments are engaged in converting new legal records to digital form, sometimes making these available online, but in most cases the conversion process is retroactive only on a limited basis so that records more than a few decades old are still in the original form.

Generally speaking, then, most original records and documents can still only be viewed on the premises of the institution having possession, whether this is the Special Collections department of a library or the records vault of a county clerk's office. The primary value of the Internet today is in determining what records exist and where they may be located; the researcher must still be prepared to commit time and effort to travel and inspection of materials on site.

There are many different types of archival materials that are useful to the researcher interested in discovering and locating forgotten karst features. The major categories of these resources are described below, in the context of the author's own research which focuses primarily upon the Inner Bluegrass karst region of Kentucky. Some of these resources, particularly those that concern early settlement, are specific to Kentucky; the first task of the historian is to ascertain what archival resources may be available for their particular region or locale.

#### Land Records

Land records are among the most valuable of resources for locating references to karst features. These are usually legal documents, often issued by governments, as in the case of land grants and patents, or transactions between individuals, such as deeds of property conveyance or wills. Such records are most useful in identifying karst features and in locating them, sometimes with great precision, but contain very little descriptive information concerning the feature. Land records are usually indexed, although the index may be available only on site and not online.

Land grants and patents are awards of land made by the government either in compensation for services rendered (usually military service) or for a fee. In Kentucky, such awards were made by the British colonial government of Virginia prior to the Revolution, and afterward by the Commonwealth of Virginia until Kentucky achieved statehood in 1793. Surveys of these lands were based on the "metes and bounds" system, which consisted of bearings and distances from one physical landmark to another, and were further identified by the primary watercourse draining the land. Land descriptions based on this system may contain references to karst features;

sometimes as a waypoint in the survey, more often as a reference to “on the waters of” some significant spring. Lands to which the metes and bounds system was applied included the original thirteen colonies plus Maine, Vermont, Tennessee, Kentucky, Texas, West Virginia, and parts of Ohio. After the Revolution, Congress implemented the grid-based “Township and Range” system in 1785 to divide the western lands gained during the war, which was subsequently applied in all other states. This latter system describes lands in terms of grid coordinates rather than landmarks and is thus less useful in identifying terrain features.

Beginning about 1774, the region that would become Kentucky was invaded by a hoard of would-be settlers as well as land speculators, who began to choose and survey prime tracts of land. Most of the initial claims were of lands in the central, or Bluegrass, region of the state; other areas were settled later. The land claims were made on the basis of crude surveys, which might constitute no more than corners marked by blazing or girdling trees, or carving initials into a tree or upon a boundary rock, and through “improvements,” such as clearing an acre or two and planting a corn crop, or constructing a rough cabin. Since it was often difficult, in the wilderness, to locate markers for someone else’s survey or even to determine if the land had been claimed at all, this led to a host of conflicting claims. In 1779, the Virginia government sent a commission to Kentucky to judge the land claims and resolve the conflicts, which issued certificates for valid claims.

Many of these certificates contain references to karst features. There was a well-developed terminology used by the pioneers to describe such features as springs, “sinking springs,” “lick springs,” “blue holes,” “cave springs,” and the like. One must keep in mind, however, that in these records, the spring itself was considered the important feature and if the waters issued from a cave mouth, this fact might not even be mentioned. A typical certificate might include a description such as the following, issued by the Commission seated at Harrodsburg on 28 October 1779:

William Combs this day claimed the right to a settlement and preemption to a Tract of Land lying on the waters of Beach [Beech] Fork of Salt River known by the name of the Cave Spring by residing in this Country for 12 months before the year 1778, satisfactory proof being made to the Court they are of Opinion that the said Combs has a right to a settlement for 400 Acres of Land including said Spring & a preemption of 1000 Acres adjoining & that a certificate issued for the same accordingly.<sup>10</sup>

The certificates were only broadly descriptive and did not include the actual survey calls. The certificates issued by the commission were later affirmed by the Virginia government, which issued grants or patents in Kentucky on this basis which included detailed property descriptions and surveys associated with the claims. The records of the Virginia Land Office, which contain early grants and patents for Kentucky and West Virginia as well as Virginia, may be accessed online through the Library of Virginia: <http://ajax.lva.lib.va.us/F>. For land grants, however, indexing is mainly limited to the names of the grantees, so a search under the term “cave,” for example, will only return a few records where this word is used in the descriptive heading, and then mainly in reference to individuals named “Cave.” These records are therefore of more use when there are other links pointing to a cave or spring location, or in tracing the history of a land parcel.<sup>11</sup>

Despite the labors of the Virginia Land Commission in Kentucky during 1779-1780, they were unable to resolve all the many conflicts, and so litigation on these matters enriched several generations of Kentucky lawyers. Testimony and depositions in these cases provide a great deal of additional information about the notable physical landmarks of the landscape in the pioneer era, including karst features. These early pioneers and settlers recalled, often in great detail, their activities during the first years of settlement, and made frequent reference to the most significant springs as landmarks. Many depositions were taken on location at or near one of these springs, as an aid to recollection by the deponent. The records of the land trials held in the Kentucky District Court, and later the state Circuit Courts, from 1798-1825, are abstracted in considerable detail in a multi-part series published by the state historical society from 1930-1935;<sup>12</sup> the original court documents are on microfilm at the Kentucky Department for Libraries and Archives in Frankfort. The original records often include maps of the surveys on which springs are noted and labeled in reference to other landmarks.

Two examples from the court records are indicative of the nature of depositions in the trials. Benjamin Pettit testified on 10 October 1790, that:

Late in year 1775 deponent and his brother Thomas Pettit being out in the woods, came to a sinking spring, which he looked on to be the waters of Paint Lick [in present Madison County]. His brother said he liked that spring well and the land, and he would mark it which he did. Not long after...they were out again and went to the same spring and finding another spring said he would mark that which he did and made further improvements at the first spring. That sometimes [afterwards] the deponents brother desired him, if

he found ever another spring near that place to mark it for him and in, and about February or first of March following he was out there and finding the spring where Sam Rice now lives, he marked that for his brother....he thinks it was on a large big rooted sycamore. The sinking spring first spoken of is 3/4 of a mile from where Mr. Rice lives.<sup>13</sup>

On 5 August 1801, Samuel Boggs made the following statement in regard to a claim in present Scott County, Kentucky. In his deposition, Samuel made clear the competitive nature of land claiming and that settlers were well aware of problems with potentially conflicting claims:

That in year 1776 this deponent in company with William Lindsay deceased and others made an improvement by building a cabbin at the Cave spring where Henry Lindsay now lives which improvement was made for William Lindsay...also made several other improvements on the run above and below the Cave spring to keep other people from making improvements that might interfere with those at the Cave spring and this place.<sup>14</sup>

For the period following initial settlement, to the present day, local County Court records including deed books, mortgage books, and will books may provide information about springs and caves. In order to know which county clerk's office(s) to visit, the researcher must determine when the county first formed. Kentucky counties have undergone many transformations, being first Fincastle and then Kentucky County of Virginia, then divided to form Fayette, Lincoln and Jefferson, and further subdivided to form the present 120 individual counties. To conduct deed research in Scott County, for example, one must know that the county was formed from Woodford County in 1792, which in turn had derived from Fayette in 1789. Thus, the earliest land records for present-day Scott are located in the offices of three different counties. Also, for many counties the record of land conveyances is incomplete, as a consequence of fires that may have destroyed all or part of a county's records. Many of Scott County's earliest records are fragmentary, recopied from partially burnt deeds recovered from courthouse fires in 1837 and 1876. For Rockcastle County, a half-century of records for the nineteenth century are entirely missing due to arson of the original log courthouse in 1873; however, since Rockcastle was formed largely from Madison County in 1810, the earliest Rockcastle records can be located in the Madison County clerk's office.

Land transactions in a county clerk's office are almost invariably indexed, although the extent and

detail of such indexing varies considerably among offices. Some index by name within a single book for a given year; other indexes may cover multiple years. Some indexes may list only the names of the seller and purchaser; others may include supplemental information such as the number of acres and a rough location by road or watercourse.

In using deeds to trace a landscape feature, one generally must have an idea of the identity of a landowner at some point in time for the area of interest. The researcher can begin with an old deed and work forward through time, which can be very difficult, particularly when the property owner may have engaged in multiple transactions over a long time and you have no knowledge of when or to whom the land was sold. Conversely, the researcher can start in modern times and work backwards, which is much easier, since most conveyances indicate who was the seller of the land. If the deed chain is interrupted, so that there appears to be no record of conveyance, one should check the will books, since land can be inherited without need for execution of a deed.

On rare occasions, a spring can be located precisely because it is one of the boundary markers, as in the case of Steele's Spring near Lexington. The "big spring," which was near the center of the original pioneer claim, was later divided for the heirs into seven separate parcels; the spring became the intersection point or corner for four of these parcels. Each of the surveys for these four parcels thus included the phrase, "to the centre of the big spring" in the boundary description.<sup>15</sup> More commonly, however, boundaries were drawn so as to wholly include the spring, which was, after all a valuable resource and for which ownership and water rights might be subject to dispute. In such cases, the task of the researcher who wishes to locate the feature with some exactitude is to follow the chain of deed conveyances until enough information can be obtained to place the karst feature in relation to identifiable landmarks of the modern landscape, such as roads. This may often also require investigation of property transactions of adjacent landowners in order to properly situate the tract of interest.

#### Correspondence, Diaries, and Journals

Personal narratives are very likely to yield considerable descriptive information, but discovering specific references to karst features within them can be very time-consuming since there is usually no indexing of the contents. Even when indexes have been compiled, these are usually limited to persons' names or to significant historical events. The researcher is probably best able to make use of such materials only after determining the name of some individual who is in some manner associated with the karst feature of interest, so that the investigation can be more narrowly targeted. Resources of this nature are usually found

within the Special Collections departments of various libraries, such as those of the University of Kentucky (Lexington), the Kentucky Historical Society (Frankfort), or the Filson Club (Louisville).

One such resource of great value to the historian, that is indexed and abstracted, is the immense collection of pioneer-era materials known as the Draper Manuscripts. The original documents are housed in the State Historical Society of Wisconsin but are available on microfilm at most major libraries or through interlibrary loan. At a time when many of the original participants in the settlement of the West were still living, Lyman C. Draper carried out a project of interviewing the survivors and collecting various letters, documents, and maps pertinent to the period. The time frame of his investigation ranges from the 1740s through the War of 1812, and includes 21 states east of the Mississippi River, Iowa, Missouri, and parts of Canada. The collection is vast, constituting 491 volumes on 123 reels of microfilm, divided into 50 separate series, such as the “Kentucky Papers,” the “Daniel Boone Papers,” and the “George Rogers Clark Papers” (the latter alone comprises 65 volumes on 15 reels).<sup>16</sup>

Two items concerning Russell Cave, located near Lexington, illustrate the use of such resources in cave histories. The Draper Collection includes an interview by John D. Shane of the early Kentucky pioneer Isaac Clinkenbeard, who in 1779 settled at Strode’s Station. Clinkenbeard, interviewed many years after the event, recalled that in 1782, “I got my gun stocked [repaired] by a man that lived on the hill above Russel’s cave, but had big shop in it (the cave).”<sup>17</sup> Russell Cave has a large mouth, with a broad flat area just inside the dripline. This is a fascinating historical tid-bit; a gunsmith’s shop located in a cave. One of the earliest descriptions of a specific, identifiable Kentucky cave is a reference to Russell Cave in the diary of sixteen year-old Robert B. McAfee. On 16 August 1800, young Robert went to a barbecue on the Russell place, and later wrote, “a party went 1960 yards up his cave but could go no farther by reason of the water and rock being so near together.”<sup>18</sup> This is an accurate if succinct description of the cave as it appears today.

#### Newspapers and Periodicals

Antebellum newspapers were, for the most part, dedicated to state, national, and international news and to advertising of goods and services; local news generally received short shrift. Outside of the largest cities, inhabitants of most communities were already familiar with local events and were more interested in reading about events in the outside world. On very rare occasions, an item concerning a local cave or spring might appear in one of these older papers, when the editor felt it might interest or amuse the readers. The effort in 1790 to recover a lost calf from the Scott

County cave, mentioned earlier, is one such case, but relatively few other antebellum examples exist.

During the latter part of the nineteenth century, however, there was a substantial expansion in the overall scope of newspaper reporting. Newspapers began to devote increasing space to items of purely local interest, which included a tendency to publish anecdotes and often nostalgic accounts of local history. Since, in karst country, caves and springs often figured prominently in local lore and legend, newspapers may provide detailed descriptions and even locations of these features. The title of a 13 January 1952 article in the Lexington *Herald-Leader* was straight to the point and a red flag for a spelean historian: “Both truth, legend surround Fayette County caves, but majority have been lost or entrances blocked.”

News items range from mundane accounts of the efforts of some farmer to extract a cow from a collapse sink, to breathless hyperbole reporting the adventures of local bravos challenging the subterranean darkness. Particularly in urban settings, geohazards associated with karst provide ample fodder for news writers, instances of collapse or subsidence that damages roads or buildings, or construction that breaks through to underground streams or passageways. In July 1906, the Lexington *Leader* reported that workers excavating a cellar for a new building on Main Street uncovered the entrance to a large cave:

The entrance leads under the street and was found at the bottom of the excavation under shelving rock. The street immediately began to show signs of caving in. A large crack opened up in the bricks parallel with the front of the excavation and the earth falling away from a telephone post leaving it in an exposed and very dangerous position. The workmen were immediately removed from that portion of the work. The entrance is small and very narrow at the point opened but grows larger rapidly from the opening inward. It is supposed from the action of the street that it leads into a large subterranean cavity.<sup>19</sup>

Here are two more examples of intriguing leads from old newspaper accounts. From the Lexington *Leader*, 8 February 1906, appears this account with what appears to be sufficient information to locate the entrance:

NEW CAVE DISCOVERED NEAR DANVILLE – SAID TO OUTRIVAL MAMMOTH CAVE. A cave has been discovered eight miles from Danville and two miles east of Perryville, which, it is believed, will outrival the famous Mammoth Cave. While hunting for minks and other varmints, valued for the hides, along the banks of Salt river, last week Irvine Parks

discovered in a secluded section a large entrance, leading from the river banks into mother earth.

The article continued in several more paragraphs to describe subsequent expedition of the varmint hunter and his friends to the new cavern, equipped with lanterns and food; upon their return, the explorers estimated they had covered a distance of seven or eight miles underground without reaching the end. While such exploration accounts are typically greatly exaggerated, here we have what seems to be the discovery of a major Kentucky cavern in the outer Bluegrass region. The author is not personally familiar with the caves in this vicinity, so this may in fact be a cave well-known today. Comparisons with the well-known Mammoth Cave were virtually *de rigueur* for any new discovery, as can also be seen in the following example.

On 12 August 1930, the *Leader* reported another fascinating discovery, this time from eastern Kentucky:

TWO LARGE CRYSTAL CAVES FOUND IN ESTILL. Two large crystal caves, rivaling in size the great Mammoth Cave, were discovered in Lee county, seven miles from [Irvine], by an Ohio tourist who had been searching this drouth-stricken area for water....Scores of persons Monday were flocking to the caves to verify the report of the discovery....Two large crystal rooms, having the appearance of large cathedrals, were discovered. One of the rooms, about 100 feet high, was found by the tourist, about two miles from the entrance.

Many caves, perhaps hundreds, in Estill and Lee counties are known to modern cavers. The newspaper article did not, in itself, contain enough information to locate the specific caves in question, but noted that "Estill county capitalists" were taking steps to secure the property and develop the caves commercially. This did not actually occur; at least, the author is not aware of any commercial caves that ever operated in the region. The next step for the researcher would be, in this case, to visit the public libraries in Estill and Lee counties, to see if archives of local papers exist and if they report on this incident in greater detail. Also, since this discovery took place in 1930, there might still be some elderly local residents who could recall the event.

Locating items of interest within the great volume of historical newsprint can be a considerable challenge. Larger newspapers today are generally indexed, which can be searched online and full-text articles retrieved (though often for a fee), but such indexes usually do not extend more than a few decades into the past. In rare cases, local historical associations may have compiled partial indexes of community

newspapers, which may or may not be accessible through the Internet. This is the case for Lexington, Kentucky, where the most significant regional newspapers have been indexed from 1787 to the present by volunteers who have donated thousands of hours to the effort. The website for this index is <http://local.lexpublib.org/>; numerous results of interest from the region can be derived by a search using the terms "cave" or "spring." The researcher should, however, be prepared to wade through numerous references to persons named *Cave*, to *cave-ins* of mines or ditches, and to *Spring* as a season of the year.

Newspaper items are probably the single most valuable source of information to the spelean historian and cave-hunter.

### Maps

Unusual indeed would be the caver who has not at least a passing familiarity with the 7.5-minute, 1:24,000 scale, topographic maps published by the U.S. Geological Survey for the various states. These are certainly indispensable tools to the cave-hunter or karst researcher, since these maps show (although not always with complete accuracy) karst features such as sinkholes and sinking streams. Springs and caves are also, in some cases, marked upon these maps, and occasionally, identified by name. These locations marked on modern maps tend to be rather haphazard, however, and generally represent only a handful of the best-known karst features that may be present in an area.

Older maps can sometimes be more informative. Topographic and geologic maps dating from the late nineteenth century, available through the map collections of various libraries, often show caves and springs that are not noted on modern maps, and may include historic names that are no longer used. Another important map resource, though limited to urban settings, are the Sanborn Insurance maps, published for many American cities and towns from 1867 to 1970. These maps provide block-by-block detail of buildings and other structures and features, including significant springs and, sometimes, very large sinkholes.

### County Histories

The range of published books that may contain references to present or former caves is far too vast to describe here, but one particular class stands out as being of particular worth to the cave-hunter and historian. These are the county histories, the publication of which generally began in the late nineteenth century coincident with an increased popular interest in local history and continues today with new or revised histories. While the style and format of such histories varies widely, most contain a physical description of the topography, natural

resources, and interesting geological features or “curiosities” of a county, and provide stories and anecdotes as well as a more formal accounting of historical events in a region. Springs, important as water-supply sources in community and industrial development, are often featured, as are descriptions or legends associated with prominent caves.

The resources described above are only a brief sampling of the types and examples of materials that are available to the diligent researcher. The case studies that follow illustrate how archival materials can be correlated to discover previously unknown caves, or to provide information about “lost” entrances or previously unknown passages in otherwise well-known caves.

### **Forgotten Caves Rediscovered**

#### Patterson Cave Spring

One day, a few years ago, while scanning one of the indexes of property transactions for Fayette County, Kentucky, I came across a reference to a “quarry cave lot.” Intrigued, I pulled the deed book cited, and found an entry for May 12, 1857, in which Dr. [David] Bell of Lexington traded “a negro boy named Calvin, valued at \$600” to Thomas H. Waters for a “Quarry Lot” located between Merino Street and the Southern Railway, which contained “the old Patterson Cave Spring.”<sup>20</sup> The general area is now in the heart of urban Lexington, a poor working-class neighborhood known as Davistown, and there is no remaining trace of any quarry.

The vicinity was land originally claimed by pioneer Robert Patterson in 1776.<sup>21</sup> The quarry is mentioned by John Robert Shaw in his famous 1807 autobiography: “I entered into partnership with colonel Patterson, in the stone quarrying and lime burning business, and likewise leased two acres of land from him, for six years, at forty shillings per year.”<sup>22</sup> Shaw placed an advertisement in the 21 February 1799 issue of the *Kentucky Gazette*, stating that he was producing “excellent lime at his lime house about half a mile from Lexington, at Col. Patterson's quarry.” The quarry is also shown on the 1877 map of Lexington.<sup>23</sup>

As I later discovered, there are numerous historic references to a spring in this location, including the fact that the spring once supplied water for locomotives of the Cincinnati & Southern Railway. Only the 1857 deed, however, mentions a cave. I visited the site in 2006, not really expecting to find any remaining trace since the location was within the highly developed urban area, but to my surprise the site was a neighborhood park and the spring still flows. The quarry and cave are both long since covered over.

#### McMurtry Sink and Russell Cave

Russell Cave, which was surveyed in 1994 to a length of 4,629 feet by the author and members of the Blue

Grass Grotto of Lexington, is a stream cave that is one of the largest in the Bluegrass. There are several smaller caves known within the recharge area of the cave, including two, Barnes Cave and Turtle Cave, situated in a large sinkhole about 1,200 feet south of mapped passageway in Russell Cave. Thus, when I came across the following 1883 newspaper item written by Lexington resident John McMurtry, this particular sink came immediately to mind:

Over sixty years ago we recollect that curious visitors came from Lexington, year after year, at frequent intervals, to explore a cave on my father's farm, about one mile this side of Russell's Cave spring (now belonging to Mr. Kearney). This cave consists of an abrupt depression of about half an acre of land sunken below the general level, thirty or forty feet; three sides are perpendicular cliffs but accessible on the southwest side, and on its northeast side is an entrance to a cave that soon enlarges into an avenue fifty feet wide and twenty feet high. About one hundred yards on you come to what we called a river running northeast across the avenue, in which parties would amuse themselves in pitching in stones of five and ten pounds weight, in order to hear them strike the rocky ledge bottom and tumble from ledge to ledge until the sound became indistinct, giving evidence of great depth, and we vainly tried with slings to throw rocks to the opposite bank, but they would fall into the water with that peculiar sound, indicating ‘deep water,’ and a freshet washed into the cave a sled runner that came out at Russell's Cave, and satisfied parties that Russell's Spring was an overflow of this body of water.<sup>24</sup>

The description of the sinkhole in this account matches in all particulars the existing sinkhole on a farm on Ironworks Pike today. A search of the property records of Fayette County confirmed that the land was once owned by McMurtry's father.<sup>25</sup>

Turtle Cave is located high on the west wall of the sinkhole, a short, dry cave about 120 feet long. Barnes Cave, also on the west wall, is a single chamber which contains some flowing water. The newspaper account locates the cave entrance on the northeast side, which is the deepest part of the sink. The northeast side is a vertical wall, and beneath it, during wet weather, water flowing into the sinkhole disappears through a tangle of debris and sediment. Some years ago (1977), when I first came upon this sink, I spent some time trying to dig out these obstructions but was unable to make much progress. In the center of the sink is an old-fashioned rock-walled well, unused today, about three feet in diameter with a square concrete slab as a cover; a steel manhole provides access.

At the author's suggestion, Marc Cammack, a caver with the Blue Grass Grotto who was acquainted with the property owners, received permission to descend the well in 1996. The shaft proved to be about twenty feet deep, and at the bottom intersected a conduit two to three feet in diameter which led toward the deep end of the sink. The way was blocked by a large rock, which Marc was unable to shift. Thus, a significant local cave, which may well prove to be a "back door" into unexplored sections of Russell Cave, still remains to be investigated.

### **Forgotten Passages in Well-Known Caves**

#### Great Saltpetre Cave

Great Saltpetre Cave in Rockcastle County is one of the most historically significant caves in Kentucky. The cave was discovered in 1798 and was soon transformed into a saltpeter mining factory that outperformed even the Mammoth Cave operation, producing nitrates for gunpowder manufacture during the War of 1812 that helped preserve our nation's independence.<sup>26</sup> John James Dufour was responsible for the design and construction of the mine works, and carried out a compass and chain survey of the cave in 1805, the resulting map being the first known instrument survey of a cave in the United States.<sup>27</sup> During the twentieth century, several additional surveys were made of the cave, including one in 1981 by members of the Greater Cincinnati Grotto (GCG).

Angelo George of Louisville, Kentucky, has spent more than twenty years investigating the richly detailed history of this cave. As part of this research, Angelo obtained a copy of the Dufour map, and noticed a striking anomaly when he compared the 1805 map to the 1981 GCG map. A short section of passage was shown on the older map that was not present on the modern survey. In the cave, there was then no physical trace of the passage in the location shown by the map, save for a slight solutional indentation. Evidently the opening had been covered some time in the past, either by activities associated with nineteenth-century nitrate mining, or during the mid-twentieth century when some of the passages were leveled for a brief stint as a commercial show cave. Angelo first shared his discovery with other cavers as leader of a 1985 field trip to Great Saltpetre, pointing out the site of the buried passage, and, in 1988, published a slightly modified version of the 1981 map, to which he added the location of the entrance.<sup>28</sup> Two years later, in 1990, while conducting an inventory of some of the historic artifacts in the cave, Angelo met some of the GCG cavers and again brought up the existence of the lost passage. Dig here, he suggested. Later that year, he submitted an article for publication to the GCG's *Electric Caver*, which specifically noted the presence of the lost passage and included a new version of the 1981

map which depicted the passage as shown on Dufour's 1805 map.<sup>29</sup>

Ron Crawford of the GCG initially took up the challenge, and began excavating in the soft soil along the wall of the cave, hoping to uncover the lost passage. He managed to dig down about two feet before temporarily abandoning the effort. On 6 September 1992, Bill Carr, Tony Weibel, Jamie Foltz, Rob Weber, and Mike Short set to digging in Ron's prior excavation and, after about four hours, had taken the bottom down an additional six feet. They were exhausted from the task and were about to give up on the idea, when Bill decided to make one last effort. As he recalls:

On the next poke into the dirt the shovel went out of my hands and slid down into a cave passage. We opened up the hole big enough for all of us to squirm on down. I entered first but we agreed we would all explore the new section together and so we did. It split off in 2 directions not very far in. The left side was low and finally silted up to the ceiling. We dug on this for about another 40 feet till we stopped and tried the right side. The right side is dirt filled canyon. We dug upwards in the canyon till we were actually able to pop our head into an upper room. When we first entered the new section you could tell no one had been in this section since the mining days and artifacts were everywhere still sitting on the ledges, just like the miners left them.<sup>30</sup>

This was an amazing discovery! Smoked onto the wall, above a ledge, was the date 1804. The artifacts recovered, which included a wooden paddle used to scrape soil off ledges and the remains of a piece of cloth, probably used to carry soil, were later placed on display in the "Museum" section of the cave in a case built by Bill Carr.<sup>31</sup>

### **Alternate Entrances Rediscovered**

Sometimes old cave descriptions found in the historic archives do not seem to agree with the present-day passage configuration of a known cave. The discrepancy may simply derive from a different perspective; the writer may have entered the cave from a different entrance that is no longer known in the present day. When an historic description of a known cave does not appear to make sense, or describes a major cave that cannot be associated with any known in the area today, while it may represent a forgotten cave, possibly it may instead apply to a forgotten entrance. Reexamination and careful reading of cave descriptions can sometimes lead to one of those eureka! moments, as shown in the following accounts of Phelps Cave and Slacks Cave.

### Phelps Cave

Numerous references to 1,473 foot-long Phelps Cave, over a period of 170 years, appear in the historic record. The cave is located near a palatial nineteenth-century mansion known as "Cave Hill," which in recent years was the home of fried-chicken entrepreneur and former Kentucky governor, John Y. Brown, Jr. The only entrance known to modern cave explorers is in a hillside southeast of the mansion. Within the entrance, the passage forks immediately into two branches of approximately equal length, the right branch trending directly toward the mansion. Within this passage are a number of constructions dating from the mid to late nineteenth century, including a dry-laid rock wall across the passage with a doorway in the center, and, near the end of the passage, a welded iron gate before a small passage blocked by rubble. The left-hand fork from the entrance was unknown during the nineteenth century, being a discovery made in 1921 by a boy on the farm, who dug into an entirely new section.<sup>32</sup>

Nineteenth-century descriptions of the cave did not appear to relate very well to the known, older passage. In 1832, Constantine S. Rafinesque, then professor of natural history at Transylvania University in Lexington, published a short article titled, "The Caves of Kentucky," which gave short descriptions of about a dozen caves in the state. Among the caves mentioned was Bryans Cave, a "small dry cave in limestone, with a small spring at the entrance. It is like a crooked gallery, 380 steps long, 6 to 10 feet high and wide, with an even floor and roof. It is used by Mr. Bryan as a spring house."<sup>33</sup> The land on which Phelps Cave is located was originally settled by David Bryan, and upon the death of his son William, the land was sold to Judge John S. Phelps.<sup>34</sup> This is certainly the same cave, but the problem is in the description. The 1832 description mentions a spring and spring house, but the present entrance is some distance away from a surface stream and contains no flowing water. Later accounts note that the cave was used as cold storage for butter, milk, and fresh vegetables, but since the hillside entrance is nearly a thousand feet from the house, this would hardly be practical.<sup>35</sup>

Rafinesque's 1832 account is not referring to the modern entrance, but to a former entrance, now covered. In 1879, a description in the *Kentucky Gazette* made note of TWO separate entrances: "In the side of the hill in the rear of the yard, a door opens into a cave which extends several hundred yards with an opening at the other end out into a woodland pasture."<sup>36</sup> The 1964 Blue Grass Grotto survey of Phelps Cave indicates that the iron gate within the cave is located beneath the yard about three hundred feet to the rear of the mansion, adjacent to Cave Creek. Very near to this point, a significant spring discharges to the surface stream, doubtless the spring mentioned by Rafinesque. The final piece of evidence is found in the 1987 research of Larry

Spangler, who, as part of his study of the karst hydrology of the region, injected dye into sinks just to the southeast of the cave, which was later recovered at the spring.<sup>37</sup>

All this evidence rather strongly indicates the presence of a former entrance to Phelps Cave at the site of the present spring, covered sometime in the past, perhaps to prevent trespassers or thieves from making their way through the cave from the woodland entrance to emerge behind the house.

### Slacks Cave

Slacks Cave in Scott County, Kentucky, represents the most intriguing case of historical detective work in which I have engaged. Slacks, at 7,040 feet length, is one of the longest caves in the Inner Bluegrass karst region, second only to Mundy's Landing Cave in Woodford County. The cave is essentially a single long stream passage, generally of walking height, divided into two sections by a karst window from which both sections can be entered, on opposite sides of the sinkhole. The downstream end of the cave terminates in a sump.

The first description of a cave in Kentucky, as mentioned previously, appeared in the 7 June 1790 issue of the *Kentucky Gazette*, a short account of a mission to rescue a lost calf:

On the 3d of May last, Mr. John Garnet near the mouth of Cain [Cane] Run in Woodford County, lost a calf which was supposed to have gone into a Cave at the head of a spring; the Cave was examined some distance underground, but as they proceeded the passage was obstructed by a large current of water, upon which he had a boat built and proceeded by water up the stream about three-quarters of a mile, when they overtook the Calf, which they recovered, and brought down to the mouth again. They saw no evidence of an end to the passage, the aperture as large where they stopped as at any other place. They were provided with candles to see their way.

The mouth of Cane Run lies in present-day Scott County, but in 1790 this area was still part of Woodford County. Near the junction of Cane Run with the larger Elkhorn Creek is a set of springs. About a thousand feet south of the springs is another outlet at the head of a ravine, usually dry. Water rises vertically here through rock rubble during times of heavy precipitation, forming an overflow spring which has a higher discharge at such times than the lower, main spring. A local tradition holds that there was once a cave entrance here.

Dye tracing conducted by Larry Spangler in 1980 demonstrated that the stream flowing through Slacks Cave discharges from these springs into Elkhorn Creek.<sup>38</sup> The downstream section of the cave leading to

the sump is a large stream canyon, in which the water is generally quite deep; the passage averages twenty to thirty feet high and thirty feet wide before ending abruptly. The sump within the cave is about 3,300 feet from the overflow spring at Elkhorn Creek.

The *Gazette* account suggests that the Garnet party traveled through a relatively dry passage for a short distance before reaching a place where they felt a boat necessary to continue. If this was the case, this upper opening may have then descended to merge with the cave stream below, at low flow. The account further states that the party traveled “by water up the stream three-quarters of a mile,” indicating that the water must have been deeply pooled throughout. The quoted extent of exploration, three-quarters of a mile, places the calf interception point very near to the sump in Slacks Cave. If this interpretation is accurate, then there may be only a single sump separating Slacks Cave, second largest in the Bluegrass, from a considerable quantity of large trunk passage leading to the sealed entrance on Elkhorn Creek.<sup>39</sup>

## Conclusion

The dynamic processes at work in karst landscapes assure that no one will ever be able to answer the question, “How many caves are there?” for a given locale. Many more caves yet remain to be discovered. This is certainly true for areas that have yet received little attention from organized cavers, but even in locales that have been frequently combed, new entrances are found—or sometimes made, with effort—with encouraging frequency.

Some years ago, the author counted himself among that dedicated cadre who sought to discover new caves by physically investigating the landscape. As I have grown older and slower, I may be less able to tramp up and down steep and tangled terrain, but I find that I can still derive considerable pleasure from negotiating the wilderness of institutional archives, pursuing the same end—the thrill of discovery—but in greater comfort.

## NOTES

1. The author is currently finishing a manuscript which contains detailed historical accounts of more than fifty caves and springs in the vicinity of Lexington, Kentucky. This article is intended to share the methodology used and provide some interesting anecdotes taken from the manuscript.
2. Interview with Samuel Matthews, n.d. (circa late 1840s), Draper Mss, 11CC157.
3. Tench Coxe, *A statement of the arts & manufactures of the United States for the year 1810. Part III. Tabular statements of the several branches of American manufactures* (Philadelphia, 1814), 22.

4. Advertisement quoted is from the collection of William M. Ambrose of Lexington; identity of the periodical in which it appeared is unknown. The claim that Wilson Spring is the largest in Kentucky is a typical exaggeration.

5. The Civil War was another period when cave saltpeter was in high demand, but only by the blockaded Confederacy, and so cave-hunting for this purpose was generally limited to the Southern states. Since the industrial North did not require cave saltpeter, there was no need to develop mining sites in Kentucky, a border state controlled by Union troops.

6. *Lexington Kentucky Gazette*, 7 June 1790.

7. Anonymous, “A letter, touching Russell’s Cave, from a tourist in Kentucky to his friend in Philadelphia.” *Western Review, and Miscellaneous Magazine* 3 (October, 1820), 160-164. For more information, see Gary A. O’Dell, “A history and description of the Russell Cave, Fayette County, Kentucky,” *Journal of Spelean History* 19 (July-September, 1985), 64-73, and Gary A. O’Dell, Ron Householder and Frank Reid “Subterranean explorers: Mapping Russell Cave with GPS and magnetic induction radio.” *GPS World* 7 (October, 1996): 20-33.

8. This is not the same as the better-known Royal Spring of Georgetown, Kentucky.

9. See O’Dell, G.A. and J.R. Rebmann (1996) “The rescue of McConnell Springs historic site: A partnership between local government and the citizens of Lexington, Kentucky.” In *Proceedings, 1995 Cave Management Symposium*, ed. G.T. Rea, 255-266. Indianapolis: Indiana Karst Conservancy, Inc.

10. Kentucky Historical Society, *Certificate Book of the Virginia Land Commission, 1779-1780* (Greenville, SC: Southern Historical Press Inc, 1992), 22. The Virginia Land Law of 1779 allowed residents of Kentucky District to claim settlements of 400 acres and additional 1000-acre preemptions if they met certain residency requirements. The Beech Fork of the Rolling Fork of the Salt River flows through Washington and Nelson counties, Kentucky. This quotation is provided as an example; I have not attempted to determine if this “Cave Spring” refers to a cave known today by another name.

11. Land offices in various other states provide similar information; the Kentucky Land Office, for example, can be accessed at <http://www.sos.ky.gov/land/>.

12. The series of abstracts by Charles R. Staples was published in consecutive issues of the *Register of the Kentucky Historical Society* during the period.

13. Deposition of Benjamin Pettit, 10 October 1790, “Benjamin Estill and Samuel Rice vs. John Bruce,” Lexington District Court, *Land Trials*, 298, Kentucky Department for Libraries and Archives, Frankfort. The deposition was abstracted in Charles R. Staples, “History in Circuit Court records,” *Register of the Kentucky Historical Society* 28 (July 1930), 219-220.

14. Deposition of Samuel Boggs, 5 April 1801, "George G. Taylor vs. James Lindsay," Fayette Circuit Court, *Complete Record Book A*, 381, Kentucky Department for Libraries and Archives, Frankfort. Abstracted in Charles R. Staples, "History in Circuit Court records," *Register of the Kentucky Historical Society* 30 (January 1932), 64.
15. Fayette County *Will Book R*, 1-4, 15 September 1845, division of lands of Robert Tucker.
16. There are numerous indexes of the Draper papers. For example, see Josephine L. Harper, *Guide to the Draper Manuscripts* (Madison, State Historical Society of Wisconsin, 1983). McDowell Publications offers several "Calendars" or indexes of the papers, including ones for the Kentucky Papers, Tennessee and Kings Mountain Papers, Frontier Wars Papers, Preston and Virginia Papers, and George Rogers Clark Papers. Heritage Books has published partial transcripts and indexes, including volumes on the Virginia Papers and on the Georgia, Alabama, and South Carolina Papers.
17. Interview with Isaac Clinkenbeard, Draper mss. 11CC1-4. Clinkenbeard's visit to the gunsmith may have been prompted by damage to the weapon sustained shortly after Estill's defeat (the Battle of Little Mountain in Madison County, March 1782). Clinkenbeard had not been present at the skirmish but afterward helped to bury the dead. When they arrived at the battleground, he saw "an Eagle eating of [James] Estill, & he c'dn't fly, and I took after him w my gun stick and killed him." The term "gun stick" was used for the ramrod of a long rifle, which may have been damaged or broken by Clinkenbeard in his rage. Native raptors of Kentucky that feed upon carrion are the turkey vulture, red-tailed hawk, and bald eagle.
18. Entry for 16 August 1800, Journal of Robert B. McAfee, transcript, Kentucky Historical Society. The author is indebted to Blue Grass Grotto member James C. Currens for bringing this item to his attention. Robert B. McAfee is one of his ancestors.
19. "Cave running under Main Street," *Lexington Leader*, 26 July 1906.
20. Fayette County *Deed Book 33*, 447. The quarry is shown on the 1855 Hart & Mapother and the 1877 D.G. Beers maps of Lexington.
21. *Certificate Book*, 105, 3 January 1780; Virginia Land Office Grants O, 1785, 221-223 (Reel 55); Virginia Land Office Grants No. 22, 1789-1791, 584 (Reel 88).
22. John R. Shaw, *A narrative of the life and travels of John Robert Shaw, the well-digger, now resident in Lexington, Kentucky* (Lexington: Daniel Bradford, 1807) 183-185.
23. Atlas of Bourbon, Clark, Fayette, Jessamine and Woodford counties, KY (Philadelphia: D.G. Beers & Co, 1877).
24. John McMurtry, "Underground streams," *Lexington Daily Transcript*, 25 September 1883.
25. The property was purchased by John Kearney in 1863 from Ben F. McMurtry; Fayette County *Deed Book 59*, 7.
26. Angelo I. George, *The Saltpetre Empires of Great Saltpetre Cave and Mammoth Cave* (Louisville, KY: HMI Press, 2001).
27. John J. Dufour, "A survey of the Great Salt Petre Cave on Crooked Creek in Madison County, Ky." Unpublished map, 1805 (American Philosophical Society, Philadelphia).
28. Angelo I. George, personal communication, 6 July 2007; Angelo I. George, "Saltpetre field trip," *The caves of southeastern Kentucky*, eds. C. Hacker, D. Vore, B. Vore (Lexington, Kentucky, 1985), 15; Angelo I. George, "Interim chronology of historic events at Great Saltpetre Cave, Rockcastle County, Kentucky," *Journal of Spelean History* 22 (April-June 1988), 8.
29. Angelo I. George, "Place names changes, cultural geography and distribution of saltpetre hoppers in Great Saltpetre Cave," *Electric Caver* 26 (July, 1990), 74.
30. Bill Carr, "GSP historical find," *Electric Caver* 29 (October, 1992), 21; Bill Carr, "Great Saltpetre." Personal email, 12 June 2007.
31. Great Saltpetre Cave today is the property of the Rockcastle Karst Conservancy and the property is managed and maintained by cavers as an historic and nature preserve with limited access to the general public. For more information about the cave and its history, see the RKC website: <http://www.rkci.org/>.
32. Arthur M. Miller, "Licks and caves of the lower Ohio Valley as repositories of mammalian remains, including those of man," *Bulletin of the Geological Society of America* 33 (March, 1922), 158.
33. C. S. Rafinesque, "Caves of Kentucky," *Atlantic Journal, and Friend of Knowledge* 1 (Spring, 1832), 29.
34. Fayette County *Will Book L*, p. 453, 20 June 1833, Will of David Bryan, probated August 1834; Fayette County *Deed Book 63*, pp. 151-153, 12 April 1881, Deed, Heirs of William Bryan to Jennie P. and John S. Phelps.
35. "Wildwood," *Lexington Kentucky Gazette*, 28 June 1879; William D. Funkhouser and William S. Webb, *Ancient life in Kentucky* (Frankfort: Kentucky Geological Survey, 1928), 135.
36. "Wildwood." *Kentucky Gazette*, 28 June 1879.
37. Lawrence E. Spangler, unpublished research report (1989) provided to author. A more detailed description and history of this cave can be found in Gary A. O'Dell, "Phelps Cave," *NSS News* 47 (December, 1989): 296-299. National Speleological Society.
38. Lawrence E. Spangler, *Karst hydrogeology of northern Fayette and southern Scott counties, Kentucky*. (Masters thesis, University of Kentucky, Lexington, 1982).
39. For more information about this cave, see Gary A. O'Dell and Lawrence E. Spangler, "Slack's Cave Bicentennial, 1790-1990. *NSS News* 48 (March, 1990), 60-63.

# Abstracts from the Spelean History Session 2008 NSS Convention, Lake City, Florida

Session Chair: Dean Snyder

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## Speleological Clues: Following in the Footsteps of John and William Bartram, Eighteenth Century Botanists Extraordinaire

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The early naturalists of our country, no matter what their specific disciplines, were often quite descriptive of their geological surroundings. For example, well known Quaker botanist, William Bartram referenced in his *Travels* numerous caves, springs, and other karst features of interest to the speleologist.

While perusing an excerpt from John Bartram's diary of 1765 describing his travels through the Carolinas, Georgia, and Florida, the author of this paper found a vague reference to what sounded like a talus cave in Bladen County, North Carolina: "August, 8, Walked out to Donahoos Creek to search for fossils with Billy (son William)... Sometimes ye creek would plunge down between vast rocks and not appear on ye surface for many perches unless in great cavities between ye rocks."

Although Bartram's talus caves were not located, a real bonus for the search occurred in the discovery of a new limestone solution cave at the base of a hill along the same creek. Were it not for John Bartram's early description, chances are pretty slim that a ridge walk would have even been considered here.

## A Note on the History and Material Culture of Bellamy Cave, Tennessee

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Bellamy Cave is a large and well-known cave located in Montgomery County, Tennessee and currently managed as a biological preserve for the endangered Gray Bat. An examination of historical sources, and limited, initial investigations of the material culture on-site, allows the outlines of the history of Bellamy Cave to emerge. In the mid-to-late Mississippian period, Native Americans explored much of the cave. They also utilized it for mortuary and ceremonial purposes, as a clay mine, and perhaps as a habitation site. After Euro-American settlement, the cave was also utilized in a number of ways. The cave was an industrial space, serving as a moderate-to-large saltpeter mine in the war of 1812 era. Guano was also extracted for sale later in the nineteenth century. The cave was a cultural curiosity and social space, portrayed in the local press as a natural wonder and utilized as a place of public resort, including picnics and cave exploration. Bellamy Cave was also a hidden space, where the body of a murder victim was deposited in 1882, which upon discovery led to a sensational and significant murder trial. Finally, Bellamy Cave was part of the household or domestic economy, used for storing food and possibly liquids, and also as a water source. Thus all five categories of use in the history of American caves are represented at the site. The current study suggests that the cave will reveal even more with additional research.

## History in Grotto Newsletters

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By shelf-length, the grotto newsletters comprise the largest collection in the NSS Library. This collection contains a vital historical record of the chapters of the Society, and indirectly of the Society itself. However, the maintenance of this collection is at a turning point. Many of the grottos are now publishing their newsletters online, and in some cases the Library is not receiving a paper copy to put on the shelf. An open question is whether it is desirable or practical to make a transition from shelved paper copies of the newsletters to an online collection on the Library webpage. The grottos must have a role in answering this question because copyright and public access policies differ from grotto to grotto. There is also the question whether back issues should be scanned and added to an online collection. A solution could be for the Library webpage to provide publicly accessible sites where each grotto, using a specific password, could load its newsletter. Each grotto could also scan back issues and put them online. This potential solution leaves to each grotto the policy decisions of online publishing and access. The payoff could be a rich, online, historical resource for Society members and other scholars. When back issues for any grotto are scanned, another payoff would be the assurance that their content could not be lost due to deterioration of old paper copies or due to a catastrophe at the NSS Library.

### **Rest in Pieces: A Cave Inside the Old Man of the Mountain, Franconia Notch, New Hampshire**

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Sometime during the darkness of the very early morning hours on 3 May 2003, the venerable Old Man of the Mountain of New Hampshire collapsed from natural causes. The Old Man, a profile of a human face, was first noted in 1805 and was adopted as the official symbol of the State of New Hampshire by its legislature in 1945. It was one of the most recognized rock formations in North America and the likeness has appeared in books, posters, postcards, souvenirs, stamps, and the statehood quarter of New Hampshire. Although the demise of the Old Man was a sad event for the people of the Granite State, the memory of this icon lives on.

One of the most unusual, and barely known caves in New England existed within the rock mass comprising the Old Man's face. Like the profile, the cave has vanished, as the granitic blocks that defined its walls, floor, and roof now rest on the talus slope at base of Cannon Mountain in Franconia Notch State Park in the White Mountains. Although not visible from a distance, this small opening was noticed and sketched during a structural stability study of the Old Man formation in 1976 by Bryan K. Fowler, a New Hampshire engineering geologist. Based on this study, it is likely that the cave contributed to an overall weakness of the rock mass that eventually lead to the collapse. It may even have had a pivotal role.

### **William Karras and the Speleological Society of America**

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During the 1960's the NSS as well as well most organizations were challenged by the "free thinkers" of society who rebelled against controls, laws and regulations. The caving community had consisted of unique sophisticated individuals who supported a scientific structure. However, it was rapidly changing to one with a majority of sport cavers. The younger generation just wanted to have fun and wasn't interested in attending seminars at major hotels in Washington, DC. Most were content with doing their own thing but others desired to be leaders with many followers. The story of William G. Karras is a classic example of the internal struggles that occurred both within the NSS and the grotto. The formation of the Speleological Society of America (SSA) was of great concern to the "bureaucrats" of the NSS due to the potential loss of revenue as well as national recognition. The effects of the publicity was changing the manner of many procedures. Although William Karras attracted the headlines of this time, his tactics served as guidelines for others to follow.

## Clippings & Reprints

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*The following piece, by R. W. Strong, appeared in the Saint Paul Pioneer Press for November 11, 1900. The first half of it was reprinted in the 1980 NSS Convention Guidebook. The "mammoth cave" mentioned in the opening sentence is said to be located two miles southwest of Osceola, Wisconsin, but on the Minnesota side of the St. Croix River, and is usually identified with Leslie Cave (as it is called in the Guidebook), also known as Knapps Cave (on the USGS quadrangle), even though the true distance is more like three miles.*

*The second half of the article, omitted from the Guidebook, but included below, describes well-decorated "great crevices" nearby, also on the Minnesota side, and a gold mining venture. More than a century later, I spent several days prospecting for these crevices, finding a roomy, dozen-foot crevice in basalt, in the town of Taylors Falls, Minnesota, just below the St. Croix Falls Dam. A crevice in this location was mentioned as early as 1850 by E. S. Seymour in his book, Sketches of Minnesota, the New England of the West, and the abundance of large fissures near Taylors Falls generally was remarked upon by Charles Berkey in his 1897 article, "Geology of the St. Croix Dalles." Milk-white calcite, described by Strong, does indeed coat the walls of the crevice in one small patch, but there are no "icycles." Of course, it's possible that other crevices were submerged by construction of the dam itself, completed in 1907.—Ed.*

### Caves of the St. Croix

Osceola, Wis., Special, Nov. 10.—A mammoth cave has been discovered, or rediscovered, in a large rock bluff on the Minnesota side of the St. Croix river, two miles southwest of Osceola. Its entrance is half way up on a solid rock bluff 200 feet high and is large enough to admit a man walking erect.

It has long been known that a small cave existed there, from the fact that that was the place where the Sioux and Chippewas made their peace treaties, and also from the fact that Indians often met there in mortal combat, spilling their life's blood on the moss-covered rocks, but it was not supposed to be of such mammoth proportions until recently.

An investigation regarding the value and construction of this cave was made this week by Fred Lindberg and William Messenger, two Osceola citizens, and the representative of the Pioneer Press, and they discovered some wonderful features.

The first apartment of the big cave is some thirty to forty feet wide by ten to twenty feet high and 100 feet long. Leading from it is

a round passageway about two feet in diameter and twenty feet long, which leads to another room of the same dimensions. Then from this another passage way leads to a third room. In this manner dungeon after dungeon is passed, but it is now impossible to go into it more than 500 feet, owing to the foul air which predominates.

Partitioned from the large room are several smaller apartments, hewn from solid rock—there may be a hundred of them, it is impossible to state—which proves beyond a doubt that, while the cave proper may be the work of nature, these rooms are the result of labor by human hands—perhaps a thousand years ago.

The first one of these small rooms is reached soon after entering the main cave, by a stairway leading upward to a point at least twenty feet high, at the top of which is a small round entrance, eight feet long and just wide enough to allow a man to crawl through, but when once past this one enters a room at least twelve feet square and six feet high, hewn from solid rock. This room, like the others, has only one outlet, but is perfectly dry, and is

large enough to accommodate two persons for all ordinary purposes.

An attempt was made to find the remains of or utensils employed by the builders of this wonderful cave, but nothing of importance was discovered, except utensils bearing dates as early as 1840, and Indian signs.

Some of the old residents here claim that thieves made this cave their home forty or fifty years ago, and it is possible that treasures are hidden there to-day. It is well known that one thief stole sixteen head of cattle and kept them there for several weeks about thirty years ago. A small, winding path from above the bluff was no doubt employed to drive the animals into the cave. The animals were recovered, but the thief hid in some unknown recess and escaped.

Many persons now believe that this cave will equal in magnitude the wonderful Mammoth cave of Kentucky, or the Black Hills caves of South Dakota, and they have good reason for believing this, for nearly a mile back of the front entrance to the cave is a large recess in the earth, into which a stream disappears, and it is thought to be an entrance to the cave. Further investigation will be made.

Five miles north of this mammoth affair, also situated in a huge rock bluff on the west side of the river, are two smaller caves of a peculiar nature. These caves are great crevices, large enough to admit a man walking erect for 100 feet or more. Hanging from their walls is a limestone formation resembling icicles, from and through which

spring water trickles to the floor, which is also composed of similar substance, resembling frozen flowing water. Thousands of these milk-white "icicles" hang from every conceivable nook and corner, giving an exceedingly cold, frigid appearance. This substance is very hard.

Curiosity seekers have disfigured the beauties of these caves to some extent, but the crevices gradually diminish in size, stopping their progress, although with the aid of a searchlight one can look for many yards down into the cold, damp inclosures.

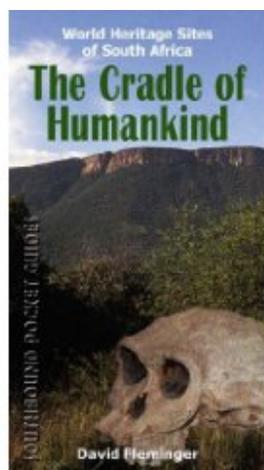
Just across the river, east of these caves, a veritable mountain of copper quartz has recently been discovered, and miners are now there at work. An Eastern syndicate has secured an option on the entire ledge, which is three miles long, and will push the work.

Then, just south of these caves is a large rock bluff protruding into the river. It is called the conglomerate rock, and contains many kinds of ore, including gold and silver. Twenty years ago miners worked on this ledge, but did not have the capital to go ahead on an extensive scale. However, one miner stayed three years and washed gold from streams in that locality.

With its natural caves, minerals, waterfalls, perpendicular bluffs, rivers, lakes, trout brooks and other scenery and sporting features equal in beauty and liveliness to those of Yellowstone Park, the Interstate Park of Minnesota and Wisconsin is destined to become one of the most popular summer resorts in the United States.—R. W. Strong.

## Book Reviews

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***THE CRADLE OF HUMANKIND*** (2008) by David Fleminger. 30° South Publishers. Johannesburg South Africa. Paperback, 144 pages, 4" x 7" format, ISBN 9-780958-489133. Available for \$10.95. Reviewed by Danny A. Brass.

Among the most famous archaeological sites in the world are the many fossil-bearing dolomite caves of South Africa. The region known as the Cradle of Humankind contains a number of sites that are particularly rich in high-quality hominin fossil remains (i.e., the remains of our distant ancestors, Tribe Hominini of the Subfamily Homininae), with finds dating to as much as 3.5 million years ago. Among the wealth of fossils unearthed are some of the most important finds ever made, including Raymond Dart's famous Taung child (the first species of australopithecine ever found—*Australopithecus africanus*—and, in fact, the first significant hominin fossil to be found in all of Africa), and Robert Broom's outstanding Mrs. Ples (the most complete *A. africanus* skull ever found in South Africa). Many other luminaries in the field

of paleoanthropology have labored in the rich fossil beds of the Cradle and the area is still an active site of excavation.

The annals of paleoanthropology duly record the scientific community's initial skepticism of the *Australopithecus* skull found by Dart. In a time when the smart money centered on an Asian origin of humanity and the scientific world was still in the grip of the infamous Piltdown hoax, Dart was heavily criticized by his peers. However, Broom's discovery—bolstered by additional finds—provided valuable support for the ultimate acceptance of the australopithecines as ancestral hominins and for the inevitable recognition of the African continent as the birthplace of humanity.

Because of its tremendous historical significance and continuing importance to ongoing paleoanthropology research, the Cradle of Humankind was declared a World Heritage Site by UNESCO in 1999. The site itself consists of a large number of caves, the most important of which are Sterkfontein, Swartkrans, and Kromdraai.

Like a number of other archaeologically important cave sites—such as Britain's Creswell Crags with its Ice-Age petroglyphs and a variety of painted caves in France and Spain (including several manmade replicas)—many of the numerous caves in the Cradle are open to the public.<sup>1</sup> While some can be visited on regularly scheduled guided tours others

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<sup>1</sup> For persons interested in touring Europe's publicly accessible painted caves, *Cave Art: A Guide to the Decorated Ice Age Caves of Europe* (2007) by Paul Bahn, is an invaluable resource; a review of this title can be found in JSH#132.

require prior arrangements through one of the specially licensed tour-group operators in the area.

In this most recent addition to the Southbound Pocket Guides to South Africa's World Heritage Sites, David Fleminger provides a wealth of information for travelers interested in touring this celebrated locale that figures so prominently on the stage of human prehistory.

Information provided in this guidebook includes details of guided cave tours (including costs, hours of operation, and contact information for arrangement of special tours of various archaeologically active sites), availability of on-site facilities, and descriptions of the various museums—both in and out of the Cradle—that specialize in human-origins displays. Material is also provided about the numerous other visitor attractions in the region, including contact information, detailed driving directions and road maps, details of room and board, options for area dining, and information about local flora and fauna.

A visit to the Cradle of Humankind or to any of the painted caves of Europe is nothing short of a journey of self-discovery, helping travelers to uncover the deepest origins of the human species. For readers who aren't actually planning a South African vacation in the near future, but who are still quite interested in human prehistory, Fleminger also provides a wealth of detailed information about the area's caves and the historical significance of local fossil finds to our understanding of human origins. A detailed discussion of human evolution places these finds into appropriate context for general-interest readers not already versed in the subject. Many of the Cradle's most famous caves are considered from an historical

perspective, with information provided on early gold-mining activity, quarrying operations, and fossil excavations. Almost two dozen distinct locations on the overall heritage site are discussed.

A great deal of fascinating regional history, including details of regional tribal culture and bloodthirsty battles, is also included. In a discussion worthy of inclusion in Paul Steward's (2005) *True Tales of Terror in the Caves of the World*, Cave Books (see review in the *NSS News*, June 2005), one of the most fascinating tales is that of the grisly battle between the native BaTlou tribe and the Boer Voortrekkers which took place at Makapan Cave. Entrenched within the impregnable fortress of the cave for almost a month while fending off the invading horde of Voortrekkers, the BaTlou people gradually became weaker and weaker. When the Boers were finally able to safely storm the entrance, they found a mass grave of almost 1,500 people, who had reportedly succumbed to dehydration, starvation, and histoplasmosis.

*The Cradle of Humankind* is a well-written and interesting book, easily digested by the general reader. More than 80 full-color photographs highlight the beauty and diversity of the region, its people, and its wildlife. A useful list of relevant references and websites is also provided. This pocket guide is sure to be an invaluable aid to travelers interested in the story of human origins or spelean history as it unfolded in this part of the world.

## *The Peter M. Hauer Spelean History Award*

“The Peter M. Hauer Spelean History Award is established to provide annually a cash award to be given to an individual or group of individuals engaged in an outstanding spelean history project.”

1. 1979 Kevin R. Downey
2. 1980 Jack H. Speece
3. 1981 Anne Whittemore
4. 1982 Joel Sneed
5. 1983 Larry O. Blair
6. 1984 Marion O. Smith
7. 1985 Trevor R. Shaw
8. 1986 Gary K. Soule
9. 1987 Angelo I. George
10. 1988 William R. Halliday
11. 1989 Russell H. Gurnee
12. 1990 Larry E. Matthews
13. 1991 Cato Holler
14. 1992 Dean H. Snyder
15. 1993 Chris Howes
16. 1994 Stephen Craven
17. 1995 Fred Grady
18. 1996 Paul Damon
19. 1997 Tom and Kim Metzgar
20. 1998 Joseph C. Douglas
21. 1999 Charles J. DeCroix
22. 2000 Dale R. Ibberson
23. 2001 Robert H. Thompson
24. 2002 John C. Taylor
25. 2003 Daniel S. Snyder
26. 2004 Roger Brucker
27. 2005 Greg A. Brick
28. 2006 Thomas Lera
29. 2007 Robert Hoke
30. 2008 Jim Whidby