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The American Speleian 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: “Alum Cave, Tennessee” (reproduced from Lanman 1869:328).
See the article by Don Ball in this issue.
Although it is a well-known destination to modern day hikers in the Great Smoky Mountain National Park, Alum Cave (see cover of this issue) in Sevier, County, Tennessee, has attracted little attention from students of spelean history. In large part, this may be attributable to the same rugged terrain and remoteness which has traditionally made any visit to this site an excursion in its own right. Matthews (1971:82) has succinctly observed:

Alum Cave is not a true cave but a large rockshelter. It is a favorite hiking objective of many visitors to the [Smoky Mountain] Park every year. An excellent trail leads to the main park road, U.S. Hwy. 441, to Alum Cave and continues on to the summit of Mount LeConte.

The present study will review available early information on this cave’s natural setting and mineral resources, known nineteenth century accounts of visitation, and summarize available (albeit limited) historical information about this cave.

Geology, Mineral Resources, and Topography of Alum Cave

The earliest formal geological study of Alum Cave was undertaken about 1855 by James Merrill Safford (1822-1907) and reported in A Geological Reconnoissance [sic] of the State of Tennessee (Safford 1856). During his long professional career, Safford authored or co-authored several books concerned with the geology of Tennessee (e.g., Safford 1856; 1869; Safford and Killebrew 1904). In a table of regional elevations appearing in Geology of Tennessee, a later work, Safford (1869:33) lists Alum Cave as being located on Mt. Guyot at 4,791 feet (an elevational figure also reported by North Carolina State Geologist (1875:44). The same table (Safford 1869:33) places the peak of Mt. Guyot at 6,636 feet. In his brief remarks on the cave’s mineral resources, Safford (ibid.:191, §450) observed:

The slates of these mountains are often silvery, or semi-micaceous in appearance. At points they are dark bluish, and contain much pyrites, which, in sheltered places under the rocks, decomposes and forms, with alumina and magnesia, from the decomposing rocks, alum and Epsom salt. There is a noted locality of this kind on the side of one of the great ridges near the line of our section, called Alum Cave.

Elsewhere in his survey of the state’s geology (ibid.:503, §1326), he remarks:

Epsomite, or Epsom Salt, is one of the products of oxidation, found with alum, copperas, and nitrocalite, in caves and “rockhouses.” Alum Cave, in Sevier County, is an interesting locality.

In an article entitled “The Mountain Regions of North Carolina and Tennessee,” Anonymous (1859:703) reports: “Summit of Road Gap near the Alum Cave … 5,314 feet.” The same source (ibid.:704) describes the surrounding landscape:

The highest Smoky Mountains are near the head waters of the Ocona-luftu and Little Pigeon rivers, being accessible from Tennessee via Sevierville, and up the Little Pigeon to a Mr. Hawkins's, who lives eight miles from the top of the gap-road, which is near the alum cave; and from North Carolina by the road up the Ocona-luftu to Mr. Collins's house, seven miles from the top of the afore named gap-road.
The geology of the mountains south and west of Asheville has a good deal of sameness, they being composed of crystalline rocks, with the exception of a narrow strip, extending southwest along the Unaka or Smoky Mountains, which belongs to the taconic system of Emmons. The taconic rocks here consist of dark colored shales in which we do not remember to have seen any organic remains. The strata of these rocks are in many places nearly and often quite vertical. They are well exposed along the Middle or Straight Fork of the Ravensfork in descending from Mount Guyot to the Ocona-luftu...

Early Accounts

During his long and varied career, Charles Lanman (1819-1895) was a prolific author writing and editing in excess of twenty books and numerous magazine articles and continues to be respected by art historians for his romantic landscapes. He wrote on varied subjects and is perhaps best remembered by historians for his biographical sketches of the members of Congress (cf. Egelston and Fischer 1983; Lanman 1859; 1876; 1887) and naturalists for his numerous travelogues and books on nature and the landscape (Lanman 1841; 1842; 1845; 1847; 1848; 1849; 1850; 1853; 1854; 1856). For students of spelealn history, it is from this latter body of his work that the much of the available early history of Alum Cave may most productively be extracted.

But a cursory review of Lanman’s works quickly reveal that he was not in the least bashful about recycling a good tale or descriptive passages in subsequent publications. Careful to avoid dates, his accounts of adventures in little known parts of the countryside tended to remain perpetually fresh and appealing to another segment of the reading public. Recognizing this tendency, it is noted that an extended review (Anonymous 1850:44) in the September 1850 issue of Southern Quarterly Review of Lanman’s (1849) Letters from the Alleghany Mountains specifically mentions Lanman’s travels to Alum Cave thus dating his visit to about 1848.

Effectively marking the earliest account of Alum Cave, Lanman (1856:1, 403-406) observes in a later book entitled Adventures in the Wilds of the United States and British American Provinces:

[Page 403] The ordinary time required to visit the Alum Cave is two days: but, owing to bad weather, my friend and myself occupied the most of four days in performing the same trip. To give a minute account of all that we met with would occupy too much time, and I will therefore only record in this place the incidents which made the deepest impression on my own mind.

Our first night from home we spent in the cabin of a man who treated us with the utmost kindness, and would not receive a penny for his pains. So much for mountain hospitality. And now, to prove that our friend was an intelligent man, it may be mentioned that he is an adept in the following professions and trades, viz. those of medicine, the law, the blacksmith, the carpenter, the hunter, the shoemaker, the watchmaker, the farmer, and he also seemed to possess an inkling of some half dozen sciences. Now, I do not exactly mean to assert that the gentleman is a master practitioner in all these departments of human learning and industry; but if you were to judge of his ability by his use of technical words, you would not for a moment imagine he could have a competitor. But so it is in this wild region, one man has to perform the intellectual labor of a whole district; and what is really a hard case, the knowledge which is thus brought to so good a market is nearly always the fruit of a chance education and not a systematic one...

[Page 404] On the following morning we travelled to the foot of Smoky Mountain, and having obtained a guide, who happened to be one of the proprietors of Alum Cave, we resumed our journey. In the immediate vicinity of the cave we came across an Indian camp, where were two Indians who were out bear-hunting.
We were admitted under their bark roof, and with them spent the night, sleeping upon the ground. We remained a sufficient [pg. 405] length of time to enjoy one supper and one breakfast...

On questioning our Indian landlord, as we sat around our watch fire, with regard to the Alum Cave, I could only gather the fact that it was originally discovered by the famous chief Yo-na-gus-ka, who happened in his youth to track a bear to one of its corners, where he had a den. Disappointed on this score, I then turned to our guide to see what he could tell me about the cave that was not connected with its minerals, and the substance of his narrative was as follows:

“I hav’n’t much to say about the cave that I knows of excepting one or two little circumstances about myself and another man. The first time I come here it was with my brother and two Indians. The sight of this strange gash in the mountain and the beautiful scenery all around made me very excited, and I was for climbing on top, and no mistake. The Indians and my brother started with me up the ledge at the north end of the cave, but when we got up half way, just opposite to an eagle’s nest, where the creatures were screaming at a fearful rate, they all three of them backed down, and said I must not keep on. I told ‘em I was determined to see the top, and I would. I did get on top, and after looking round a while and laughing at the fellows below, I began to think of going down again. And then it was that I felt a good deal skeered [sic]. I found I couldn’t get down the way I got up, so I turned about for a new place. It was near sundown, and I hadn’t yet found a place that suited me, and I was afraid I’d have to sleep out alone and without any fire. And the only way I ever got down was to find a pine tree that stood pretty close to a low part of the ledge, some three hundred yards from the cave, when I got into its top, and so came down among my friends, who said it was a wonder I hadn’t been killed.

“I generally have had to pilot all strangers to the cave since that time, and I remember one circumstance that happened to a Tennessee lawyer, who caused us a good deal of fun; for [pg. 406] there was a party of young gentlemen there at the time. We had a camp right under the cave, where it’s always dry, and about midnight the lawyer I mentioned suddenly jumped up as we were all asleep, and began to yell in the most awful manner, as if something dreadful had happened. He jumped about as if in the greatest agony, and called on God to have mercy on him, for he knew he would die. O, he did carry on at a most awful rate, and we thought he must have been bitten by some snake, or was crazy, so we tore off his clothes to see what was the matter; and what do you suppose we found? Nothing but a harmless little lizard, that had run up the poor man’s legs, all the way up to his arm-pits, thinking, I suppose, that his clothes was the bark of a dead tree. After the trouble was all over, the way we laughed at the fellow was curious.”

Our second day at the Alum Cave (and third one from home) was a remarkably cheerless one; for a regular snow-storm set in, mingled with hail, and, before we could reach our horses and descend the Smoky Mountain, some three or four inches of snow had fallen. We spent that night under the roof of our good friend and worthy man, the guide, and it was with difficulty that we could induce him to receive a bit of money for all his trouble in piloting us and treating us to his best fare. On that night we ate our supper at nine o’clock, and what rendered it somewhat peculiar, was the fact that his two eldest daughters, and very pretty girls withal, waited upon us at table, holding above our heads a couple of torches made of the fat pine. That was the first time that I was ever waited upon in so regal a style, and more than once during the feast did I long to retire in a corner of the smoky and dingy cabin to take a sketch of the romantic scene. At sunrise on the following morning my companion and myself remounted our horses, and in three hours were eating our breakfast in Qualla Town.

With but little modification, this same account later appeared in an article entitled “Novelties of Southern Scenery. III” published in the October 1869 issue of Appleton’s Journal. Discounting the oral history collected from Lanman’s Cherokee guide, Lanman (1869:327) offers additional informative descriptive commentary concerning both the physical appearance and topographic setting of Alum Cave:

[Pg. 327] ALUM CAVE, SMOKY MOUNTAIN.—The mountain here mentioned is one of the most imposing in the Alleghany range, and its foundations lie
both in North Carolina and Tennessee; and its chief attraction is a singular cliff known throughout that region as the Alum Cave. In reaching this spot, which is on the Tennessee side, you have to leave your horses near the top of the mountain, and then journey on foot for six miles up and down, far up and far down, over every thing in the way of rocks and ruined vegetation which Nature could devise, until you come to a mountain side which is only two miles, in a direct line, from your starting-place. Roaring along at the base of this mountain is a small stream, from which you have to climb a precipice in a zigzag way, which is at least two thousand feet high, when you find yourself on a level spot of pulverized stone, with a rocky roof extending over your head a distance of perhaps sixty feet. The length of this hollow in the mountain, or “cave,” as it is called, is nearly four hundred feet, and, from the brow of the beetling precipice to the level below, the distance is about one hundred and fifty feet. The top of the cliff is covered with a variety of rare and curious plants, and directly over its centre trickles a little stream, which forms a pool, like a fountain in front of a spacious piazza. The ingredients of the rock composing this cliff are alum, epsom salts, salt petre, magnesia, and copperas, and the water which oozes therefrom is distinguished for its strong medicinal qualities. This strange and almost inaccessible, but unquestionably very valuable cave, belongs to an organized company, and, before the late war, had been worked with considerable profit, on account of its alum. The scenery upon which this cave looks down is also decidedly novel and interesting. From one point of view the mountains descend abruptly from either side, into a kind of amphitheatre, where the one on the right terminates in a very narrow and ragged ridge, which is without vegetation, while far beyond, directly in front of the cave, rises a lofty and pointed mountain backed by some three or four peaks of inferior magnitude. The ridge alluded to is very high, but yet the cave looks down upon it, and it is so fantastic in its appearance that, from different points of view, may be discovered natural holes, or windows, opening through the entire wall, while from other points of view the great rocky mass resembles a ruined castle, a decayed battlement, or the shattered tower of a huge cathedral. To gaze upon this prospect at the sunset hour, when the mountains are tinged with a rosy hue, and the great hollow, or basin, before you is filled with a purple atmosphere, and the rocky ledge is basking in the sunlight, like a huge monster on the bosom of a placid lake, affords one of the most curious and impressive scenes imaginable. But the locality, under any of its phases, will amply repay the lover of fine scenery for a long pilgrimage. When the writer visited this spot, which was in the month of May, the weather in the valley where he was staying was balmy and summer-like, but after leaving the cave on his return he had to wade through snow several inches deep...

Following Lanman (1849; 1856; 1860) and Safford (1856; 1869), a third nineteenth century account of Alum Cave attributed to an otherwise anonymous “R., of Tennessee” (Anonymous 1860) appeared in the August 1860 issue of Southern Literary Messenger. Aside from their purely descriptive value, the author also remarks on the status of mineral resources at the cave at the time of his visit:

[pg. 126] Sunday, 6 Nov.—Jack Bradley made his appearance this morning before breakfast, and of course before sunrise, ready to start to the Alum Cave with me. Jack carried his gun and a blanket, a hand axe and a sack filled with provisions—for you see we intended to stay all night and next day in the mountains. After breakfast, having added some more bread and meat from Mrs. Huskey’s supply, we set out on foot;—I carrying two blankets and lay saddle-bags emptied of every thing except the quart bottle which was not empty. The saddle-bags I needed to bring away specimens from the Cave. Why the bottle was left in it I cannot well tell, unless it was because of Jack’s remark, “the rattle-snakes is sometimes powerful bad in the Smoky.” But as the times Jack alluded to must have been in July and August, find as all such reptiles were then snug in their winter quarters, that could not have been the reason. After all I suppose we simply forgot to take it out—that must have been it.

It is useless to attempt to describe the wild and romantic scenery through which we passed. We went the whole day through laurel thickets, with no path to guide us, passed over rapid mountain torrents by springing from rock to rock, many times at places I should never have thought of attempting, had not Jack gone before, climbed up steep mountain sides by pulling ourselves along by the bushes overhead, and at about two o’clock, arrived at Alum Cave, thoroughly and utterly exhausted by our toilsome climbing and
walk of seven miles. The last half mile was nearly perpendicular. I do not believe I could possibly have held out to climb one hundred yards more. Bathed in perspiration, and my heart beating as though it would jump out of my mouth, I threw myself on the ground in the entrance of Alum Cave. As I lay there panting, Jack took one of the blankets and threw it over me, reminding me that it was very cold up there, and that I would certainly make myself sick if I cooled off too rapidly. I thanked him for his considerate kindness.

“But, Jack, is it possible to get any water up here” said I, “for I feel almost dying from thirst.”

“Give me your cup off of your flask,” said the kind fellow, “and I will go where the water generally drops out of the sides of the Cave.”

Jack soon returned however, saying that it had been so dry all fall, that there was no water there—the cave was as dry as a powder horn. Reader, did you ever find out, by personal experience, what an amount of suffering there is in extreme thirst? I was just about to trespass so far on Jack’s good nature and kindness, as to ask him to return down the mountain to the last water we had crossed, when I spied a large onion lying beside me, left there doubtless by some hunter. Seizing upon it, I devoured half of it, and gave the other half to Jack. Now whether such would be the ordinary effect of an onion, I cannot say, but almost immediately all thirst was gone, and my strength returned...

At the lower edge or end of the cave is what is called the “Devil’s Leap.” This is a cliff which, though not quite perpendicular, must be one thousand feet to the bottom. The very thought of taking such a leap almost makes one’s hair stand on end. At the upper edge of the cave, the precipice closes quite down to the side of the mountain below, so that progress in that direction is impossible. Just to the west of the cave rises another rugged mountain peak, whose sides are so steep that no one has yet been able to climb to the top of it. This precipice seems within a stone’s throw of the mouth of the cave, but as my friend J. C. R. was not along, I cannot say whether. one could throw so far or not. Had R. gone with me as he promised, his passion for stone-throwing would certainly have led him to test the matter. Through the sides of this beetling cliff are great holes. They look from where I stood as large as a hogshead, and give the cliff a very peculiar and grand appearance.

The cave is called Alum, because the water exuding from the side of the cave is strongly impregnated with alum. At the lower edge of the cave there are immense beds of almost pure alum. I got several large blocks of it loose with Jack’s axe, and brought them home with me; they are very beautiful.

At the upper part of this extraordinary cave are large beds of sulphate of magnesia, or Epsom salts. Beautiful pieces of this, too, I brought off with me.

The reader who wishes to refer to a scientific account of this cave, can do so by turning to pages 118 and 119 of Professor Stafford’s “Geological Reconnoissance [sic] of Tennessee.” By the way, I see by a note of the Professor at that place, that Jack Bradley accompanied him to the cave, and he thanks Jack for his kindness to him. Jack, however, is ignorant that the Professor has thus spoken of him. He told me of the Professor’s visit, and seemed to think his passion for knocking off bits of rock and looking at them, indicated that the gentleman was slightly demented—which impression I fear I only partially succeeded in removing from Jacks untutored mind.

The peaks just above the Alum Cave, are called by the hunters “Bull’s Head.” Their altitudes have recently been taken, and one of them has been found to be 6670 feet high. This one has been called Mt. Le Conte, in honour of Professor [Joseph] Le Conte of South Carolina. The other peak is 6559 feet high, and has
been called Mt. Safford, for the State Geologist of Tennessee. Mt. Washington, it will be recollected, is 6226 feet high; so the peak in the side of which Alum Cave is, is 444 feet higher than Mt. Washington. Another peak near the Alum Cave has been named Mt. Guyot, in honour of Professor Guyot of New Jersey. It is 6734 feet high.

Having wandered about for an hour or two in the cave, I left, with regret, just before sun-down, to find some water at which to camp for the night. We had intended to stop in the cave, but could not do without water till morning. We found water in about half a mile, and making up a large log-heap fire, we cooked our evening meal...

Summary

The early history of Alum Cave remains poorly known and is limited to the comments appearing in but a small handful of sources (Anonymous 1860; Lanman 1849; 1856; 1869; Safford 1856; 1869). Suggesting any prehistoric use would be purely conjectural lacking any firm archaeological evidence; studies of this type may not yet have been undertaken at the cave. Charles Lanman (1856:I, 404-405) recorded oral historical knowledge of the discovery of the site by Cherokees, presumably at some point in the eighteenth century. Likely serving as merely an otherwise seldom used and unheralded camp site for local hunters (both Cherokee and more recent arrivals alike) well into the early nineteenth century, the cave next received attention when area entrepreneurs began mining some of the cave’s mineral resources.

Without elaboration, Lanman (1856:I, 404) remarked upon “having obtained a guide, who happened to be one of the proprietors of Alum Cave” thus suggesting such mineral extraction efforts were ongoing at the time of his visit about 1848. Safford (1856:119) later reported that the cave was actively being mined for alum at the time he visited there about 1855. Lanman (1869:327) subsequently remarked that, “This strange and almost inaccessible, but unquestionably very valuable cave, belongs to an organized company, and, before the late war, had been worked with considerable profit, on account of its alum.” In light of the Confederacy’s desperate need for niter, it is a telling statement that the US Army’s voluminous Official Record series makes no mention of Bureau of Nitre and Mining activity here. The cave’s sheer isolation, rugged topography, and lack of any nearby dependable water supply all conspired to render it of no known wartime service. Mining activities at the cave are discussed in greater detail in Jenkins (1988) and Coskren and Lauf (2000).

The first published account of Alum Cave appeared in Lanman (1849; see also Anonymous 1850:44), reflecting, as noted, a visit occurring about 1848. The extent to which Lanman’s subsequent reuse of his tale of adventure in visiting this site (e.g., Lanman 1856:I, 403-406; 1869) influenced the wanderlust in another generation of naturalists remains unknown.

As documented in A Geological Reconnoissance of the State of Tennessee (Safford 1856) and further attested by Anonymous (1860:127), geologist James M. Safford is the next recorded visitor to this remote cave. As his volume was authored in 1855, his visit to the cave would have been no later than that year. Not surprisingly, the focus of his work was restricted to regional geology and he included no comments concerning the cave’s history. It seems not unreasonable that Safford’s study caught the attention of the New Orleans staff
of *Debow’s Review* prompting Anonymous (1859:703, 704) to make passing mention of the elevation and location of Alum Cave and its commercial mining interests.

The third presently known early account of the cave by the elusive “R., of Tennessee” (Anonymous 1860) provides useful descriptive comments about both the cave and the rigors of reaching it but giving only clues as to its history. As demonstrated by R’s fortunate find of a stray onion, we learn that the cave was still being visited by hunters. This is hardly surprising. It is surprising, however, to notice the complete freedom with which he preceded to remove several mineral samples at will (ibid.:127) suggesting either theft on his part or, alternately, the abandonment of the site by the miners who had worked it from the time of Lanman's visit about 1848 until Safford’s (1856:119) visit in 1855. In either event, “R.” remarking (Anonymous 1860:127) on the relative abundance of various minerals suggests that mining activities there of limited scope and only seasonally conducted. However – and subject to further geographic verification – a brief but tantalizing announcement (Anonymous 1862) appearing in the June 17, 1862, issue of the *Weekly Columbus [Georgia] Enquirer* suggests some level of commercial operations in the early months of the Civil War:

**Epsom Salts.**—Messes. Sensabough, Mingus and Long sent us a specimen of Epsom Salts manufactured by them from a cave in Smokey Mountain, between N. Carolina and Tennessee. They are now making 300 lbs of Epsom Salts, and 400 lbs. of Alum daily. The salts are said to be superior to any heretofore sold in the South, and the Alum is equal. The manufacturers say they will be able to supply the whole Southern Confederacy with these necessary articles. Anyone interested can take the Salts sent us, and try their effects.—*Augusta Chronicle.*

Despite this temporary reprieve from commercial oblivion, no evidence was encountered to suggest that this formation attracted any significant amount of attention from either visitors or entrepreneurs following the Civil War save for likely a very few adventurous souls exploring the mountains. Alum Cave would attract little notice until sometime after the establishment of the Smoky Mountain National Park.

**Notes**

1. There are at least three collections of Charles Lanman papers available to researchers. Unfortunately, for purposes of spelean history none of these appear to relate to his early travels across the American landscape. The first collection, “Charles Lanman Correspondence, 1860-1868” (Collection MSS 251 SC), is curated by Center for Southwest Research, University of New Mexico, Albuquerque. This collection is described as consisting “one folder” containing 12 letters from members of the US House of Representatives concerning their entries in Lanman’s book (Lanman 1876) devoted to congressional biographies (cf. website entitled “Charles Lanman Correspondence, 1860-1868” accessible at: <http://elibrary.unm.edu/oanm/NmU/nmu1%23mss251sc/nmu1%23mss251sc_m2.html>). A second group of documents is the “Charles Lanman (1819-1895) Collection, 1828-1869” maintained at the Manuscript and Visual Collections Department of William Henry Smith Memorial Library, Indiana Historical Society, Indianapolis. This
collection (Collection #M 0185) is described as “one container box” holding letters from 61 Indiana members of Congress (cf. website entitled “Charles Lanman (1819-1895) Collection, 1828-1869” accessible at: http://www.indianahistory.org/library/manuscripts/collection_guides/M0185.html). The third collection is maintained with the “American Historical Manuscripts, 1765-1982” (no collection number stated) at the Special Collections Library, Kent State landscape (Lanman 1841; 1842; 1845; 1847; 1848; 1849; 1850; 1853; 1854; 1856). For students of spelean history, it is from this latter body of his work that the much of the available early history of Alum Cave may most productively be extracted.


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MAMMOTH CAVE PIONEERS OF DISCOVERY: ROOTS WEEKEND

Mammoth Cave National Park

November 11-13, 2011

Notes and Summary by Preston L. Forsythe, KSS, L, and NSS 14161, LF

This exciting weekend featured three days of interesting gatherings, talks, and discussions about Mammoth Cave Pioneers of Discovery. On Friday, November 11, from 4 to 6 pm, descendants of Mammoth Cave families, and other interested people, came together in the Rotunda Room to share genealogical information, stories, photos, and engaging conversation. At 7 pm there was a panel discussion with the focus on Mammoth Cave’s New Discovery and the famous connection of the Flint Ridge Cave System and the Mammoth Cave System. Pete and Carl Hanson and other early explorers, up to and including the Cave Research Foundation, were featured.

Panel members included: Roger Brucker, Dr. Stan Sides, Norman Warnell, Henry Holman (president of Friends of Mammoth Cave), and Coy Hanson, brother of Pete Hanson.

On Saturday morning, Johnny Merideth, Park Ranger, Division of Interpretation, MCNP, gave a presentation titled “Home is Where the Park Is.” In the afternoon a special tour was offered to New Discovery. That night Roger Brucker gave a talk.

On Sunday morning Chuck DeCroix, Park Ranger, Division of Interpretation, presented “Lost Connections in Mammoth Cave.”

Sunday afternoon at Locust Grove Cemetery there was a Veterans Day Wreath Placement Ceremony for World War II veteran, Warner Pete Hanson, one of the discoverers of the New Discovery section of Mammoth Cave. Pete lost his life in that great conflict.

The organizers of the weekend were Greg Davis and Joy Lyons. A video of the weekend was made by John Davis.

Sixty people were in attendance, including twelve members of the Hanson family.

Here are my notes from the weekend, which are more or less in the order of occurrence.

Carl and Warner Pete Hanson along with Claude and Leo Hunt were the first explorers of New Discovery. The Hanson family lived at Chaumont, which is now inside the park. Pete was the patriarch of the Hanson family and many Hansons worked in the park as guides, hotel staff, and at other positions.

October 3, 1938, guides Carl and Leo were told to gather some eyeless fish down on Echo River. They turned around early because of light trouble. On October 4 they went again, exploring further this time, as permission had been granted to do this by Mr. Marty Charlet. However, the trip was shortened as Leo’s baby was sick. October 10, Pete and Claude joined the crew and they explored even further, wading the river waist deep, crawling for 1100 feet and then popped into big cave at the area later to be called Paradise in New Discovery. This is one of the most decorated sections of Mammoth Cave.
and certainly a great discovery. On the 11th they repeated the cave trip with their manager Mr. Charlet, a 22½ hour trip.

**Stan Sides:** In 1938 Mammoth Cave was struggling to become a national park. Legislation in 1926 was passed allowing Mammoth Cave to become the first park east of the Mississippi River to have land taken from the people. Carl and Leo explored far up Roaring River from Cascade Hall. This was a long, wet, muddy, and sloppy journey. They recruited Carl’s son, Pete, and Leo’s cousin, Claude, to assist them in finding the way to New Discovery. This grand discovery brought needed publicity and attention to the fledging park.

A few of the other great discoveries were outlined by Stan. On June 7, 1935, guides Cutliff and Campbell discovered Lost John. On July 15, 1972, at survey station Q-87, Pat Crothers squeezed through an eight inch Tight Spot to find passage draining to Mammoth Cave from Flint Ridge, the X drainage divide. On August 26, 1972, Tom Brucker and Richard Zoph ventured beyond the Tight Spot to find a stream continuing. On August 30, John Wilcox, Pat Crothers, Richard Zopf, and Tom Brucker made another trip. Tom explored beyond and discovered the initials in a mud bank, PH and LH. They wondered how did those initials get there? On September 3, several CRF cavers, with Superintendent Joe Kulesza and CRF president, Stan Sides, assembled to discuss the discoveries and risks of exploring out under Houchins Valley. John Wilcox was given the green light to attempt to make a connection between the two cave ridges via 10 miles of passage. John Wilcox was one of the hardest, toughest cavers. The stream was very low. They connected Hanson’s Lost River to Echo River at Cascade Hall. This was the integration of the Flint Ridge Cave system and the Mammoth Cave Ridge system. The connection stream at Cascade Hall was called Roaring River going upstream and Hanson’s Lost River going downstream. Stan later pointed out that New Discovery has the largest rimstone dam in Mammoth Cave.

**Roger Brucker:** The Mammoth cave system is made up of eleven connected caves. The mantra has been to “Follow the Water.” Pete Hanson and Leo Hunt are two of the pioneers of “Follow the Water.” Mammoth Cave is now 392 miles long (631 kilometers) and three times longer than any cave in the world. New Discovery was a very significant addition to Mammoth Cave. It is large, walking, beautiful cave, better than Broadway and has some of the most beautiful gypsum in the entire cave. Of the eleven major connected caves, seven connections were made via vertical shafts and water, three via underground rivers, and one by digging through fill. So ten of the eleven connections were made by “Following the Water.” Today there are 26 entrances to Mammoth Cave. Roger asked “What did the Pioneers do that set them apart from previous guides who explored?” First, they got wet. Second, they got muddy. Third, probably most important, they were nutty enough to keep going back, i.e., they persisted. Fourth, they made maps that enabled them to make breakouts. The important maps were: the Steven Bishop map of 1842. The Max Kaemper and Ed Bishop map of 1907. The Pioneers of Discovery of 1937, and CRF from 1957 to the present, all made maps. From the maps the pioneers were able to see that passage stopped by breakdown on one side of the valley-lined up with similar passage on the
other side of the valley which was also stopped by breakdown. By going down shafts to lower levels, through the drains and under the valley and up to a continuation, the caves were connected. In 1937 the great discoveries gave the park some publicity. Pete and Leo were given permission to explore; river levels were low, the passage off Cascade Hall in October of 1937 was open, but often neck deep into what is now called Hanson's Lost River. That was 6500 feet of muddy crawlway. Leo Hunt and Pete Hanson left their initials where they stopped exploring, then returned. Leo applied for the "bonus" awarded for significant discoveries. The manager said that bonuses would no longer be paid now that the National Park was just around the corner. "But you can tell me about what you found," said the manager. Pete reportedly said, "If you want to know, you could go check it out for yourself." That was how "Hanson's Lost River" became lost until 1972.

Pete and Leo, who discovered New Discovery in 1938, also led the way for connecting Mammoth Cave Ridge to Flint Ridge. Roy Hunt said follow the river in Colossal Cave which led to the connection of Colossal with Salts Cave in 1961. In 2011 Joyce Hoffmaster made the helmet off connection, pulled through by Norman Warnell, between Donkey Cave and Mammoth Cave. Mammoth Cave is three times longer than any other cave in the world because the cavers got wet, muddy, and had persistence.

**Henry Holman:** He is a retired guide. Henry told other guides, who could explore in the winter, and maybe receive a bonus, “if you want to find what’s there go find it yourself.”

**Coy Hanson:** Coy, Pete’s brother, told a story about caving in 1931 on Uncle Earl's farm. He went into a hole only big enough for a small boy to get into. He had to yell up to an older brother to get him out of there. The Hansons were all explorers, especially of Proctor and Long Caves.

**Norman Warnell:** He told a story about exploring Hanson’s Pit around 1970. By going down a ten foot pit and through a 12 inch by 18 inch hole, and down another 15 foot pit through a 50 foot long passage to a 50 foot pit he found the initials of PH, Sept. 30, 1936.

Other stories mentioned that night: Ismal Hunt was the grandfather of Leo and Claude. One story was something about, “Pull a string here and something else would move.”

John Hacket from Texas purchased the cave rights for Frozen Niagara. He was the one who lived in Long Cave around 1917-1918. Lincoln and Jim Wells did a lot of caving for George Morrison and they were part of the crew who dug out Frozen Niagara along with Carl Hanson and Roy Hanson.

**One of the Hanson family members** told the very moving story of how the family at Chaumont was notified after Pete Hanson died in the Aleutian Islands in 1943. One Sunday morning two large black cars drove by the Hanson house and proceeded up to the church. Soon the cars were back and Pete’s mother went out on the porch. She fainted with the terrible news of her son’s death.

The development of New Discovery was accomplished during winter in the late 1930s. Food was dropped down a drill hole. The entrance building and steps down into the cave were constructed, as well as two miles of
trails were developed. Then development was suddenly stopped for two reasons. First, there was WWII. And, second, work was stopped as the fragile gypsum cotton was being damaged from too many trips. How could that be protected? Once a gate to the cave was left open and there was some vandalism. For a while trips were reduced to only four people at a time. New Discovery has some fragile areas but there may be more gypsum cotton there today than in the late 1960s.

Someone mentioned the interconnection of families and the interconnection of cave passages. These people were all hard working and had persistence and endurance. They faced agony after agony.

**Coy Hanson** said his first job in the park in 1937 was as a hotel night bellhop. Today in the hotel dining room there is a picture of him in a boat on the Echo River. This picture was published in *National Geographic*.

**Johnny Merideth**: Johnny is a very relaxed and interesting speaker. He has been at MaCa since 1996. His talk was on “Home is Where the Park Is.” What is the meaning of home and place and how they became combined into Homeplace. The old Homeplace! The old chimney, an old leather boot, spring daffodils, and an old fence. One of the early settlers in the area was Shackleford. He leased the historic entrance and in 1837 charged $1 for a tour. The signature of O.P. Shackleford dated 1872 is in Salts Cave. It was common in those days to use your house as a boarding house for your family, farm laborers, housemaids, orphans, and other boarders. The census records for 1880 show that Oliver Perry Shackleford had a boarding house. He deeded the land for the community’s Baptist Church, the Flint Ridge Baptist Church. This may be the most famous caver church and cemetery in the world. Oliver Perry Shackleford, born in 1828 lived until he was 95. He died in 1923 and is buried at “his” cemetery. Later Floyd Collins was buried here. O.P. died one week after his wife died. His tombstone says, “He did the best he could.”

Next Johnny talked about Mat Bransford. Mat was the son of Thomas Bransford. Mat arrived at Mammoth Cave at the same time Stephen Bishop did. Mat had four children. Three of the children were sold to the highest bidder by Mat's owner, Franklin Goren when the children were 7 or 8. As a Union soldier said in 1864, “slave children were sold to men who had a meanness and were nothing but dabbler in human flesh.” The soldier said, “I don’t suppose the children's parents missed their children much, as you colored people never do.” But, the fact is selling of the children almost killed the mother. The parents had to bear it the best they could, but if they could only have the children back. Mat was very spiritual. He attended Pleasant Union Church which he organized with O.P. Shackleford in 1868. Mat was one of the first deacons. The church is gone, but the cemetery is still there. We don’t know where Mat is buried. Mat's one child, who was not sold, Henry Bransford, grew up and lived on Flint Ridge. In 1876 Henry purchased land from O.P. Shackleford and his wife Maggie (Margaret). Later Henry purchased another 90 acres from the Shacklefords. Henry is buried at Bransford Cemetery. Henry’s tombstone sums up his life with one word, “Guide.”

Johnny next talked about the tight knit community around Good Springs Church, where people learned together to survive. The
“Bell” at Good Springs Church was the community center and announcer for something important going on. Johnny had a picture of Roy Sanders’ homeplace. Roy was born in 1913. Roy’s father died when he was ten years old. He was not allergic to backbreaking work as he cut railroad ties for 25 cents a day to pay off a debt of $16 owed by his mom. Roy paid off the debt plus $2 extra to have a bad tooth removed by a dentist at Brownsville. Johnny had a picture of the three Sanders brothers. Roy was ordained as a preacher at age 18, Brother Roy. Roy preached for free for close to 80 years. Roy made his living farming. Brother Roy baptized Terry Whitmer who was in the audience. Roy married Beatrice Davis. They were married for 60 years. Land for the future park was purchased between 1900 and 1930. Roy never forgot his homeplace at Good Springs. It was still “Home.” Roy and his wife Beatrice are buried just outside the park. Preston does not know why they were not buried at Good Springs. One of the most difficult things about selling out your land to the park was leaving behind the cemeteries—“like selling your dead.” This is a very bitter-sweet story which was tough for families to endure. Many of these stories are archived in the park today, and in many cases this was not done outside the park. If not for the park many of the old pictures and stories may never have been preserved. People loved their homeplaces. The park is now marking old homeplaces with known names. MyFamily.com would probably not have happened if not for the park. One of Johnny’s favorite people in the world is Bro. Roy. Once a year there is a Good Springs Homecoming with the ringing of the beautiful Bell, the sound of the Bell.

Roy would say, “you never forget the place that you grewed up, that is anyone that’s got a good mind loves their homeplace.” Mrs. Whitmer said, “Roy would say just hold your feet on the floor.”

Does the Bransford story continue? Yes, as there has been a Bransford on the staff of Mammoth Cave for over 100 years. Today a fifth generation, great, great, great grandson of Mat, Jerry Bransford, works for the park. Joy Lyons introduced Jerry to his history.

Johnny found out 11 years ago that O.P. Shackleford was a great uncle.

On Saturday evening Roger Brucker gave a talk, which Preston somehow unfortunately missed. Roger presented two interesting charts. The first was a CRF copyrighted graph and chart showing the eleven connections of Mammoth Cave from 1790 to 2011. The chart shows the cave connected, the year the cave was discovered, and a brief connection history. Roger also had a survey sheet, compiled by John Wilcox on 3/20/75, showing leads on the Roaring River Route of New Discovery.

Chuck DeCroix: Chuck spoke on “Lost Connections.” If you did not hear Chuck or Johnny make their presentations, you really missed something (PLF). Chuck began by mentioning George Slaughter Gatewood’s signature in 1832 with A. Miller below, in Gothic Ave. Chuck presented photos of old guides and their tour groups in front of the Historic Entrance. He mentioned the old black cemetery, the Mansfield Cemetery near the old Job Corps site, a short distance from Flint Ridge Road. Chuck has a photo of the Bransford Hotel. In the 1930s the black guides were told they would lose their jobs.
Jerry Bransford was recruited for his job and Jerry feels like he is not a celebrity but that he is adding to the history of his family.

John Nelson’s signature with the date 1905 is at Nelson’s Dome near Edna’s Dome on the Kaemper Map. John was a guide and is known for the saying “do as the guide says.” Here is the story behind those words of wisdom. Around 1904 there was a boat wreck on an Echo River tour when a passenger pushed up on the ceiling and the boat swamped. A senator was on board the boat. Everyone was trying to protect themselves. John Nelson had the only light and everyone was grabbing him. Nelson said for everyone to leave him alone so the lantern would stay lit. The senator spoke up and said, “Do as the guide says.” People on the boat were so thankful to the senator for his leadership that day that they formed a club and met for years at St. Louis, Mammoth Cave, and New Orleans. The Echo River Club Medal was awarded to everyone on the boat. The Nelsons still have the medallion.

John married Orpha. Orpha had a sister Anis Gossom. Descendants of the Gossom family visited Mammoth Cave a few years ago.

Chuck continued by telling a story about Oliver Hanson Perry Anderson. Chuck titled this story “To Stand Where He Stood.” O.H.P. Anderson was a patient of Dr. John Croghan in the tuberculosis huts of Main Cave. Anderson’s signature is in the Wooden Bowl Room, not far from the stone buildings of the TB huts. A few years ago a relative of O.H.P. Anderson, a great, great granddaughter from Texas, Alice Anderson Follett, came to Mammoth Cave. Of course they were taken on a grand tour. Chuck had a picture of Jerry and Alice Follett standing below the signature. O.H.P. Anderson is buried near Daniel Boone in Frankfort, KY, as O.H.P. Anderson was from Frankfort. The TB hospital operated in the 1840s. The cause of TB was not discovered until 1880, 40 years later. Another signature of O.H.P. Anderson dated Dec. 1842 is on a wall in the back of Pensacola Ave. Jerry and Alice began to cry when they saw the Pensacola signature. Mammoth Cave has many powerful connections.

Pete Hanson—A Family Connection. Chuck had a picture of Peter and Mary Hanson with their sons. The men who discovered New Discovery, Leo, Claude, Carl and Pete all had the spirit “To Boldly Go.” Hunt’s Well is one of the largest rooms in Mammoth Cave National Park. Chuck presented a photo of Leo Hunt and Pete Hanson crawling with Pete holding the lantern. Leo has a tie on. Most of that passage is large walking cave. An audio of Claude Hunt was played talking about being the first to find New Discovery. They wondered what was around the next bend. For instance, when walking in Fossil Avenue, which has a sandy floor, making the first tracks, you look back and there’s one set of tracks, but no tracks out in front of you—and then you get a pretty big thrill!

At the wreath laying ceremony at Locust Grove Cemetery a picture of Pete Hanson was displayed. It was a nice photo of Pete in his Army uniform with his hat cocked. The photo was from Coy Hanson. A lady said she could remember that picture in a gold frame at Uncle Carl’s house.

Coy Hanson took Preston to the back corner of the cemetery to point out where the first Hanson to live at Chaumont is buried. He was a carpenter from Sweden.

Many Swedes came to the Mammoth Cave area. One community was named Stockholm. One lady said the Hansons first went to Chicago, then bought land in the Chaumont area. Coy told Preston not much was left of his old home place, just a few foundation stones and a basketball hoop nailed to a cedar tree. The location is not far down the road, west from the cemetery.

Joy Lyons remarked that we need to record our family history, before it is lost. One needs to go out and research your own history, but do not rely on just the internet as some errors do exist on the net. Genealogy is very rewarding as Preston will vouch for that satisfying feeling when your family history is published.

The Mammoth Cave Library is open every day.

What a great weekend. Hope you can make the next Roots Weekend in November of 2012. This was my third Roots weekend.
A History of Baker Caverns; Williamson, Pennsylvania

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Baker Caverns is a former commercial cave at Williamson, Pennsylvania. Operated from 1932 to 1954, it was the only commercial cave within 50 miles of Chambersburg. This cavern has 3000 feet (914.4 m) of surveyed passages, is the longest cave in Franklin County, and the twenty-first longest in Pennsylvania.

Discovered in 1830, it became known as the John Coffey, Coffey, or Williamson Cave. Earliest documented explorations date to 1836. In 1941, M.L. Burgan and O.G. Edwards leased the cave. A small, two-story building was erected over the original opening. Exploring and preparing the caverns began in 1932 and the formal opening was in July of that year. From 1952 until 1959 Bethlehem Steel anonymously purchased 3185 acres in the Williamson area. Speculation about the purchases included: underground storage, limestone quarrying, cobalt mining, magnetite mining, and construction of an underground Pentagon. In 1954 Bethlehem's purchases included land in which Baker Caverns was located. From then until 1988, the Caverns were largely off limits. In 1988 the company sold all acreage to a consortium of farmers and Valley Quarries, Inc. From then to the present, Baker Caverns has been privately owned.

Unpublished images include the discovery cave opening, gift shop prior to additions, picnic grounds, and cave features. When Baker Caverns closed in 1954, unsold merchandise (now collector’s items) was thrown into the limestone quarry across the road.

The history of Baker Caverns also includes a brief discussion of the cave’s geology, with special attention to the Conococheague Creek’s role.
The History of Peiper Cave, Carnegie Cave, and Cleversburg Sink; Cumberland Valley, Pennsylvania

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Peiper Cave, Carnegie Cave, and Cleversburg Sink have been popular for about 60 years. These are among the Commonwealth’s longest. Peiper Cave is a maze cave along Interstate 81. In 1949, a “hidden passage” with one of the most remarkable speleothem displays found in a Pennsylvania cave was discovered. The speleothems were vandalized in 1955. Pre- and post-vandalism images are presented. Interesting cave formations still exist there, including helictites. Peiper Cave also provides excellent examples of dome pits, breakdown, and vertically developed passages. Carnegie Cave is partly located under Interstate 81. Of these three caves, only Carnegie experienced a major caving accident. Despite decades of exploration, some well-developed speleothems exist, including rimpools. They are unknown in most local caves. Cleversburg Sink is unique in that: except during droughts, the cave is flooded; fish have been found in the cave; the largest cave column in Franklin or Cumberland Counties is found here, measuring 15-25 feet in length; and of local caves, this one has the greatest vertical development, ranging 70-80 feet. Prolific drapery and stalactites 2-3 feet in length were seen on the ceiling in Giant Hall. Normally, these features are too high above the cave bottom to be seen if explorations occur when the cave is dry. Inflatable rafts offered opportunities to photograph a 30-foot drop in the water table over a two-week period. This observation complements more recent pressure transducer readings of water-level measurements in the cave.

Saltpeter Mining and Gunpowder Manufacturing in Greenbrier and Monroe Counties, West Virginia

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Historic documents from the 18th and 19th centuries have been discovered in the archives of the Greenbrier Historical Society in Lewisburg, West Virginia. These documents range from property records that reference saltpeter caves, court cases that involve transactions in which saltpeter was used as payment, frontier trading post ledgers, county records, and information from family genealogies which reference saltpeter mining and miners. More information has been found about the history of well-known sites like Organ Cave and Greenville Saltpeter Cave, but also in-depth research has uncovered information about lesser known caves which played a crucial part in the history of the region. The history of Haynes Cave is also discussed at length. This project documents
the caves and people involved with saltpeter mining and domestic gunpowder manufacturing in Greenbrier and Monroe Counties, from the settlement of the region, through the American Civil War.


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Robert Paine Hudson was born November 11, 1857, in White County, Tennessee. He was familiar with the major caves in this area, including Higgenbotham Cave (Cumberland Caverns) and Big Bone Cave. His epic poem, *The Fairy Caverns*, was signed:

Robert Paine Hudson

Cardwell Mountain

December, 1880

His name has been found written on the wall of the Grand Canyon Passage and smoked on the ceiling of the Ten Acre Room in Cumberland Caverns, which is located under Cardwell Mountain.

Hudson became an adventurer, poet, and stereoptician of some renown. In 2010, I was contacted by the owners of the White County Heritage Museum, who had located an old, hand-written notebook of Hudson’s with a fictional story about Big Bone Cave.

In 1907 Hudson published *Southern Lyrics*, a collection of poems 854 pages long. At the time of its publication, he lived in Nashville, Tennessee. According to *Who’s Who*, he studied medicine, particularly diseases of the eye. He traveled widely and was on the lecture circuit, using “stereopticon illustrations.” Today we would consider this a “Slide Show.”

Both addresses that have been discovered for Hudson in Nashville would place him within a few blocks of Shelah Waters, another prominent nineteenth century Cumberland Caverns explorer. Although Waters was nineteen years older than Hudson, it seems likely that they knew each other.

Hudson died on June 1, 1923 and was buried at Mt. Pisgah Cemetery in White County, Tennessee.
Philipp W. Zettler-Seidel, An Historic Caver and Cave Owner

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The culture of Huntsville, Alabama, was dramatically transformed after 1950 when the U.S. Army selected the city as the permanent site for Army rocket development. This action involved relocation to Huntsville of more than one-hundred cultured engineers and scientists who had formerly worked on rocket development at Peenemunde in Germany. Many additional sophisticated U.S. citizens came to Huntsville to joint this high-technology operation. One of the new, non-governmental, organizations formed in Huntsville by the newcomers was a chapter of the National Speleological Society. Philipp W. Zettler-Seidel, who was born August 1, 1914 in Leipzig, Germany, and graduated from the University of Leipzig, became a charter member of the Huntsville Grotto in 1955. He was the third Grotto chairperson. Philipp was the only member of the former German rocket team who became an ardent caver. His dog, Electra, accompanied him on his explorations. He particularly became devoted to the exploration of Cathedral, Caverns, which is now a major Alabama state park. He purchased land over the rear reaches of the cave and was involved in the contentious commercial development of the cave. In 1959 Philipp left Huntsville to become a physics professor at a sequence of universities in Pennsylvania. He was also a concert pianist. In 1962, he married Ilse Zoll while in Pennsylvania. On March 19, 2002, he died in Du Bois, Pennsylvania.

The History of Conodoguinet Cave

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A list of the first caves recorded in America prior to 1800 would include Durham, Dragon, and Indian Echo (Swarta), all located on William Scull's 1770 map of Pennsylvania. The next most celebrated cave in Pennsylvania would be Conodoguinet which was noted by geologist Johann D. Schöpf in 1787 and drawn by the Cornte de Colbert de Maulevrier in 1794. In 1897 Henry C. Mercer hired William H. Witte to excavate the cave in search of the remains of ancient man. Today this natural wonder is a part of The Cave Hill Nature Center of Carlisle.
A Jules Verne Odyssey: The Journey

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Like many cavers my age, a primary stimulus to my yearning to get underground was the 1959 movie of Jules Verne's classic adventure “Journey to the Center of the earth.” Although more current versions abound, this 50’s film starring Pat Boone, James Mason, and Arlene Dahl, still rates as one of my all-time favorite movies.

Besides introducing me to the underworld, it also sparked my interest in collecting movie ephemera related to the film, including black and white stills, lobby cards, posters, etc. It also introduced me to the genius of Jules Verne, and I began collecting and enjoying his other novels as well as collecting volumes of Journey in foreign languages, including the original French, as well as Greek and Japanese editions.

By this time, I admitted I was totally obsessed with the film and decided it would be fun to visit some of the actual locations used in the movie. I learned that the crew had spent considerable time filming in Carlsbad Caverns, shooting at night to avoid disrupting the tour groups. Of course, I had visited Carlsbad numerous times. While in Scotland a couple of years ago, I visited what is now the School of Law in Edinburgh. The building there was the backdrop for several scenes.

Most recently, in April of this year, my daughter Nancy and I spent 3 weeks in Iceland where the story began. We had one up on the movie crew, as they did not actually film there. We explored 30 caves around the island, and the highlight of the trip was an ascent of Snaefellsjokull, the legendary entrance to the center of the earth.

Woodson-Adair Cave: The First Commercial Entrance to Colossal Cave, Kentucky

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In 1871 members of the Lee family were exploring an obscure cave under Flint Ridge, today within Mammoth Cave National Park. Bedquilt Cave led to endless canyons and crawls as well as an area to mine gypsum for the tourist trade. One day in June 1895 Flint Ridge resident Henry Lee was crossing Houchins Valley on the road between Mammoth Cave Ridge and Flint Ridge. He rested near a small sinkhole on the property of Billie Adair and his daughter, Mary Isenberg. He found cool air coming from a small crevice. He and his brother, Lute Lee, descended a 50-foot shaft that
intersected a horizontal passage. The cave was quickly opened for tourists. A Hopkinsville, Kentucky, newspaper article in November 1895 described the lengthy tour from the Woodson-Adair entrance across and to the bottom of Colossal Dome and out the Pearly Pool route. In 1896 Horace C. Hovey described the cave in his article, “The Colossal Cavern of Kentucky.”

Louisville and Nashville Railroad purchased the Woodson-Adair entrance and surrounding land. In 1896 railroad surveyors, W. L. Marshall and Edgar Vaughn, made an underground survey from Bedquilt Cave through Colossal Cave to find a new entrance into Grand Avenue. The Woodson-Adair entrance was closed after being used less than a year and its tourist trail was forgotten. Recent Cave Research Foundation trips entering the Woodson-Adair entrance allow us to understand what visitors experienced in these rarely visited passages, abandoned 117 years ago.

**Was it Really in the Civil War? Examining the Chronology of Saltpeter Mining in Select Tennessee Caves**

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In the literature on Tennessee caves, there is a strong presumption that most saltpeter mining took place during the Civil War. The author recently investigated several saltpeter caves in Tennessee hoping to establish a finer grained temporal analysis. The results of this archival and field research challenge the dominant chronological assumptions. This paper looks at the history of Old Squires Saltpeter Cave in Smith County, Whiteoak Saltpeter Cave in Macon County, and recently re-discovered Cave Point Cave, also in Macon County. Document analysis reveals that Whiteoak Saltpeter Cave, previously thought to date from the Civil War, was mined by 1801. Old Squires Saltpeter Cave, located by the author in the 1990s, was previously suspected to be an early 19th Century site, but a recently located letter precisely dates the mining to 1814 and states that 500 pounds of saltpeter were produced. Cave Point Cave, unknown to researchers until early 2013, also dates to 1814. According to recorded family lore, Ansil Gregory, age 16, was killed near the cave that year while cutting timber for the saltpeter operation. This research, along with new information on other known saltpeter caves like Tobaccoport Saltpeter Cave, suggests that a wider reexamination of the chronology of saltpeter mining in Tennessee is needed, and that the common presumption of a Civil War context may be incorrect.
Written references to Pennsylvania caves in the eighteenth century include first-hand accounts of cave trips, maps showing cave locations, and cave descriptions in geographies. Although eleven different Pennsylvania caves are mentioned in about 75 different references, three of them—Indian Echo Caverns, Conodoguinet Cave, and Durham Cave—were the best-known caves of the century.

The authors of these references were frequently historical figures: the man who saved George Washington's life, the second President of the United States, the governor of both Massachusetts and South Carolina under King George, the United States Secretary of War, the “father of American Geography,” William Penn's successor as Proprietor of Pennsylvania, the leader of a famous sect of religious ascetics, foreigners who fought on both sides of the Revolutionary War, and more.

The circumstances surrounding their writing about Pennsylvania caves are also remarkable. They include a presentation to Benjamin Franklin's American Philosophical Society, name-calling between best-selling authors, plagiarism and the nation's first copyright infringement lawsuit, a seminal geology text that was “lost” for more than a century, the teenager who lost 24 million acres of land, the map that indirectly led to the death of its cartographer, political prisoners who wrote and published books from prison, and the pursuit of the love of a young woman.

Finally, several notable “firsts” (as far as is currently known) are described: the first written reference to a Pennsylvania cave (1751), the first publication referring to a Pennsylvania cave (1752), the first paid tour of a Pennsylvania cave (1797), and the first drawing of a Pennsylvania cave (1798).

Schofer Cave, Pennsylvania—Roost of the Purple Bats

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Schofer Cave is named for John Gottlieb Schofer, who operated a grist mill near the cave for 22 years in the late 1800s. Found during limestone quarrying, the exact discovery year is unknown. Some of the earliest work in banding bats occurred at Schofer Cave, when future NSS President Charles E. Mohr caught and banded bats in 1931. In one experiment, Mohr painted the wings of 50 bats a bright purple color and then released them miles from the cave to determine their homing instincts. In 1952, archeologists from the University of Pennsylvania dug at the cave entrance, but
found nothing of interest. Bob Kerper used SCUBA equipment in 1956 to dive into a twin set of pools in the cave named Jacob's Wells. He found an underwater connection back to dry passage. In the following years Schofer Cave became a popular spot for beginner cavers, often attracting dozens of novices on any weekend. Keith Williams studied radon levels in the cave in 1988, finding levels five to ten times higher than the EPA minimum safety levels. In 1994, the Pennsylvania Game Commission gated Schofer Cave and has not allowed entry to even the most responsible explorers.

See It By Car: The Automobile and Pennsylvania’s Golden Age of Show Cave Development

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The number of commercial caves operating in Pennsylvania expanded from 2 to 14 between 1923 and 1933, constituting a golden age of show cave development that no other ten year span can beat. Although the increased availability of electric lights helps to explain the expansion, the most important factor was the popular adoption of reliable automobiles, and widespread building of all-weather highways. With nature rather than economics dictating the location of caves, transportation—whether trails, rails, or roads—has always been critical to their commercial development. More than any other mode, the automobile brought an unprecedented number of potential customers into cave country, fundamentally altering how show caves were interpreted, marketed, and presented to the paying public. Pennsylvania is representative of what was happening in karst regions throughout the country.
CAVE CLIPPINGS

THE MINING OF ALUM

Turkish Workings Have Been in Operation for Three Hundred Years in a Crude Manner.

[The Arizonaut:] Alum workings in the province of Sivas, Turkey, have been actively operated for fully 500 years. Near the village of Goynyk there is a plentiful supply of the rock or raw material, as the operations so far have been primitive, and only the face of the hillside has been dug out and reduced. The alum-bearing rock is brightly colored, usually with a pinkish or red tinge, and the waste from the Goynyk workings flows down to a small stream along the roadside, to whose waters it gives a pinkish white and opaque color. Incidentally killing all the brook trout that happen to venture into the stained water from the higher part of the stream. The rock of ore is first roasted and then broken into small pieces, which are very light because the chemical elements have been burned out. The broken rock is then placed in open pits and allowed to be exposed to the rain and weather for a whole winter, during which time it becomes something like slacked lime, crumbling easily and finely granulated. In this state it is boiled with water in a large cauldron, the stone and waste matter being gradually taken out as it is stirred. Having been sufficiently boiled, the liquid, now almost clear, is placed in cooling tanks made of masonry. In the course of a few days the alum crystallizes around the sides of these tanks to a thickness varying from six to nine inches. It is then ready to be broken into smaller pieces and sent to market. The small portion of alum that sinks to the bottom of the tanks is boiled a second time and yields a superior quality.

From the Los Angeles Times, April 26, 1914.
**Mystic Caverns** [in St. Paul, MN] is forgotten today, but was beloved in the 1930s. “The most novel café and night club in the country” was opened on April 8, 1933, about the same time that the classic version of *King Kong*, starring Fay Wray, hit the movie theaters. Garish newspaper advertisements for Mystic Caverns, with leering skulls, promoted “St. Paul’s Underground Wonderland,” advising readers to “See the Beautiful Silver Cave and the Rainbow Shower of 2,000 Mirrors. Dine, Drink, and dance to the rhythmic tunes of Jack Foster’s Ten Cavemen,” spelling out the location exactly: “Cross the Wabasha Street Bridge at the new St. Paul Courthouse. Travel…up the river road under the High Bridge to the huge Neon Skull and Crossbones.”

On opening night, 400 people had to be turned away, and Mystic Caverns was rapidly enlarged so as to hold 800 people. During construction, liquid glass was sprayed upon the walls. There were three main chambers, one of which contained the ballroom, called the Silver Cave. According to one patron, the cave contained “a monstrous chandelier, with lights flashing all different colors, two stories above the polished-wood dance floor.” The other two chambers held, respectively, the main dining room and “a regular old-time bar, 40 feet long, with brass foot rail and all, where light lunches and beverages will be served.” “A system of loud speakers wafts the music from the main dining room into the farthest recesses of the innumerable smaller caverns which serve as private dining rooms,” it was reported.

“Entertainment features will be in keeping with the mystic atmosphere, providing palmists, mind readers, psychics and a magician for the amusement of guests.” Some of the magical effects were produced by a stage-manager for the famous magician Howard Thurston. As if that was not enough, “Ghosts will stalk the river bank, ‘living’ skeletons will move about its cavernous rooms, weird specters will peer from hidden recesses and women will float above the heads of the orchestra.” By far the biggest draw, however, was the nude fan dancer, Sally Rand.

One of the cave’s owners, Jack Foster, was the leader of the St. Paul police band. Which made it all the more ironic when a Ramsey County grand jury investigation led to the closure of Mystic Caverns in 1934 for running a subterranean casino.

After its glory days, Mystic Caverns was used for potato storage and in its misunderstood old age was dubbed “Horseshoe Cave” by the cavers of the 1980s, unaware of its romantic past. In the 1990s, I diligently examined the infinite palimpsest of graffiti on the cave’s walls, especially in the former ballroom, hoping for old signatures (or any artifact) from the nightclub era, but could find nothing really convincing. It had been stripped bare, like the fan dancers who had wowed crowds more than half a century earlier.

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In this interesting book on speleohistory, Bert Ashbrook offers readers a somewhat unique insight into the early documentation of Pennsylvania caves. Making use of a variety of eighteenth-century sources, including early maps, old magazine and newspaper articles, letters, diaries, journal entries, and geographies/gazetteers, Ashbrook discusses the earliest written records of Pennsylvania caves and puts them into historical perspective. In addition to considering sundry aspects of the caves themselves, he also provides relevant background information on the people who first described them. This affords readers a suitable context in which to understand some of the historical background that underlies the early descriptions of Pennsylvania caves.

As far as is currently known, eighteenth-century references to Pennsylvania caves were quite limited—although all references have certainly not yet been discovered—with only twelve caves being mentioned or described. These include Indian Echo Caverns, Penns Cave, Laurel Caverns, Conodoguinet Cave, Durham Cave, Tytoona Cave, Arch Spring, Dragon Cave, Highland Park Cave, Bezalions Cave, Christopher Gist Cave, and Kreider Cave, each of which is discussed to varying degree in the book. The level of detail provided on individual caves varies from mere mention of a first appearance on a map to more lengthy descriptions of passageways and formations (or petrifications, as speleothems were generally referred to at that period of time). The fate of each site in modern times is included in the epilogue. Accordingly, some have been commercialized, some remain in a wild state, some are privately owned (requiring permission to enter), and some have since been destroyed by quarrying operations.

The Caves of Pennsylvania in the Eighteenth Century is an interesting and well-written book, certainly quite different in character from most mainstream books on cavers, caves, and caving. It is nicely illustrated, with a variety of maps, documents, and figures (both full-color and black-and-white). An annotated bibliography and a chart of the most comprehensive references to each location are useful additions for readers interested in
gathering more detailed information. Although the narrow focus of the text may not strike a harmonious chord in everyone, the book will appeal to cavers interested in select aspects of speleohistory, Americana, American history, and cartography. Of course, it will be of most interest to Pennsylvania cavers and others familiar with the state’s local karst landscape.

As Ashbrook observes, an appreciation of the early written history of local caves will provide a degree of insight into their early exploration and perhaps even their cultural importance. Moreover, as he notes, “Historic cave references and descriptions fascinate us because they give us a direct connection to the past. History comes alive when we can visit the same caves, recognize the same features, and feel the same sense of wonderment that people felt long ago.”

Ashbrook offers a refreshing new look at cave history, and even readers who aren’t connoisseurs of speleohistory will find something of interest to pique their curiosity—and perhaps even delve into a similar literature search to learn something of the early written history of caves in their own region.
and from there enter into another world of stalactite & stalagmite beauty. Seeing the huge rooms of unbelievable size, carved out by an underground river millions of years ago and decorated since then by mother nature with her indescribable onyx formations, will be an experience never to be forgotten.

Now, for the first time, INCA CAVE has been developed with lights and walks to share with all the world the beauties of the earth that have for centuries been hidden underground.

WATER—working drop-by-drop so slowly that progress could not be detected in the span of a human life, has hollowed out, built up and adorned, under the earth's surface several hundred feet, a cavern so vast and beautiful that man's mind cannot conceive of it. Timeless time of nature's work has made it; ages and eons the work has gone on without stop and still continues. There is no estimate as to its actual size, although more than twelve miles of passages and chambers have been explored.