

USING HISTORICAL ARCHIVES TO DISCOVER FORGOTTEN CAVES

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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.¹

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."² 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.³ 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."⁴ 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.⁵ 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.⁶ 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."⁷

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 1841.⁸ 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.⁹

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.¹⁰

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.¹¹

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;¹² 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.¹³

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.¹⁴

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.¹⁵ 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).¹⁶

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).”¹⁷ 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.”¹⁸ 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.¹⁹

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.”²⁰ 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 1776.²¹ 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.”²² 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.²³

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.²⁴

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.²⁵

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.²⁶ 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.²⁷ 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.²⁸ 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.²⁹

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.³⁰

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.³¹

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.³²

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."³³ 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.³⁴ 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.³⁵

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."³⁶ 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.³⁷

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.³⁸ 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.³⁹

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.