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Front Cover

Photograph of Edmund Ruffin, from the Brady Studios, courtesy of the National Archives.

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EDMUND RUFFIN AND THE CYMBEE OF WOODBOO

by Cato Holler

Born in Virginia in 1794, Edmund Ruffin became a prominent farmer and one of the century's foremost agricultural reformists. He did extensive experimenting with crop rotation, improved plowing, drainage, and fertilizing methods. He authored the highly original Essay of Calcareous Manures and served as editor of the celebrated agricultural monthly, *The Farmers' Register*. These were the first publications to draw attention to the widespread soil acidity of the coastal states as being a primary reason for the resulting low crop yields and depressed land values. He proposed the use of locally found deposits of calcareous marl as a much-needed acid soil neutralizer. Ruffin believed that these new agricultural methods would reverse exhaustion in the Southeast, as well as restore agricultural prosperity, hold the population, and protect slavery. Ruffin was indeed a staunch supporter of slavery and favored secession from the Union. His real claim to fame was the fact that he was given the honor of firing the first shot on Fort Sumter, South Carolina in 1861, thus beginning the Civil War. A true southerner to the bitter end, Ruffin was so distressed when the North won the war, that he wrapped himself in a Rebel flag and took his own life.

For the purposes of this paper, I would like to focus on one small incident in the colorful life of this individual. It was the year 1843. Impressed with Ruffin's work in Virginia, South Carolina governor, James Hammond, hired Ruffin to conduct an eight month agricultural and geological survey of the Palmetto State. During this time, he traveled throughout the state, visiting numerous plantations and meeting with various farmers and agricultural societies. His travels took him through dense, alligator infested swamps and other unfamiliar terrain as he searched for marl and limestone deposits, which he felt could be used for the benefit of the farmers. While investigating these carbonate deposits, Ruffin discovered a number of caves and karst springs, which he described vividly in his private diary.

I first became aware of this interesting document as I was conducting research for my book, *Caves of South Carolina*. Tim Harwell, a member of the South Carolina Interstate Grotto graciously arranged to get me a copy of Ruffin's diary which appeared in a book entitled *Agriculture, Geology, and Society in Antebellum South Carolina*. When I started reading through Ruffin's notes, I could hardly put them down. Included in his diary were detailed descriptions of numerous karst features, such as various sinks, boiling artesian springs, a "weeping fountain", caves at Vance's Ferry, Eutaw Springs, Pee Dee River, Cave Hall, and other fascinating sites. At one point, Ruffin is describing his exploration of a cave on the Pee Dee River:

I proceeded pushing a candle before me & crawling on my hands and knees, and soon had to be almost prostrate. The passage was not only so low as to require this, but soon became too narrow for me to turn about any where, & also very crooked &, as it required more space to go backward than forward in such a constrained position, I was afraid that I might get jammed in returning and have to be dug out. Therefore I did not go as far as I might have squeezed through, but not much short of it .... It was not merely my old fondness for exploring caverns that carried me into this. I wished also to see how these passages are formed through marl.

One can see from this description, that Ruffin was a pretty dedicated caver and possessed the scientific curiosity of a good speleologist.

Unlike the rather cut and dried formal report which Ruffin presented the governor at the close of his eight month study, his private diary, on the other hand is filled with fascinating stories and vignettes of his journey. It is one of these tales which I would like to share with you now. So as to
avoid losing any of the original flavor of Ruffin's story, I am going to quote directly from his diary:

Still cold though much less so than yesterday. Made an early start to the house of Mr. H. W. Ravenel's, who was ready, by previous appointment to go with me to examine some interesting localities east of the canal. In all this neighborhood there are numerous sinks, subterranean passages of considerable streams of water, & of the limestone boiling springs, such as were described about Eutaw. The sinks however are more rare & less deep than in the upper neighborhood, indicating as I infer greater depth of the lime-rock below the high land, or a less cavernous interior. The springs of this kind, when deep in the visible opening & throwing up large quantity of water, are known by the name of fountains, which term is thus limited, & not of general application as it is correctly. One of the most remarkable of these fountains for size & beauty is at Woodboo, & was the first object visited.

It bursts up from two separate apertures about 8 or 10 yards apart, the smaller of which only could be then seen, as the reservoir or pool, which is several feet deep some 15 yards wide & 40 or 50 long to its narrower outlet. What is the depth of the wide opening which discharges the greater jet, there was no means of ascertaining; for though there was a little canal on the water, it was unfit for use. But the smaller opening, which is close to one side was measured, & found to be about 14 feet deep, of what is a funnel shaped mouth; but besides this depth, which is clearly exposed to the eye through the perfectly transparent water the passage to it from below, through the broken ledges of rock marl seen at the bottom, though much narrower, must be of no small size. I tried to obtain a specimen of the body by the borer, but it being only 11 feet, I could not reach the marl any where, except on the top of a very thin ledge standing perpendicular, & there I could not enter it enough to obtain a specimen. It is however certainly of the softer & lower bed, & not of such hard & stony texture & fracture as frequently shown, & such as the Eutaw spring, & others I have seen force their way between, without being able to wash a large cavity. This difference of form would alone prove the softer texture of the rock of the Woodboo fountain, & all others like it in this respect. This is at the edge of the swamp, through which the water flows in its channel on a level, without visible current. This still & placid appearance, the surrounding tall trees & the dense swamp forest on one side, give to this fountain a gloomy & solemn beauty altogether different from that of the Eutaw. The general bottom of the tiny lake is of black mud; & the water appears so dark as to be almost black at first glance, although its crystalline transparency is evident by the clearness with which the marl is seen in the bottom of the opening whence the water comes up, & near which the trout are seen swimming almost as distinctly as if they were floating in air. The continued upward rush of the water keeps these apertures open & clear no matter how deep.

The Wadboo [sic] plantation belongs to Mr. Mazyck. When it was formerly a family residence, (which it is no longer,) the margins of the fountain were kept in neat order which made the place more beautiful than now. It however is yet a place of great beauty, without the aid of ornament or care.

It was at this fountain that I first heard reference made to a superstitious belief universal among the negroes, which of all their superstitions is the only one having any touch of romance & deep interest. Each of these fountains, of considerable depth & size, is believed to be the habitation of a kind of water sprite, or supernatural being called a Cymbee1 - (I doubt whether the word was ever written before, & therefore I know not its spelling -. ) Each fountain has a different cymbee, the size, appearance & habits of each varying some what from others. The
 negro head man, or driver as called in S. C. who accompanied us, had never seen the cymbee of the Woodboo fountain; but reported from the accounts of others that it is web-footed like a goose - a feature certainly but little compatible with the beauty of a water nymph. Another old negro who had seen a cymbee at another fountain, when he was a very small boy, told me that she was seated on a plank which was laid across the water, & that the long brown hair of her head hung down so low, & so covered her face & whole body & limbs, that he saw no other feature; nor could he answer to my question whether she was a white or a negro cymbee, except as may be inferred from her long hair. The descriptions were very loose & meagre. The latter admitted that he was so young at the time, & so much frightened that his recollection of what he saw is very indistinct. After seeing her but a few seconds, she glided into the water & disappeared, as may be presumed in the deep cavern from which the waters of the fountain rush to the surface. But however few appearances of the cymbees are heard of, they are nevertheless believed by the negroes to be frequent & numerous. For it is another part of the superstition that it is bad luck to any one who may see a cymbee to tell of the occurrence, or refer to it; & that his death would be the certain penalty, if he told of the meeting for some weeks afterwards. Still, terror, which could not be hidden, falsehood, or other causes, have brought out many reports of appearances of cymbees above the waters of their deep caverns, & all under different circumstances, showing different habits of the supernatural & solitary resident. The Cymbee of the Woodboo fountain is seen only when the sunshine is "right up & down", as the old driver said. At other fountains, they appear only in the night. They are usually seen in a sitting posture, on any low bridge, or plank, crossing the water, or on the margin of a steep side. But at Pooshee, the plantation of Dr. Ravenel, (next to Black Oak & on the canal,) a negro boy who was so unusually bold as to go to the fountain for water late in the night, was frightened almost out of his senses by seeing the cymbee running around & around the fountain. What a fine subject would this superstition furnish to another Scott, with such a residence for the cymbee as the dark & gloomy pool of Woodboo, or the bright crystal stream & subterraneous channel of Eutaw - or still better, when this fountain, as formerly filled its broad & deep basin & overflowed its brim!

As mentioned previously in regard to matters of fact of these fountains from the lime-rock, and which facts are in strict accordance with the cavernous foundation which I suppose, these fountains sometimes suddenly disappear entirely, & in other places, new fountains burst out. When the former occurs, the negroes believe that the cymbee has died, or has been offended & abandoned her residence. When Dr. Ravenel enclosed his fountain with masonry & confined & raised its water, an old half breed Indian of the neighborhood, who was half negro in blood, & wholly in habits & superstition, remonstrated with him, upon the ground that the cymbee might be made angry & leave her haunt, & that then the spring would be dried. Unluckily for the story, the fountain continues to flow as previously.

Now, just what was this Cymbee which formed the basis of the legend? It's anyone's guess, of course. It is interesting to note, however, that earlier Indian folklore is filled with tales of water babies, dwarves, and old women inhabiting various springs. Some folks suggest that it may have been a beaver, muskrat, or otter.

It is also interesting to note that Ruffin mentioned that many of these so-called "fountains" or springs were generally inhabited by alligators. It doesn't take much imagination to picture some of these superstitious folk going out to this spring, surrounded by live oak trees draped with an eerie canopy of Spanish moss. About that time a large alligator rears his ugly head above the water. As he does so, long strands of algae and clumps of duckweed cling to his skin, giving the appearance
of a mass of tangled hair. Remember the comment about the creature being "web-footed like a goose?" If the opportunity ever arises, take a look at an alligator's foot sometime. That's something to think about.

In any event, it is refreshing to realize that while he was engaged in a serious geological survey, Edmund Ruffin took the time to record in his private diary his impressions of the locals and some of their tales, such as that of the Cymbee of Woodboo.

REFERENCE


2000 PETER HAUER AWARD WINNER - DALE IBBERSON

Dale began caving in the 1960s while in high school. His first cave trip was to Mummau Cave in Lancaster County, Pennsylvania.

He has served in every office in the York Grotto, and has served as the chair of OTR and the Robertson Association.

He maintains the York Grotto Library and has compiled the history of the Middle Appalachian Region. He has coordinated a history of OTR and displayed some of its T-shirts, photos, and memorabilia at the last year's reunion.

Dale has spent many years collecting books and other cave materials, resulting in a large cave library in his home. He has allowed cave historians to view and copy his large collection, which includes perhaps the largest number of Pennsylvania cave postcards in existence. Dale has written many descriptions and histories of caves in Pennsylvania and West Virginia. Dale has also worked on cataloging the maps and slides of the late Bernie Smeltzer, who surveyed more Pennsylvania caves than anyone else. Recently, Dale has accumulated historical information about Alexander Caverns, Pennsylvania and guided a history field trip at the 1999 Fall MAR Meet.

PETER M. HAUER SPELEANT HISTORY AWARD REES

THE REDISCOVERY OF HEISKELL CAVE: 
A CONFEDERATE NITRE BUREAU WORKS

by David A. Hubbard and Marion O. Smith

In late 1979 Smith began a serious effort to study the Confederate Nitre Bureau, and to glean information from all surviving documentation regarding it. Very early in his research, it was noted that Southern saltpeter operations, whether in a cave or using dirt from old houses and barns, were either worked directly by the government or by private contractors. By the time he met Hubbard in December 1982, Smith was already aware of a government operation at a site called "Heiskell Cave." From 1860s documents Smith knew it was near Rose Hill in Lee County, Virginia, but he did not know which, if any, of the many late twentieth century-known caves it might be. He wrote and later asked in person Dr. John R. Holsinger, an authority on Virginia caves with a special interest in Lee County, if he had ever heard of "Heiskell Cave." Professor Holsinger could not help. Smith found no one named Heiskell in the 1860 Lee County census, and did not expand his research to an earlier time. So, for many years, the identity of "Heiskell Cave" was a mystery.

In April 1862, the Confederate Congress created the Nitre Bureau to work saltpeter caves and to establish artificial niter beds. A year later the Bureau was given charge of mining iron, copper, lead, coal and other minerals. The South was divided into districts with a superintendent and various assistants in charge of each.¹

Nitre District Number 1 was composed of Russell, Washington, Scott, Wise, and Lee counties at the extreme western tip of Virginia. Its superintendent was Dr. David K. Tuttle (1835-1915), a New Yorker and former chemistry professor at the University of Virginia. Tuttle maintained an office at Abingdon, which he rented from Eliza F. Mitchell. Although over ninety contractors supplied saltpeter from this district, the only government operation was at Heiskell Cave.²

Heiskell Cave was worked by men assigned by the Nitre Bureau from at least October 1862 through August 1863. Payrolls are extant for this time, covering one to three months per roll. The cave's manager or superintendent during the entire eleven months was David Jervis Waterman (1833-1884), a Washington County, Virginia farmer who after the war moved to near Kingsport, Tennessee. The work force, including the manager, numbered thirteen to twenty-one men per payroll, of whom five to ten were free negroes, impressed from adjacent counties. In all, twenty-nine different men were employed at one time or another, nineteen whites and ten blacks. At first the white laborers were paid $20 a month, $5 more than the blacks. But beginning in March 1863, all laborers, regardless of race, were paid $15 a month. The manager's pay was $40 and then $50 per month, while the teamster received $25 a month. During the December 9, 1862 - January 15, 1863 period, two horses were employed at the operation. Later, in May and June 1863, two other horses were bought, but whether they were replacements or additional is not known.³

Like all Confederate government mines, Heiskell Cave was supposed to be supplied by military quartermaster and commissary officers. But in actuality this was not always possible and local businessmen and farmers supplied much of the foodstuffs (corn, bacon) for the men, and forage

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(corn, oats, hay) for the horses, plus tallow, dippers, steelyards, soap, and other items. In April 1863 William D. Ewing (b. c1832), a Lee County doctor, made two visits to attend sick negroes.\textsuperscript{4}

It is not known exactly when the Nitre Bureau quit mining Heiskell Cave. It was probably August 1863 or within a couple of months afterward. By November 1863, David J. Waterman, the erstwhile manager, became a private saltpeter contractor. Between then and September 1864, records have survived showing that he made a number of small deliveries totaling 909 1/10 pounds. Where he made his saltpeter is unknown, but it is possible that he continued to work in Heiskell Cave.\textsuperscript{5}

During 1994 the owners of usually closed Jones Saltpeter Cave near Rose Hill, Virginia, allowed several visits by NSS affiliated cavers. During November Hubbard, co-author of this paper, copied Civil War graffiti. Among the names he found were "John R. Fitts 1863," "A. P. Waterman Mar 7 1863," and "1863 Andrew J. Milbourn CSA March 24 1863." Waterman's name was also located a second time with a "March 10 1863" date. The significance of these names was not realized for many months. Then one day, Hubbard called Smith on the phone about other matters. During the conversation Hubbard mentioned the names he had found in Jones Saltpeter Cave. Smith immediately thought they sounded familiar, pulled his copies of Confederate payrolls, and found that Fitts, Waterman, and Milbourn were all white laborers at Heiskell Cave! Thus, the long mystery of which modern-known cave equated to the Civil War's Heiskell Cave was solved!\textsuperscript{6}

A determined effort to create biographical sketches of the Nitre Bureau miners whose names were left in Jones Saltpeter Cave has only achieved partial success. Thus far this is what has been learned:

\textbf{John R. Fitts (c1837-fl1870)}, a farm laborer, in 1860 was living with his parents Cornelius (1798-1865) and Sarah R. Fitts (1801-1879) in Lee County, Virginia. On May 16, 1861 he married Elizabeth, a daughter of Andrew Milbourn (this made him a brother-in-law to Andrew J. Milbourn), and ultimately they had four girls and a son. From late 1861 until mid-April 1862, Fitts was a private in Company E, 21st (Pound Gap) Virginia Battalion Infantry (which later became part of the 64th Virginia regiment), CSA. From about January until August 1863 he was a laborer at Heiskell Cave. What he did between then and April 28, 1865, when he was paroled at Cumberland Gap, is unknown. On July 12, 1870 he was a farmer near Jonesville with $1,800 real and $500 personal property. He died sometime prior to his wife who expired February 15, 1873. His children were raised by their grandparents, Andrew and Christina Milbourn.\textsuperscript{7}

\textbf{Andrew J. Milbourn (c1835-fl1870)}, a son of Andrew (1802-1886) and Christina Sutters Milbourn (1813-1900), was a native of Washington County, Virginia. Long before the Civil War the Milbourns moved to the vicinity of Jonesville in Lee County. There, in 1860, Andrew J. was a farm laborer residing with his parents. From about January through August 1863 he was an employee at Heiskell Cave, the first four months as a laborer and the last four months as a teamster. Between May 2 and August 5 he was paid $25.50 for various ferriages across the Clinch and Holston Rivers, corn for "Govt Stock," a two horse team for a half day, and for feeding and shoeing horses. After the war he continued to work on his father's farm, and by 1870 he apparently was married to a twenty-two year old woman named Lydia. In October 1867, his father was elected as a Radical to the Virginia Constitutional Convention.\textsuperscript{8}

\textbf{Alfred P. Waterman (c1838-fl1880)}, a Virginia native, was a son of Levi L. (1794-1876) and Mary Ann C. Waterman (1800-1863), both originally from Massachusetts. In 1860 Alfred P. was a carding machine attendant and still resided with his parents in the western portion of Washington County, Virginia. From about February through August 1863, he was a laborer at Heiskell Cave, which his brother managed. At some undisclosed time he married a woman named Isabella
(c1842-1880) whose surname may have been Francis. Nothing further has been determined except that he and his wife are buried at Clear Branch Methodist Church Cemetery in Washington County with no dates on their tombstones.9

During 1998 an obituary of William Heiskell (1788-1871) was accidentally discovered which helped to explain the reason the Heiskell name was once associated with a southwestern Virginia cave. Heiskell was born in Hagerstown, Maryland, and as a young man worked as a printer in Winchester and Richmond. In late 1811 he "was induced to remove to Lee County, Virginia, and accept a clerkship under John Mitchell ... who was engaged in the manufacture of saltpetre for the use of the government." Within a year Heiskell married Elizabeth King Mitchell, "the daughter of his employer." The dates in the obituary may be off a year or two, but no doubt during some portion of the War of 1812-15 Heiskell became associated with the cave Mitchell was mining. According to deeds, Mitchell bought the cave in September 1813, and Heiskell sold the cave in July 1817. It was Heiskell's personal estate and home, "Rose Hill," which gave the name to the community. William Heiskell remained in Lee County until 1833, and during his residence served as sheriff, justice of the peace, and as a member of the state House of Delegates. He left Virginia for Tennessee, living on a farm in Monroe County (1833-1862), and afterwards in Knoxville. He again held positions of trust, such as chairman of the Monroe County Court, and served in the legislature (1849-1950, 1856-1866), functioning as speaker of the House immediately after the Civil War.10

SOURCES


2. Confederate Papers Relating to Citizens or Business Firms, Record Group 109 (Microcopy 346, Rolls 176 and 695), National Archives, Coale and Barr and Eliza F. Mitchell Files; Who Was Who in America, Vol. 1: 1260.


According to Shaw (1992:227), a standard reference to the history of speleology, in 1569 Jacques Besson was the first to mention in print a reference to a cave fish. This article is aimed to 1) analyze Besson's record of fish; 2) summarize other records for European cave fishes while asserting the validity of those records; and, 3) to establish the true chronology of cave fish records before the first truly confirmed cave fish species, Amblyopsis spelaea (De Kay 1842), was described.

JACQUES BESSON AND HIS "LITTLE (CAVE?) EELS"

Despite being considered one of the most important and prolific writers in engineering of the 16th Century, not much is known about Jacques Besson. The following sketch is based on the few biographical sources about him: Arnaud (1894), Droz (1976), Keller (1964, 1973).

It is believed that Besson was born around 1530 near Grenoble, France. He described himself as of Colombieres, near Briancon in the Dauphine, high up in the Alps on the southeastern border of France. There are records indicating that he might have taught mathematics in Paris sometime in the 1550s. By 1557 he was working as an engineer for the city council of Lausanne for whom he designed a water-engine as part of a fountain. In 1559 he was a resident of Geneva and that year he published his first book, De absoluta ratione extrahendi olea, & aquas e medicamentis simplicibus, which dealt with chemical analyses and practical distilling. By then he may have been well connected since that book had a praising preface by one of the most noted natural historians of the time: Konrad Gesner (b. Zurich, Switzerland, 26 March 1516; d. Zurich 12 March 1565).
By 1561, when Besson acquired Swiss citizenship, he was going through tough times. He fell seriously ill and was living in poverty. By then he may have been married and had a daughter. In addition to being a teacher, an apothecary, and a mechanical engineer, he became pastor of the Reformed Church. In the town of Villeneuve-de-Berg, in the Vivarais, west of the Rhone Valley, the Protestant community was flourishing and expanding and felt the need for a preacher. Given the serious lack of preachers, almost any educated person qualified for the job. But this position was far from a solution to his problems; when he arrived at his parish, he found that the two religious parties in the town were in a civil war. He and his family were forced to live in another man’s house.

In 1563 he left the ministry for Lyons to work distilling oils and waters. In an attempt to avoid angering the church, which punished those who left without permission, he wrote them a letter in which he admitted to inadequacy while claiming, however, that those who appointed him (in essence, the church) were faulty in doing so. In 1565 we found him in Paris and two years later in Orleans where he taught mathematics and demonstrated his inventions to an admiring audience. In 1567 he published his second book, *Le Cosmolabe*, about a versatile and very elaborated mathematical instrument of his own invention, that could be used for almost all the purposes of navigation, surveying, cartography, and astronomy and, when not required for any of them, could double as a reading desk.

In 1569 King Charles IX went to Orleans and Besson entered the King’s service as a mathematician and engineer. In that year, he published his most famous book, *Theatrum Instrumentorum et Machinarum* which was the first printed work of mechanical inventions. Between 1578 and 1626 this book was published in four languages and had seven editions. It was also widely plagiarized and pilfered. There he introduced cams and templates (patterns used to guide the form of a piece being made) to the screw-cutting lathe, thus increasing the operator’s mechanical control of tool and workpiece and permitting the production of more accurate and intricate work in metal. He also improved the drive and feed mechanisms of the ornamental lathe and described a more efficient form of waterwheel, considered a prototype of the water turbine. In this book he depicts different kinds of machine tools, pumping plants, ploughs, military engines and other machines he had observed in use in different parts of Europe. In reality, it is doubtful that many of these machines were ever in operation, since they are not mechanically viable. Yet, Besson shows great ingenuity in his designs, especially in that of a screw-cutting lathe.

After the Massacre of Saint Bartholomew’s Day in 1572 (which actually began on August 24 and ended in October) in which 70,000 French Protestants, or Huguenots, were murdered, he fled France. Besson died in Orleans in 1573.

Besson often used completely new concepts and made major contributions as an inventor. His screw-cutting lathe, which used a cord with an attached weight instead of the earlier springy poles,
was a very important invention in the development of the machine-tool industry and of scientific instrumentation. He also invented a practical fire-engine that later became common. His work shows the technological visions of the day while pointing the way to future developments (see also Besson 1571, 1573).

In his 1569 "L'art de science de trouver les eaux et fontaines soubs terre . . . ," he reported "little eels" (petites anguilles) in a cave stream. Although Shaw (1992:227) claims that such observation took place "in a cave stream in France" the fact of the matter is that Besson did not give the locality of where he made that observation. The passage in reference reads:

Les entrees sont comme portaux voustez & estroits, ainsi que le tout on experimente en entrant en semblages chasteaux natureles soubs terre, la ou lon trouue avec torches de fort grands lacs, & courans d'eaux viues, mesme qui bien souuet produisent des petites anguilles qui n'ont guere affaire de l'air pour leur nourriture. (Besson 1569, 1969:41, notice that we have transcribed it in its original spelling).

[The entries are like narrow arch portals, so all the people coming into these virginal natural subterranean marvels, need to use torches to see big lakes and currents of lively waters, from which one can see small eels for which there is nothing to eat but air.]

There is no indication of either the locality or of the fish itself. He does not describe the fish as being blind and/or depigmented (what would have been extraordinary characteristics to even the casual observer). Thus is it unclear whether he observed a true cave fish, actual eels (Anguilla anguilla), or a member of some European freshwater fishes with eel-like bodies that are sympatric with the areas he traveled to (France and Switzerland). Those fish families include Petromyzonidae, Cobitidae, Siluridae, and Clariidae (Blanc et al. 1971).

OTHER EARLY REPORTS ON EUROPEAN CAVE FISHES

Besson may have been the first person to report in a publication of what he thought were cave fishes for Europe, but certainly he was not the only one. The second was Athanasius Kircher (b. Geisa, Germany, 2 May 1602; d. Rome, 28 November 1680). He was a prolific Jesuit priest polymath who published 44 books and left more than 2000 manuscripts and letters on varied topics. One of his most famous books was Mundus subterraneus (1665), probably the first printed work on speleology. There he wrote about the origin of subterranean water and described all kinds of alleged cave animals (including giants and dragons). On page 85 of part 2, in "book 8", there is indeed a description of cave fishes.

So I had much to tell about the subterranean animals, that we know. But from these, that can be in the deep and spacious holes in the earth, we can not present much, because we do not know them; from several examples however it appears that there are fishes and other animals, for Plinius writes that in Greece the earth, bursting open due to an earthquake, threw out a river with a large number of fishes, that without doubt had bred in a underground river. [Kircher gives no references to Plinius] There is also in the landscape of Krain close to the town Haubach a field, that every year about the Spring gives much water with fishes, so that in a few days the field changes in a Lake full of fishes. But this subject is sufficiently discussed before. [He probably meant Laibach instead of Haubach, the old name for Ljubljana in Slovenia, with its temporary lakes like Czernica - with springcaves and ponors].
Cysatus confirms the same, saying: "in Switzerland rivers rise from the caves of the mountains, that flow from May until September, but stop the rest of the time. He adds to that, that the rivers, as they come out of the mountains, are full of fish, and that it is clear, that they come with the waters from below the earth. [Cysatus is probably the Swiss astronomer Johann Cysat that in 1618 discovered Orion Nebula; Kircher gives no reference]."

We think that it is not implausible that, as under the earth all kind of fishes occur and live, also earth animals stay there, that is all kind of Mice, Snakes, Dragons, as well as others, that find their origin in rotten matter.

These references to subterranean fishes, however, are vague, unsubstantiated, and given Kircher's reputation as an uncritical repeater of other people's tales, highly suspect (Romero 2000a). Furthermore, he makes no reference to the features that characterize true hypogean fishes: blindness and depigmentation.

The third reference to subterranean fishes in Europe was by Marc-Rene Marquis de Montalembert (b. Angouleme, France, 16 July 1714; d. Paris, 29 March 1800). He was an aristocrat, military man, and an engineer known for his design of fortifications. Montalembert (1748) reported a blind, subterranean fish in one of his properties in the Southwest of France. His description was as follows:

In a spring at Gabard, Angoumois, near one of (Montalembert's) estates, it is common to fish either blind or one-eyed pike; one-eyed ones always miss the right eye and among the blind ones, the right eye seems further reduced that the left eyes. This spring is a kind of bottomless pit; there are small groups of floating plants at the surface, which impede the use of fishing lines, which makes fishing a long and difficult process; however Montalembert was fortunate enough to capture a young pike with its right eye missing; this spring drains its water into the Lissone river; despite this connection the local people say that one eyed or blind pikes are never fished in the river, while the spring contains one-eyed or blind ones only.

Apparentely, Montalembert left no drawings, much less a preserved specimen. He said that what he saw was a pike. That, by itself, is not surprising. The pike (Esox lucius) is, by far, the most common freshwater fish of the Northern Hemisphere. The fact that this fish can be identified as a pike despite being blind is not surprising either. Many subterranean fishes are very much identical to their surface ("epigean") forms except for the lack of eyes and pigmentation. But Montalembert never mentioned depigmentation in his description. Furthermore, he says that some of the fish lacked one eye and when that was the case, it was always the one on the right side. True cavernicoles show the same degree of reduction in both eyes. Finally, the location mentioned by Montalembert cannot be found today nor has any true blind cave fish ever been described for Europe (Romero 1999).

Another unproven report of blind cave fish for Europe is that of Scott (1866) who wrote about such a fish in Italy without specifying source or locality. Reports of blind cave fishes for North America, have been analyzed elsewhere and found to be unsubstantiated (Romero 2000b).

CONCLUSIONS

All reports of European blind cave fishes are unsupported by scientific evidence. Two of them (Besson and Kircher) do not even describe them with the features typical of hypogean fishes while the third (Montalembert) is suspect. Furthermore, no true cave fish is known for Europe at the present time.
From the chronological viewpoint, although all three records precede the description of the first blind cave fish described in the Western Hemisphere (*Amblyopsis spelaea* by De Kay in 1842) (Romero & Bennis 1998) and are thus pre-Linnean, there is an even earlier reference to a blind cave fish that, in this case, was probably true. That is of a cavernicole fish from China (*Sinocyclocheilus hyalinus*), first reported in 1541 (Chen et al. 1994).

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THE SHOCCKEYS CAVE LEGEND

By Jack H. Speece

Shockey's Cave, Washington County, Maryland is not well known in caving circles. Davies failed to recognize it in his 1950, 1952 and 1961 The Caves of Maryland. Franz and Slifer listed the cave only as "reported" in their 1971 Caves of Maryland. Although the cave is presently not accessible, its history is quite colorful.

Valentine Shockey, son of John Christopher Shockey and Barbara Milford was born about 1739 in Bucks County, Pennsylvania and moved with his family to York County, PA in 1754. In 1756, Valentine married Barbara Bixler and had four children. They moved to Washington Township, in Cumberland County, PA about 1764 and had four more children. At this time the Mason-Dixon Line had not been established and Cumberland County extended to the border, therefore, part of the 200 acre farm was in Maryland.

Prior to the Revolutionary War, inflation was at an all time high and everything was heavily taxed. After the war things weren't much better as the Continental Congress now had power to tax, so they just printed lots of money to pay for the debts. Counterfeiting hadn't become illegal yet and was causing additional problems. They were difficult times for all.

Valentine Shockey was having additional problems. His mother died in 1771, his father remarried two years later and left his estate to his second wife instead of to his children. Valentine wasn't succeeding as a farmer and was in debt with a large family to care for. With the war at hand he began counterfeiting about 1775 along with his brother and several sons. The cave near Mt. Misery, east of Great Falls on Falls Creek was used as their hide-out. They also engaged in other...
activities such as horse stealing, moonshining and bootlegging, but no evidence of any violence has ever been uncovered. In time his "gang" expanded to over twenty men and operated from Baltimore to Ohio and from New York to Savannah, Georgia. Many of their activities are just stories, but it extends over a 28 year period before Valentine was arrested by Colonel James Johnston and tried for his crimes.

Valentine knew the area well and when the posse was close behind he climbed the mountain and hid in the brush. The silence brought the posse to a halt and they continued on foot for the remainder of the night. As the dawn began a noise aroused the suspicion of an old soldier as someone walking through the woods. Giving the pass sign and it not being returned, he immediately took chase and shouted to the others to join him. On being ordered to halt, his quarry turned and gave an angry reply which led to his capture - not noticing a small fallen tree he tripped and fell. By this time the old soldier had his bayonet at Valentine Shockey's throat. Valentine was taken to the York County jail. The results of his trial are unknown. Some feel that he used his money to buy his way out of jail.

To accomplish half of what is reported to have done, Valentine must have been a truly remarkable man. He was a very active man, making fair and wise decisions, keeping a band of outlaws contented and working together for such a long period of time and over a large area. He was also arrested in Berkeley County, Virginia (now West Virginia) for counterfeiting. However, there seems to have been no convictions. Perhaps it was because it wasn't illegal to counterfeit at that time, only to forge the signatures on the bills.

When the hide-out was discovered, the cave was blown shut to keep moonshiners and others from using it. Some stories said that the cave extended under the mountain and came out the other side. That is an interesting tale which was also told about Needy Cave, near Waynesboro in Franklin County, PA located on the other side of the mountain. There are also reports that the caves in the area were used as part of the underground railroad.

The cave is reported to be a single room which extends into the 40-foot high cliffs only a short distance. The area is comprised of Weaverton Quartzite and located northeast of Falls Creek near Fort Ritchie at an elevation of about 1450 feet. There are other small fissures in the area which are common in this geological formation.

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CORRECTION:

The article in JSI issue Volume 33 Number 3 on The Steamer "Bat", submitted by William Halliday was written by Tom Lera.
TEXT OF LETTER OFFERING RESCUE ADVICE

Submitted by Timothy G. Donley

Edw Burnett
555 West 14 St
Chicago Ills. Feb 12

Gentlemen

I going to offer you my experiences in mining
I have help dig two men out of tunnels. I
help get Hicks out
after for [sic] days and another
that was in the earth
five days. I think you
people are losing great
opportunity by not going
to cart and get ( )
so you can go in the
way that Collins went
in and use the roof of
that passage [sic] as girder. I
believe what Johnnie Gerld [sic]

2
he is in hole. I have
been around the world
but never heard of digging
( ) shaft to save man
when they could dig tunnel
through good rock. I can't
see what authority the
Military officer have
to stop any body else
from digging. I bet they
got no order in writing
and from what I read
on Gerald report he
was within 15 feet of him
and the soldier would
not let him to drive pipe
to him so they could feed
him. that is not engineering
job it is for man of
mining experience. I hope
your people will start

3
three or for [sic] foot tunnel
the smaller the les [sic] danger
and crib it up when you

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come to gravel. and have six or ten men on hand. I think it is disgracefull [sic]. I help dig 150 feet in three days. every day means nine or ten feet. I ( ) the fact that Collins is in hole and the Blasting and drilling have fill it up. I hope your people will get some way to bring him out the way he come in that all E Burnett 555 West 14 St Chicago Ills.

HISTORICAL BACKGROUND OF S.E.R.A.'S RICHARD W. SCHREIBER AWARD

By Larry O. Blair

INTRODUCTION

With the untimely death of Richard Schreiber on January 6, 1990, the Southeastern Region of the National Speleological Society lost one of its most respected cavers. As soon as the initial shock of his death wore off discussion started on the formation of an award in his name. Richard had lived a short but full life of exploration and mapping of our beloved caves. History will remember him as perhaps one of S.E.R.A.'s and T.A.G.'s best. This short article will document the events leading up to the formation of this award. For a complete history of Richard's caving life please refer to "The Story of a Caver" in the NSS News, April 1990, pages 97-100 and also for a lesser insight into his life see the "Cavers Forum: "Richard W. Schreiber -- More Memories" in the NSS News, July 1990, page 170.
As happenstance would have it the S.E.R.A. Winter Business Meeting for that year was held not long after Richard's death on Saturday, March 31st. That year the meeting was held at the Motel Birmingham in Birmingham, Alabama.

There was a proposal made on the floor during the meeting that the Francis E. McKinney Award be changed to include Richard's name and be known in the future as the "Francis E. McKinney/Richard W. Schreiber Award." This motion was voted down as it was felt that to combine the award in such a way would be to diminish either one to a certain degree. There should be an award in the name of both of these respected cavers.

At that time the Birmingham Grotto proposed that a committee be set up to define the bases for, the feasibility of, and to set up the rules, regulations and etc. for a Richard W. Schreiber Award. A motion was voiced and approved. A five member group was elected for this purpose: Myrna Attaway, Bill Bussey, Joe Domnanovich, Karen Padgett and myself. We didn't elect a chairman, but decided that we would have equal status within our group. We spoke among ourselves and decided to put our thoughts down on paper and try to meet at that year's Summer Cave Carnival to be held at Goose Pond Colony Camp Ground, just outside of Scottsboro, Alabama.

I wrote a letter to Richard's wife Joan on May 5, 1990 and explained the formation of the committee and our intentions, asking her for her thoughts and suggestions and spelling out my own thoughts on such an award for my old friend.

I received a very nice reply from Joan dated May 8th. She was very approving of our effort and added one suggestion to my own ideas which was, of course, honored by the entire committee. Joan wrote, "I agree with your list of 'conditions,' with the one possible addition which follows: I would like to see the award, should it be decided that there be one, given to a relatively new caver . . . someone who has not been caving for a long time. Richard was a natural and enthusiastic teacher, I think that making an award in his name to a newcomer might help encourage others with less experience to tackle a project themselves and not wait for one of the 'old-timers' to lead."

The committee, minus myself, did in fact meet at the Cave Carnival. I was later told that a lot of progress was made on the planning of the award at the "Carnival."

Later that year during the 13th Annual T.A.G. Fall Cave-In, held each year at the Sequoyah Caverns Camp Ground in Valley Head, Alabama, Bill, Joe and myself got together in the field on "Vendor's Row." They filled me in on the earlier Cave Carnival meeting and we generally discussed how things stood as of that date. This was on October 6th.

Again Joan was written of November 21, 1990 and filled in. Also during this time, Bill Bussey, S.E.R.A. Secretary/Treasurer, had been keeping others informed of our efforts and entering information into his computer. Bill did an excellent job keeping track of all of our thoughts, criteria, rules and how the committee would operate for the future.

In a letter dated February 7, 1991, a xerox copy of the newly printed award certificates Bill had just picked up from the printer was enclosed. As Bill stated . . . "Though similar in typesetting to the Francis McKinney award, the background flourishes are in red and gold, instead of black and gold. The typesetting is similar in both to save on money, and to provide some sense of design continuity to the awards. Though different, they are both from S.E.R.A.!! The award certificates are very handsome, containing a "shadow effect" image of both the N.S.S. and S.E.R.A. logos in the background.

Journal of Spelean History
THE FIRST PRESENTATION

As the 1991 Winter Business Meeting approached we felt that we were ready. Bill had circulated several copies of the rules and regulations for the award during the time since we had put them down on paper. We had made corrections and in effect "fine tuned" the entire package to this point. He also had circulated a list of nominations he had received and the rest of us gathered any names we had gotten as the word spread of this new award.

The meeting was held on February 22, 1991 at the Goose Pond Colony activity building outside of Scottsboro. The award was brought up as a topic of discussion during the meeting under old business. We announced that we were indeed ready. The nomination rules were laid out, the award itself had been designed and we had a list of nominations. The award would be presented that evening at the yearly banquet.

Bill had previously penned a letter to Joan respectfully asking her to attend the banquet that night and to perhaps make the first presentation of the award in her late husband's name.

Joan, however, was unable to attend. A letter she had sent to be read at the event was inadvertently left at home by the person she had sent it to!

After the meal the first Richard W. Schreiber Award was presented. The certificate and accompanying monetary award was presented that first time to Rick O'Hara.

It was with pride and a sense of humility that we, the committee, had been able to design the entire award program, actually have it ready and then were able to present the award all in one year, especially since we all live in such a widely scattered area.

SOURCES

1. Personal Cave Log, Book No. 5.
2. Personal letters between Bill Bussey, Joan Schreiber and myself.
3. The Richard W. Schreiber Award criteria and outline form.
CATTLE CAVE: HISTORIC ARCHIVE

By David A. Hubbard, Jr.
and Marion O. Smith

Cattle Cave in Lee County, Virginia was mined for saltpetre. Civil War era writings on mattock marks in sediment contain more detailed inscriptions than just the names of miners. The most stirring sentiments were the following: "Nathan S. Cox Was born January 2nd 1842 This the 6th day of March 1862. Age 20 years 2 months & 4 days War is upon us But we will not be subdued We will fight them as Long as there is a woman or little boy large enough to raise a gun to fire Huzza Huzza Jeff Davis & the southern confederacy Nathan S. Cox Thursday Eve 1862." He served in the 50th Virginia Infantry and survived the Battle of the Wilderness and the war. A younger brother, Mitchel C. Cox, age 17 years 9 months and 6 days, recorded his thoughts during that March 6th evening. He served in the 64th Virginia Infantry and was captured at Cumberland Gap, exchanged as a prisoner, and served again before he was "Murdered and robbed in Russell Co., VA on 8/4/64." A sister, Mary A. F. Cox, and her friend Cynthia Ann Pruett also inscribed the sediment bank that March evening. Cynthia married another Cox brother in February, 1865. A partially obliterated name dated 1860, may be that of General Creech. He enlisted the same day as Mitchel Cox and was captured at Cumberland Gap. Sent to Camp Douglas, he was held until he died of endocarditis on December 19, 1864.

THE CAVEFISH CALENDAR: ESTABLISHING THE PRECISE CHRONOLOGY OF EARLY DISCOVERIES OF CAVE FISHES

By Aldemaro Romero
and Zeia Lomax

The history of the discovery of the first true cave, troglobitic (blind, depigmented) fish has been unclear. Different claims have been made at different times about the primacy of discoveries in this area. There are at least three references for European cave fishes for pre-Linnean times: Besson (1569), Kircher (1665), and Montalembert (1748). All these citations are unsupported by scientific evidence and may have been based on uncritical observations. Even if they were true, they would all be preceded by a description of a cave fish in China in 1541 that seems to refer to a true cavernicole.

THE CAVES OF MUSHROOM VALLEY, ST. PAUL, MINNESOTA

By Greg Brick

A three kilometer reach on the Mississippi River gorge near downtown St. Paul, Minnesota, is known locally as "Mushroom Valley" because of the abundance of man-made mushroom caves in the sandstone bluffs. Mushroom growing lasted a century, from its introduction by Parisian...
immigrants in the 1880s until the last cave ceased production in the 1980s during the creation of Lilydale Regional Park. Notable examples are Altendorfer, Bisciglia, Lehmann, and Peltier caves.

Some of the approximately fifty caves originated as sand mines, and not all were used for mushroom growing. Examination of city directories and Sanborn insurance atlases revealed that other common uses were aging of cheese (Land O' Lakes), lagering of beer (Yoerg's Brewery), and storage (Villaume Box & Lumber). The University of Minnesota rented caves in the 1930s for experimental ripening of blue cheese. A cave used by the St. Paul Brick Company later was gated as a bat hibernaculum by the Minnesota Department of Natural Resources. Mystic Caverns and Castle Royal were underground nightclubs in the 1930s, the latter hosting the Howdy Party for the 1980 N. S. S. Convention.

The caves were surveyed during a civil defense study in the early 1960s. The typical cave is a straight, horizontal passage fifty meters long, but often connected by cross-cuts to similar caves on either side, creating network mazes with multiple entrances. A cave operated by the Becker Sand & Mushroom Company is the largest of all, with ten-meter ceilings and more than a kilometer of passages.

DISPROVING A NEGATIVE: THE ALLEGED BLIND CAVE FISH FROM PENNSYLVANIA NEVER EXISTED

By Aldemaro Romero

In 1864 Edward Drinker Cope published a report on what he thought to be a new species and genus of troglobitic (blind, depigmented) cave fish, from Pennsylvania. As late as 1986 some authors, based on Cope's article, have continued to assume that there are troglobitic fishes in that state. An analysis of those reports as well as of studies on the fish and cave fauna for Pennsylvania from the historical, biological, and speleological viewpoint is presented. The results of this study fail to provide any evidence that such fish exist or ever existed. The original unsubstantiated reports seem to be based on the assumption that you cannot prove a negative, i.e., that we cannot prove that something does not exist just because we have not found it.

EDMUND RUFFIN AND THE CYMabee OF WOODBOO

By Cato Holler, Jr.

Edmund Ruffin was a noted nineteenth century agricultural reformer from Virginia as well as a staunch supporter of slavery. Civil War enthusiasts may remember him best as the individual who was selected to fire the first shot on Fort Sumter, South Carolina, thus beginning the War Between the States. Less known, perhaps, are Ruffin's antebellum speleological endeavors. In 1843 at the request of Palmetto State governor, James Hammond, Ruffin spent eight months conducting an intense agricultural and geological survey of South Carolina. Much of his time was spent in locating limestone and marl deposits which he felt could be used wisely for agricultural purposes. During his field work, Ruffin turned up a number of interesting caves and karst features within the state. He described these in detail in his private diary. While visiting and talking with some of the locals, he was also introduced to a bit of folklore concerning the legendary inhabitant of a particular karst spring. This was a peculiar supernatural being or water sprite which the local Negroes called "the Cymbee of Woodboo."
THE HISTORY OF WINDELER CAVE

By Ernie Coffman

During mining operations in 1946, Windeler Cave was discovered and in 1952, the cave was filled in under unexplained circumstances. After 20 years, the Diablo Grotto reopened the cave and they have managed it since.

Prior to 1946, Windeler Cave did not have a natural entrance. The cave was discovered by Charlie Windeler and other miners, and they permitted the now defunct Stanford Grotto to explore the cave in the years 1950 - 1952. The entrance gate has been broken into several times, which will be explained during the History Session. Windeler Cave has been surveyed to 3000 feet and is unique to the Mother Lode area because of its many speleothems and pristine condition.

During the management of Windeler Cave, the Diablo Grotto has had to patrol, use electronic surveillance equipment, redesign gates, go to court to prosecute two vandals who were charged under the 1977 California Cave Protection Law, and fill in the entrance. Much of the problem has been traced to a person who wrote a fantasy of words and sold to many that were interested in seeking out their fortune in the era of high gold prices.

Scientific exploration was attempted, with Dr. William Elliott labeling one small water creature after Windeler. One of the limits in exploring Windeler was the requirement of electric lights, which studies were to be coordinated on, but this only led to vandalism by some of those who broke in during the 70s.

IDENTIFICATION AND ANALYSIS OF A CIVIL WAR SOLDIER’S NAME IN SOUTH CARTHAGE CAVE, TENNESSEE

By Joseph C. Douglas,
Marion O. Smith and Jan F. Simek

In May 1999, a possible Civil War inscription was found in South Carthage Cave. On a return trip, an intensive visual inspection was inconclusive, so photographs of the inscription were made. These were later examined electronically using exploratory data analysis, which revealed additional information and resulted in a positive identification. The inscription was made by John C. Reed of the 11th Ohio Infantry. Subsequent research indicates that Reed had a spotty military record and that he visited the cave between March 20 and June 4, 1863 while encamped near South Carthage. Reed’s cave trip confirms that Union soldiers visited more caves, including relatively unknown caves, than previously suspected, and that American patterns of interactions with the cave environment persisted in the Civil War, despite the dislocations of the period.

MINNESOTA SHOW CAVES

By Greg Brick

The following is a list of the known show caves of Minnesota in chronological order, together with years of operation. All are either natural caves or artificially enlarged natural caves. The assistance of Gary K. Soule is gratefully acknowledged.
1. Fountain Cave, also known as New Cave and Spring Cave (St. Paul, MN, 1852-1857?).  
2. Chute's Cave, also known as Nesmith Cave (Minneapolis MN, 1875-1883).  
3. Jesse James Caves, also known as Seven Caves (St. Peter, MN, 1929-1954).  
4. Catacombs of Yucatan, also known as Black Hammer Cave (Spring Grove, MN, early 1930s).  
5. Niagara Cave (Harmony, MN, 1934-present).  
6. Old Mystery Cave (Spring Valley, MN, late 1930s-1942).  
7. Wolfe Brewery Caves (Stillwater, MN, 1945-present).  
8. Mystery Cave (Spring Valley, MN, 1947-present).  
9. Minnesota Caverns, now the Mystery II entrance to Mystery Cave (Spring Valley, MN 1960-present).  

OVER 30 YEARS UNDER THE SINKHOLE PLAIN

By John Benton

Binkleys Cave, under the sinkhole plain (part of Mitchell Plain) south of Corydon in cave rich Harrison County, is Indiana's longest surveyed cave, currently at 21.7 miles. Some of the water has been dye traced to Harrison Spring, the largest in the State. The cave was discovered around 1940, when a sinkhole pond opened up. From 1958 to 1962, the B.I.G. (Bloomington Indiana Grotto) surveyed 6.47 miles of passage. A few cavers, inconsiderate of the property owner, caused the cave to be closed for a few years. On Thanksgiving weekend 1967, a core of local cavers, calling themselves the Indiana Speleological Survey (ISS), resumed surveying where the B.I.G. had stopped. The ISS charted new areas almost immediately, and soon pushed the survey to over 16 miles by the early 1970s. Discovery and surveying has continued on and off since then, with the core of cavers being several of the original ISS (although the ISS is not maintained as an official group) cavers that started in 1967, having been involved in the project for over 30 years! In December 1999, a major upstream cave river was found, netting over a mile of virgin cave. This was the culmination of a digging project that started in 1996. Many going leads remain, and the ISS cavers potentially have more miles of cave to survey. Water and biological studies show that the cave is threatened by urban development on the sinkhole plain.
Floyd Collins Symposium

Planned for the 2001 NSS Convention

July 23-27, 2001

Mt. Vernon, Kentucky

Anyone interested in presenting a paper on Floyd Collins please contact Dean Snyder. His address is 3213 Fairland Drive, Schnecksville, PA 18078.
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August, 2000

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