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NSS NEWS

AMERICA'S CAVING MAGAZINE



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MONTH

THIS MONTH'S COVER

Photo from the 2026 NSS Convention - Photo Salon
Titled: "Droplet in Motion"

Photo by Dave Bunnell

CALENDAR OF EVENTS

October 8-11, 2026

2026 TAG Fall Cave-In - Mentone, Alabama

The TAG Fall Cave-In is an annual caving event hosted in the TAG (Tennessee, Alabama, Georgia) region. This event celebrates caving and community and is a longstanding tradition. Hosted by the Dogwood City Grotto (DCG) with the assistance of grottos from all around, it features a weekend of caving, socializing, a large bonfire, entertainment, and much more. The event is also a major fundraiser for the grotto and proceeds go back into the community to support conservation, research, and rescue efforts.

<https://dogwoodcitygrotto.org/TAG-Fall-Cave-In>



December 5, 2026

Cumberland Caverns Caver Christmas Fundraising Event

Caving trips, caving competitions, caver games, dinner, and camaraderie. More info and Buy Tickets Here: <https://shorturl.at/AEj10>



Jan. 17-23, 2027

Hawai'i Cave Week
hosted by the Hawai'i Grotto
Ocean View, HI

Come join us on the Big Island for a week of fun! Find us on Facebook at Hawaii Cave Week or email hawaiigrotto808@gmail.com for more information.



April 29 to May 2, 2027

NSS Spring regional meeting of the Mississippi Valley Ozark Region, April 29 - May 2, 2027 at Shrine Camp, Buckhorn, MO (past NSS Convention site). Website is not up yet, but information will be available on facebook page [MVOR-MVOR.ORG](https://www.facebook.com/MVOR-MVOR.ORG)



June 14-18, 2027

2027 NSS Convention - Del Rio, TX

!Bienvenidos! For cavers, there's a reason to return to the Lone Star State for the fifth time: our biggest and best convention yet!



A Tex-Mex Convention

Texas cavers welcome everyone to the border city of Del Rio for the 2027 NSS Convention, June 14-18. This will be a real Tex-Mex Convention, with piñatas, mariachis, and of course, caves on both sides of the border.

Website at: <https://caves.org/convention/2027-convention>

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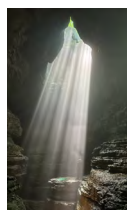
by April Gocha



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BACK COVER



Amber Jackson on rope and James Lavinge on the pedestal.

Picture was taken by Eric Taylor on August 17th, 2025.



Chinn's Cave House: A Notorious Kentucky Roadside Attraction

by Bob Thompson

Chinn's Cave House was a shady tourist stop, restaurant, and gas station along the Kentucky River halfway between Lexington and Harrodsburg, Kentucky. It was established in 1930 by Colonel George M. Chinn, a large colorful Kentucky figure known as a military weapons expert, a football coach, author, and a one-time personal bodyguard to Kentucky Governor Happy Chandler. Chinn used dynamite to blast out a usable space in a cave for a business by the scenic Brooklyn Bridge on Highway 68. At its peak, it was a popular stop for tourists to buy gas, country ham sandwiches, hot dogs, beer and alcohol. The Cave House was also known for its "hidden" backroom activities which included gambling on slot machines.

Chinn's Cave was primarily a cave that was discovered by "digging" into a limestone cliff rather than being a fully natural cavern. While some sources suggest it may have started as a small calcite mine or a minor natural opening, its current form was significantly expanded through human intervention.

George Morgan Chinn (1902-1987) was born into a family which came from Culpepper County, Virginia in 1779, the son of George Pendleton Chinn and the former Miss Anna Carlisle of Washington D.C., and the first cousin of John G. Carlisle, secretary of the treasury of President Grover Cleveland's second administration. The Chinn's were an

old pioneer family with roots in Mercer County, Kentucky. Politics, farming, and calcite mining were family businesses.

After completing his preliminary education in Mercer County, KY, Chinn spent four years at Millersburg Military Academy, entering Centre College in Danville after graduation. Leaving Centre in 1923, Chinn spent the next seven years in selling athletic equipment and coaching at Bucknell University, Lewisburg, PA, and at Catawba College, Salisbury, NC. In 1930, after becoming weary of the uncertainties in business and coaching, Chinn made the choice to return to his roots in Kentucky.

In September 1929, while vacationing at a popular tourist attraction in North Carolina called the Bat Cave, Chinn came up with an idea as he observed tourists entering the cave and purchasing snacks, drinks, and souvenirs. Back home, Chinn knew of a piece of land at "Mundy's Landing," a place where he grew up as a boy near the Brooklyn Bridge that spanned the Kentucky River, a prime location for a tourist stop. The property was a sheer cliff—almost entirely rock and towering about 150 feet high. Chinn had a vision to develop a small cave that was discovered at the cliff by workers of the Chinn Mineral Company when the area around the cave was developed for calcite mining by his grandfather, Colonel Jack Chinn from 1901-1921. After the mines closed,

George P. Chinn, Chinn's father, took over the ownership and in 1924, converted the old Chinn house into a hotel called the Riverside Inn. A beach and dancing pavilion on the river besides the hotel became a popular spot for tourists.

Supposedly, two caves were discovered on the property by the workers of the mining company, one in 1914, and one in 1917. It is uncertain which one was the "Cave House." Both of the following newspaper articles could be referencing the same cave.

"A Wonder", *The Harrodsburg Herald*
1-16-1914

"While the men were at work at the Chinn Mineral Mine last Saturday, digging about 300 feet under the cliff, in the bowels of the earth, they struck a wonderfully large cave. It has been explored quite a distance but no terminal has been reached. It has very beautiful and marvelous chambers."

Big Cavern Opened Up By Workmen At Chinn Mines, *Lexington Herald-Leader*
9-27-1917

Workmen at the Chinn calcite mine, on the Kentucky River, discovered a cavern which, it is said by those who have seen it, to outclass anything they have ever viewed. The entrance to the mine is at the water's edge of the river, on the Mercer county side, from which it

extends 400 or 500 feet under the cliffs, and while extending the shaft or tunnel the workmen came upon this remarkable cavern. The cavern consists of only one room, which is 400 or 500 feet across, and is 100 feet to the ceiling, which is funnel-shaped. The cavern contains stalagmites and stalactites, and extending from one side to the other across the ceiling, and extending six or seven feet downward, is a formation that resembles a white silken curtain, of so fine appearance that pleats and ruffles can be seen in it.

After returning to Kentucky, in May 1930, Chinn started construction on the cave after leasing the land the cave stood on. The blasting of his property created problems with the owner of The Brooklyn Bridge Camp (old Riverside Inn), a similar business across the road. The business had been operating as a tourist camp since 1925 by its owner, Price Peniston. Somehow an argument got out of hand between the two men and Peniston shot Chinn in the leg. Chinn did recover from the gun shot.

If there ever were any "stalagmites and stalactites" in Chinn's Cave, they were long gone by the time Chinn did any blasting. Chinn called upon his friend "Tunnel" Smith, an explosives expert, to enlarge the small cave entrance by blasting a tunnel at the cliff's base. Chinn supervised the clearing out of the rock to create a "250-yard" tunnel to the back of the cave. Chinn mentioned that the cave "was about the size of a barrel when we discovered it. It was stretched with dynamite to its present size." Later it was noted that "The tunnel went straight in about 20 feet and then veered to the left about 100 feet." By September 1930, the Cave House was open for business.

At the front of the cave entrance, on the left, Chinn set up a twelve to fourteen foot wood-burning grill where his wife, Cotton, made thick country ham sandwiches for 15¢ each, as well as foot-long hot dogs. On the right were a snack counter, candy jar, a large cooler for pop and beer, cigars, and a bar. A few chairs were set up but Chinn preferred his customers to stand or take-out. For additional income, four gas pumps were added directly in front of the cave entrance. At the time, it was the only place to get gasoline between Lexington and Harrodsburg. Electric lights were also added to the front part of the cave. The cave stayed open day and night.

There was limited space between the Cave House and the busy highway for visitors to fill up with gas and sit down

to eat. In May 1935, while workmen were clearing out more parking spaces for the Cave House, a second cave was discovered, paralleling the first one. The new cave was cleaned out for a "distance of about 100 feet." With the extra parking room, a few other structures were added to the Chinn property including rest rooms and a place for the selling of hand-made pottery jugs, pennants, postcards, and other souvenirs.

Chinn quickly became known as the "Cave Man of Kentucky." Research shows that both genetics and surroundings contributed to the development of Chinn's personality. Chinn loved his friends but hated his enemies, and saying: "I owe no banker, have sworn fealty to no person. If you like me, come in, if you do not, there is the river, go jump in it!" Chinn advertised the Cave House as "the only cave in Kentucky where Daniel Boone never spent the winter," a reference to inflated claims

of other cave owners trying to attract tourists.

The busiest time of the year for the cave came in the fall during hunting season. In the off season, Chinn, as a Kentucky historian, was doing research and writing. In January 1936, a robbery took place at night while the Cave House was operated by one of Chinn's workers. In 1937, a tin roof was constructed outside above the cave entrance. Customers had been annoyed by water seeping through the ground and rock ceiling of the place. Chinn and his wife lived on a houseboat on the Kentucky River directly across from the Cave House. Later in 1939, a two-story limestone house was started and completed in 1942 on top of the hill not too far from the cave. This house was torn down in 2016.

In the 1940s, Chinn became more involved with the military and less with



the cave. Chinn was fascinated with automatic firearms. Chinn, being overweight, with Happy Chandler's help, enlisted into the Marines at the age of 40. In Chinn's absent, the cave stayed open and was operated by his wife, Cotton, and workers hired by Chinn.

Many of the customers who stopped at Chinn's Cave House wondered how Chinn made a profit by selling just gas, drinks, country ham sandwiches and hot dogs. Having a bar helped but most of the money came from penny and nickel slots machines in the left tunnel of the cave. There was a walkway in the cave that led to the end of the tunnel, but most visitors were generally prohibited from entering it. In April 1943, the authorities raided the cave and charged Chinn and his hired workers with operating an "illegal game of chance." Chinn defended himself in court arguing that the slots did not constitute an illegal game of chance because you didn't have a chance to win. Every slot was rigged so that anyone who played it lost money. Chinn was acquitted.

After World War II, Chinn also was part of the Korean War. He traveled a lot, solving field problems, developing gages, tools, and helping with designs changes. Chinn was a friend to astronaut, John Glenn and baseball great, Ted Williams, as well, as they were both fighter pilots during the Korean War. It was also during the Korean War years that Chinn started writing the five-volume book he is most noted for, *The Machine Gun*.

In March 1950, Chinn started leasing the Cave House to others. In 1951, a

newspaper ad listed the cave as being open and selling foot long hot dogs. By 1957, the Cave House was still being leased and catering to fisherman, selling pond minnows and night crawlers. In 1963, Chinn offered the cave to the local 4-H members in the summer months, rent free to sell souvenirs and concessions.

In August 1966, the Cave House was again leased and "reopened" by Clarence Walls and his son, Jimmy. The cave was used for the selling of records, refreshments, fishing equipment, live bait, old and new guns, and antiques.

Soon after the lease expired, the Cave House closed permanently to tourists. Chinn had the Cave House in 1967/1968 fitted with armor plating after he had been called back into service to develop a gun that could be used against snipers in the jungles of Vietnam. Chinn used the Cave House as an indoor firing range and rented the cave to the Navy. Given Chinn's penchant for humor, just after a heavy barrage of firing weapons, a well-dressed woman stopped by the Cave House and stepped through the doorway one day and waded into a haze of gun smoke. Asking if Chinn still sold ham sandwiches, he replied: "Yes ma'am. But we've just finished shooting the hogs, and it'll be a while." Chinn was decorated for his contributions to automatic weapons used in three wars and was one of the nation's experts on machine guns.

Chinn had always envisioned his cave being larger and having exquisite formations. While he was in the service, Chinn had the local fire department "hose out" 640 feet of mud and rock

from the cave. Between January 1966, and November 1968, with Chinn's encouragement, there was an attempt to dig out more passageways by cavers Russell Hatter and Paul Clifford, but nothing came from their efforts. "The cave venture proved to be a bust. The farther back we went the smaller and narrower the cave became." A "mountain of mud" had accumulated over the years.

After 1968, Chinn had no interest in the cave. In the 1980s, for a short time, Chinn did allow truck drivers taking materials for the renovations and repairs of the nearby Dix Dam to stop at the cave's entrance to eat their lunch but traffic became a problem. In July 2019, investigators with the Kentucky State Police and the Lexington-Fayette Police Department searched along the Kentucky River for a woman, who disappeared in 1977. Some believe the woman's body may have been put in Chinn's Cave. The property was checked out several times over the years but nothing was found.

Chinn retired from the Marines as a colonel in 1961. He joined the Kentucky Historical Society in 1959 and served as the secretary-treasurer. From 1960 to 1973, he became director, and then served as deputy director from 1974 to 1980. Late in life, Chinn became a Kentucky historian and storyteller, a governmental consultant on military ordinance, and a much in demand public speaker.

Chinn authored two more books before his death in 1987, *Through Two Hundred Years: Pictorial Highlights of Harrodsburg and Mercer County, Kentucky* (1974)

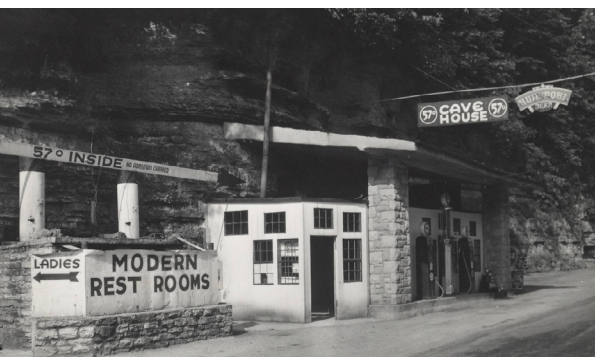


Photos:

Postcards, souvenirs & painting: courtesy of National Cave Museum and Michael Wiser

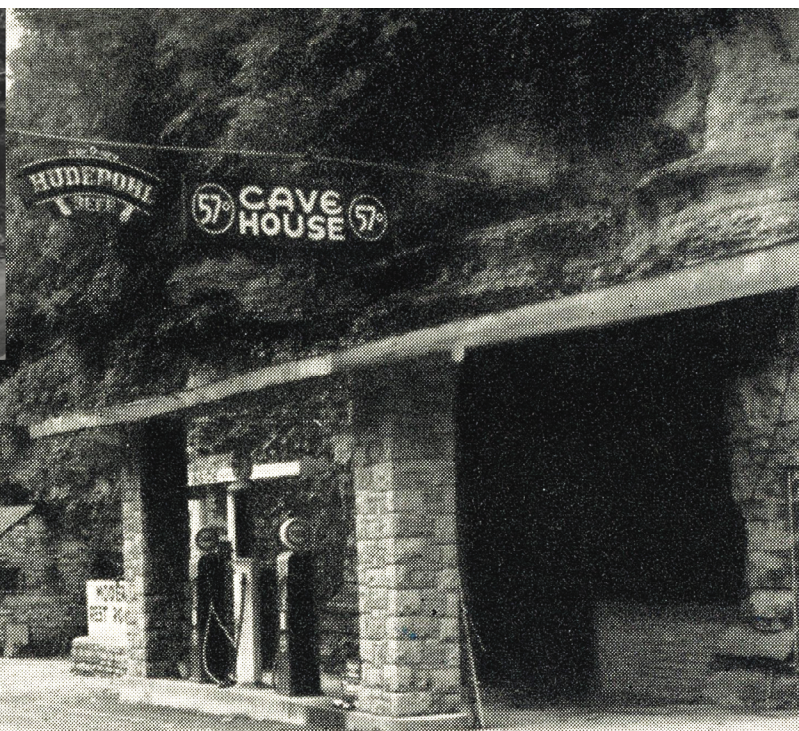
Slot Machine: courtesy of George Kontis

Cave Interiors, dated 2019: courtesy of Bob Roth



The ONLY
Cave in Kentucky
In Which
DANIEL BOONE
DID NOT
Spend the Winter
Eat and Drink
at
THE CAVE HOUSE
Lexington Pike
Near Brooklyn Bridge
GEORGE CHINN, Prop.

THE CAVE HOUSE
OPEN ALL NIGHT -- NIGHT AND DAY
STOP
For Draught Beer and
Country Ham Sandwiches
Just Across Brooklyn Bridge on
Harrodsburg Road
GEORGE M. CHINN, Proprietor



FOOT LONG HOT DOGS
— Go thru our cave —
CAVE HOUSE — BROOKLYN BRIDGE



THE CAVE HOUSE
OPEN ALL NIGHT--NIGHT AND DAY
STOP
For Draught Beer and
Country Ham
Sandwiches
Just Across Brooklyn Bridge on
Harrodsburg Road
GEORGE M. CHINN, Proprietor

and *The History of Harrodsburg and "the Great Settlement Area" of Kentucky, 1774-1900.*

A 2000 historic marker in Harrodsburg, KY, memorializes George M. Chinn for his contributions to the field of small arms. In 2017, the Kentucky Historical Society in Frankfort opened an exhibit at the Kentucky Military History Museum, "George M. Chinn: Sights Set on Innovation."

Today, a drive on Highway 68 leads to the Brooklyn Bridge and the ruins of the Cave House. The cave is largely inaccessible to the public behind safety fencing. The old stone columns and portions of the timber structure still stand, but the roof has collapsed, and the gas pumps are long gone. The once active restaurant area is dilapidated, with the doors and windows long since lost. The back areas of the cave is filled with knee-deep mud and various debris buried within the cave floor. Remnants of the former gas station's restrooms are among the most recognizable intact outdoor features, though they are currently filled with shards of broken fixtures. The family of Chinn still owns the property. The cave remains a rec-

ognized, eerie landmark viewable from the roadside, representing a piece of Kentucky's notorious history.

No official interior map of Chinn's Cave is publicly available, as the location is situated on restricted private property and state landform or mining records do not catalog its internal layout. What is known about the interior of the cave is from the few who have visited it with or without permission. Entryway: Walking and eventually stooping as the cave progresses further back, the passageway narrows before splitting into two muddy paths. The Cave: A path went a short distance straight into the cliff (approximately 20 ft.), and then it made a hard left into a long, straight passage (approximately 100 ft.). The long section was the location of the slot machines and was where the Navy tested the Mk19 machine gun. Artifacts: Wall hooks that once held old electrical lightbulbs from its commercial days. Old mechanical junk, rusted structural elements and old bottles remain buried or partially visible within the deep mud floor of the back passageways.

According to one source, there was a passage through the back of the cave

that curved around and led back to the road, just slightly uphill from the main entrance. In 2026, the author made several requests to George Chinn's granddaughter for permission to access the cave but never received a response.

Acknowledgements:

Bob Roth, Gordon Smith, Gary Soule, George Kontis, Michael Wiser, National Cave Museum

Sources:

Kentucky Maverick: The Life and Adventures of Colonel George M. Chinn by Carlton Jackson 2015

Small Arms Review, "Interview with Buddy Howells, Grandson of Col. George M. Chinn, Author of the Machine Gun" by George Kontis - November 4, 2010
Harrodsburg Herald, *Danville Advocate-Messenger*, *Lexington Herald-Leader*, *Courier-Journal* 1914-2006

THE MANN FAMILY OF CRYSTAL CAVE: OZARK PIONEERS IN THE SHOW CAVE INDUSTRY

BY BOB THOMPSON

Crystal Cave in Springfield, Missouri, is a historic roadside attraction near Route 66. According to oral history, the cave was first owned by two individuals, William Wallace and subsequently William Jenkins, and used for recreation and storage by farmers. Neither early owner pursued commercial development. "The legend goes that by the time Mr. Jenkins owned the cave, it was a somewhat well-known local hangout spot. We believe that the cave was known first as 'Old Man Jenkins' Cave,' and then briefly 'Mann's Cave,' and 'Mann's Crystal Cave' before dropping his name and settling on just 'Crystal Cave.'"

The cave was obtained in a trade in 1892 by its third owner, Alfred Mann (1851-1925), who immigrated to the United States from Brighton, England, in 1882. Mann, a cabinet maker by trade, his wife, Agnes, their three daughters, Agnes (Nessie), Ada, Margaret (Maggie), and son, Alfred Garfield William (Willie), settled in Salina, Kansas, in late 1882 and opened a furniture store in January 1883.

After a house fire in July 1886, the Mann family moved to Springfield, Missouri, where Alfred purchased three buildings, including a home in February 1887 at the NW corner of W. Lynn and

N. Boonville, and operated a business and factory, the Springfield Mattress, Spring Bed & Upholstering Works. The Mann family lived upstairs in one of the buildings and would visit parks around Springfield for recreation, as three of them featured caves.

One of those outings would end in tragedy. In 1890, the Mann family's nine-year-old son, Willie, was killed in a gun accident during a Fourth of July celebration at Springfield Sequiota (Fisher) Cave Park. A twenty-two-caliber cartridge from a target gun of a playmate, Fred Lippman, struck Willie in the back of the left shoulder and came out above the heart. Lippman was acquitted in a trial two years later.

Despite the tragedy, the family's connection to Springfield's caves would soon take on a very different significance. By June 1892, Mann's store moved to 412 South Street. The final advertisement for the store ran on August 2 of that year. On August 30, Mann traded the store property for 140 acres of farmland and a cave, five miles north of Springfield. The newspaper noted that Mann transferred his furniture shop to E.T. Robberson, a Springfield medical doctor. On the very same day, it was printed that Robberson, who introduced the cave to Mann, transferred

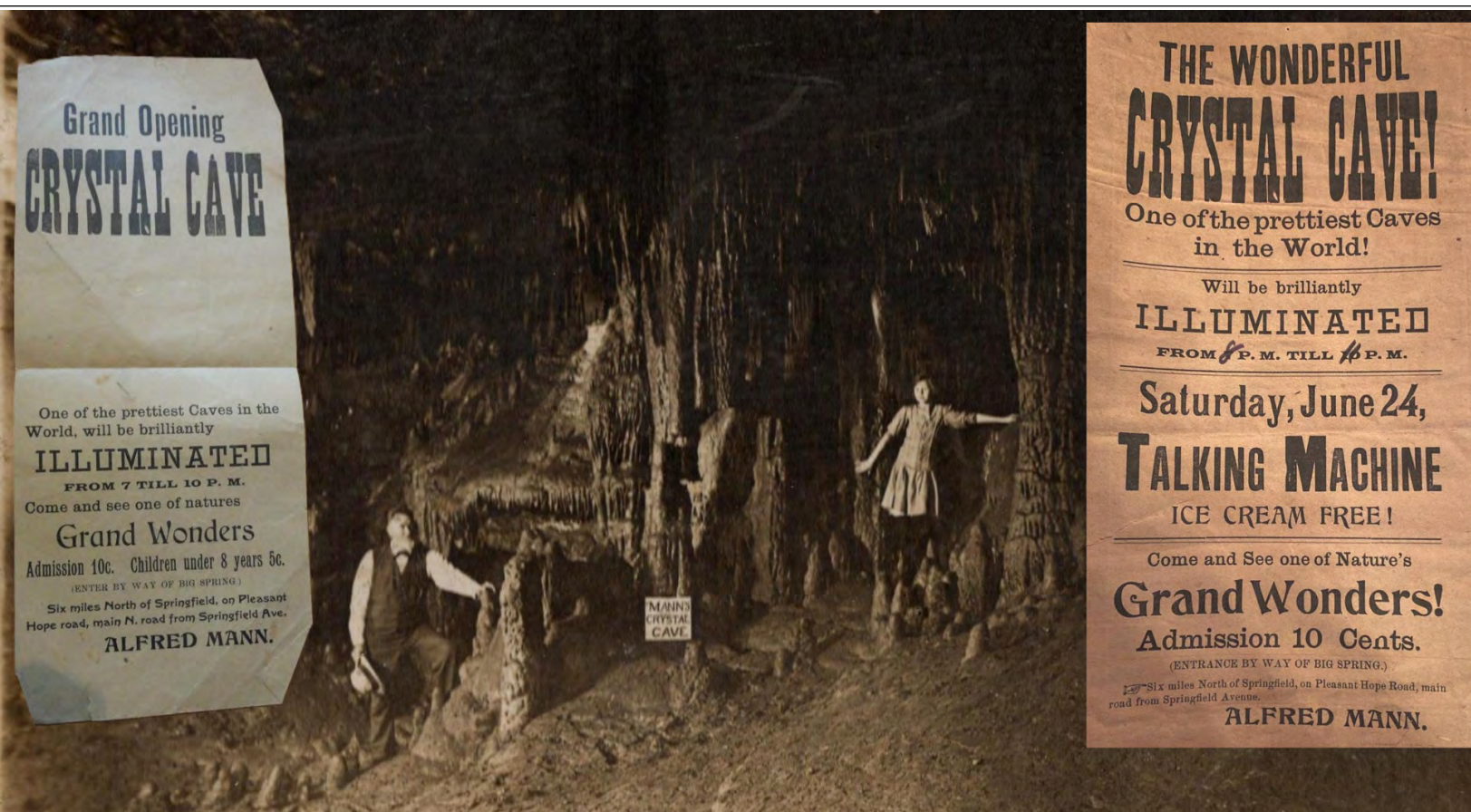
the cave to him. According to documents in possession of the cave, Mann "acquired the property in a trustee's sale by Dr. E.J. Robberson on behalf of a Mr. Henry L. McGuire and his wife, W.M. McGuire." Alfred said that "what he brought was the cave; the land was thrown in." Soon after, the Mann family moved near the cave, which took three hours in a horse-drawn wagon, and built a two-story white farmhouse.

Initially, only the first room of the cave was known. The room was set up with planting beds, built up with stones and earth, and Alfred used it in 1893 as a nursery for growing mushrooms and rhubarb to market in Missouri's larger cities. The three Mann sisters explored the cave and soon discovered many connecting rooms with formations. After some development, six years later, Mann opened the cave to the public as Crystal Cave "because of its wealth of glittering, fairyland formations." It's possible that the cave was shown before this time but was not advertised until a Fourth of July festival on the grounds in 1899. A flyer for a "Grand Opening" exists, but a date was never printed on it. "As for the opening date, the official year is 1893. We still have the deeds from that year when Alfred acquired the property and believe they would have started charging for tours



Left: The Mann Sisters

Page 9: 4. Crystal Cave and its Flyers



into the cave right away, since that was Alfred's motive for purchasing the cave. Though there is a chance that a 'Grand Opening' happened later in time after the stairs and pathways were finished in the cave." [3.1] Shortly after the festival, advertisements for Crystal Cave appeared regularly in newspapers starting September 1, along with accounts of parties and picnics held thereabouts.

At first, Crystal Cave was illuminated by coal-oil lanterns. Electric lights were put in the cave in 1932. "Old lantern chandeliers were used until the 1930s when electric lighting was installed. We still have some old bits of them including an intact oil vessel in the gift shop, and a few of the wires used to hang them are still in the ceiling in the cave. The electricity system from the 1930s was used until 2021 when we installed an entirely new system. By that time every component had been switched out but the ceramic insulators, which are still attached to the walls and ceilings throughout the cave." In 1900, Alfred Mann suffered severe burns on his face and hands while giving a tour when a gasoline lamp exploded.

Alfred's daughters were teenagers at the time when the cave opened. They were "bright, well-disciplined, lively girls, raised by a stern, demanding, religious father." None of them ever married. From the death of Willie grew

a great reluctance of the father for his remaining three children ever to leave the parental home. Shortly after moving to the cave, Ada became engaged to a local boy named William Funkhouser. The engagement lasted seven years, until it was broken and he headed out west. "Supposedly it was broken off because Ada didn't want her name to be removed from the deed to the cave property." Several years later, William came back to the Ozarks and eventually married another girl, but he never lost touch and remained friends with the Mann sisters. In November 1904, the Mann sisters paid a visit to the World's Fair in St. Louis. All three signed the register in the Missouri State Building on November 19, as posted in a St. Louis newspaper.

Alfred died on December 31, 1925, leaving the cave to his wife and daughters. At the time, the estate was valued at \$11,200. Five years later, Agnes, his wife, died as well, leaving the daughters to operate the cave. "The girls were assigned duties in the household, on the farm, and at the cave, and in all their long lives they varied little from those assignments. While all took turns guiding at the cave when needed, Agnes was principal tour guide. Ada was business manager and automobile driver after roads and motor development progressed, and Margaret had charge of the cooking and grounds upkeep and was a knowledgeable mechanic."

The Mann sisters continued operating the cave together as they aged. A sign was attached to a tree for visitors at the closed entrance gate that read, "Stop, Honk Loud for Information." When a visitor followed the sign's instructions, one of the sisters would come and let them in. The tour of the Crystal Cave began by entering the historic iron gates from Springfield's first jail and finished with a genuine respect for the cave's natural beauty. In the early 1900s, the Smithsonian Institution replicated a popular cave formation called the Washington Monument in the Rocky Mountain Chamber in concrete and plaster, and it was on display at the Museum of Natural History for years. Photos or references of the exhibit could not be found on the Smithsonian's website. "I've honestly seen very little record of the replica, though a few years ago we had a customer come through who claimed to remember seeing it in 2017. I believe that it may be rotated on and off display."

In 1960, Agnes, the oldest sister, died at age 85. Five years later, Margaret passed away, leaving Ada to run the cave operation in the summer. She continued giving tours until she was around 88 years old. "After that, Miss Mann hired people to lead the tours, but she continued to walk down to the cave and invite visitors up to the farmhouse to explain the cave's history. Visitors were mostly persons who had heard about it from

former visitors. Often they were parents or grandparents who brought a younger generation to see something they had admired in their youth." Ada died in 1969 at age 92. As no immediate relatives survived, Estle Funkhouser, Ada's close friend, was willed the cave upon her death. The will also stated that the money from the estate be given to friends, relatives, and four charitable institutions.

In 1971, Funkhouser added a new entrance sign and gift shop. The newly constructed building on the cave grounds included many Mann family mementos. A large glass-enclosed case of cave formations, made and arranged by Alfred in 1910, was on display, along with a map of the cave he made after early explorations. "I believe there is a good chance the map was made by Alfred and/or one of his daughters, and I would say with some certainty that the display was a family effort between Alfred and his daughters." The miniature reproduction of formations from Crystal Cave was temporarily displayed at the Phenix Stone Company of Springfield in 1910 just before it was displayed at the cave. This work of art is still exhibited at the cave. The gift shop also included "gift items" that were on display on the tops of 12 metal stands of old sewing machines.

An estate sale was held at the cave by Funkhouser in June 1972, which featured "many rare and unusual items dating back to the 1800s" from the Mann family, including a small hand type printing press and "cave rocks." Over the years, artifacts from the 1972 auction of the Mann's estate have shown up on auction sites such as eBay, including early promotion flyers for the cave. "Historical documents we have were bought in an estate sale, and given back to us after we reopened. We were also gifted some pictures and documents from the Funkhouser-Richardson family. The display was here, and there were old signs, postcards, and old pieces of equipment from the cave." Also in the 1970s came the rerouting of US-65, which diverted much of the traffic and business away from Crystal Cave.

Funkhouser operated the cave for 13 years until 1982, when it passed to new owners, her sister and brother-in-law, Loyd and Edith Richardson. Under their ownership, the Greene County Historic Sites Board added Crystal Cave as a local site of significance in 1992. When Loyd died in 2014, the cave was closed to the public. Loyd willed the cave to George and Barbara Blowers, Loyd's daughter and her husband. They eventually offered the property for sale, and in 2021, it was bought

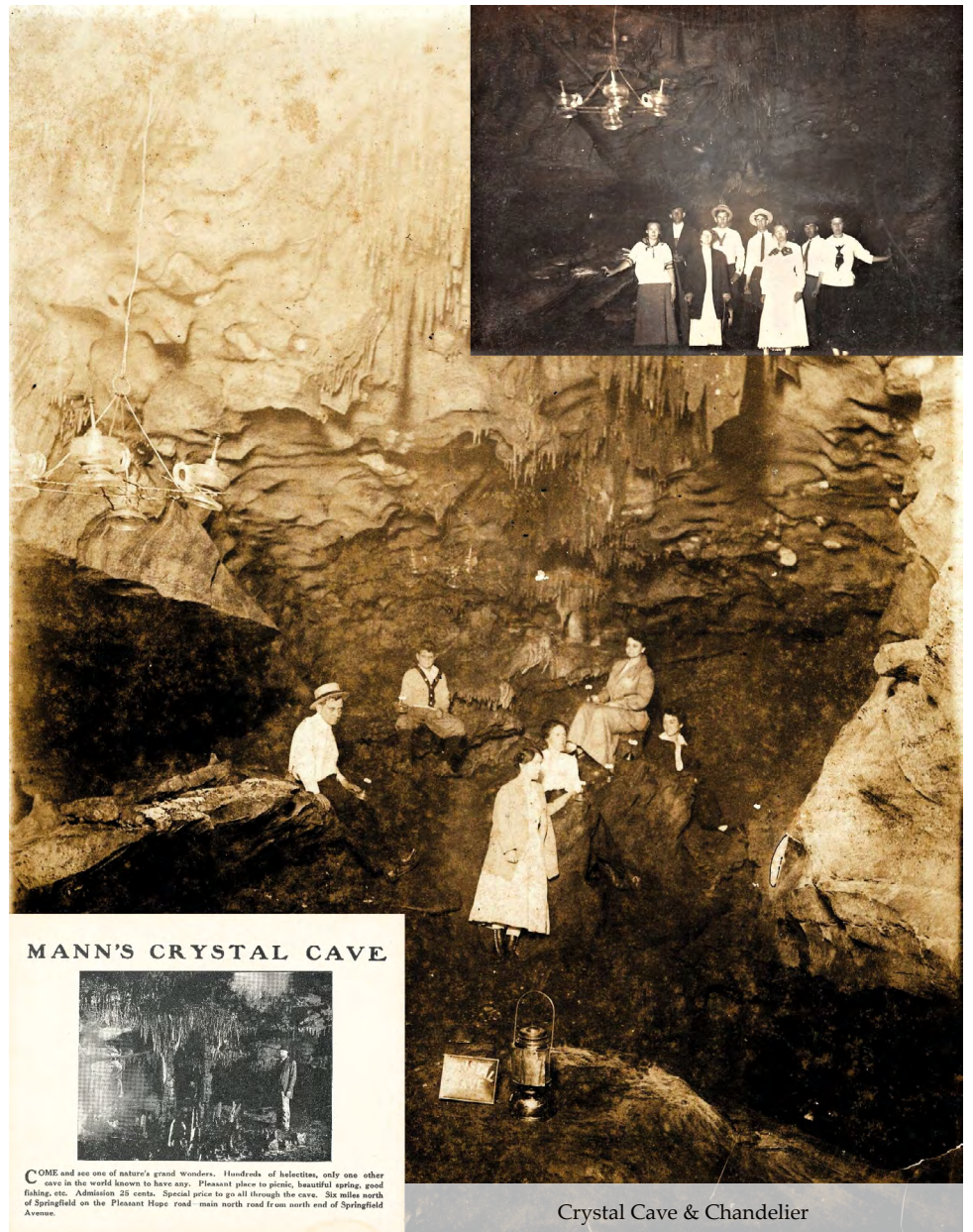
by the Dirk Dole family. The cave was reopened to the public in March 2022 with Duncan Lang as manager. As of January 2025, Alex Sharp is the current manager. The Mann family's two-story farm home is still standing but "no longer a part of the cave property."

Alfred had some "knowledge of surveying, and for one thing, mapped the cave stream course back from its entrance into the 'First Room.'" The last survey and map of Crystal Cave was done in 1970-71 by the Heart of the Ozarks Grotto (HOG), Robert Taylor, and Ken Thomson. The cave was surveyed at 3,610 feet long, but "that does not include the unmapped portion of the cave. We're not sure why they stopped where they did, but assume it was due to the water level. However, Alfred and his daughters had made it all the way to the very back, and from what we can tell, had explored the entire accessible cave system. We haven't

seen a part of the cave they didn't go to first."

Over the years, several prominent individuals have visited the cave. A man from Independence, Missouri came to the cave while campaigning for United States senator. Years later, Margaret Mann was going through some old papers and found Harry S. Truman's card. Then there was the man who showed special interest in two features of the cave. One of these was a round depression in the roof of one room known as "the upside-down well." The other was the living root of a tree in the floor of the cave, which has been traced to a mulberry tree 73 feet above. That man was Robert L. Ripley, and the well and the root appeared in his famous "Believe It or Not" feature.

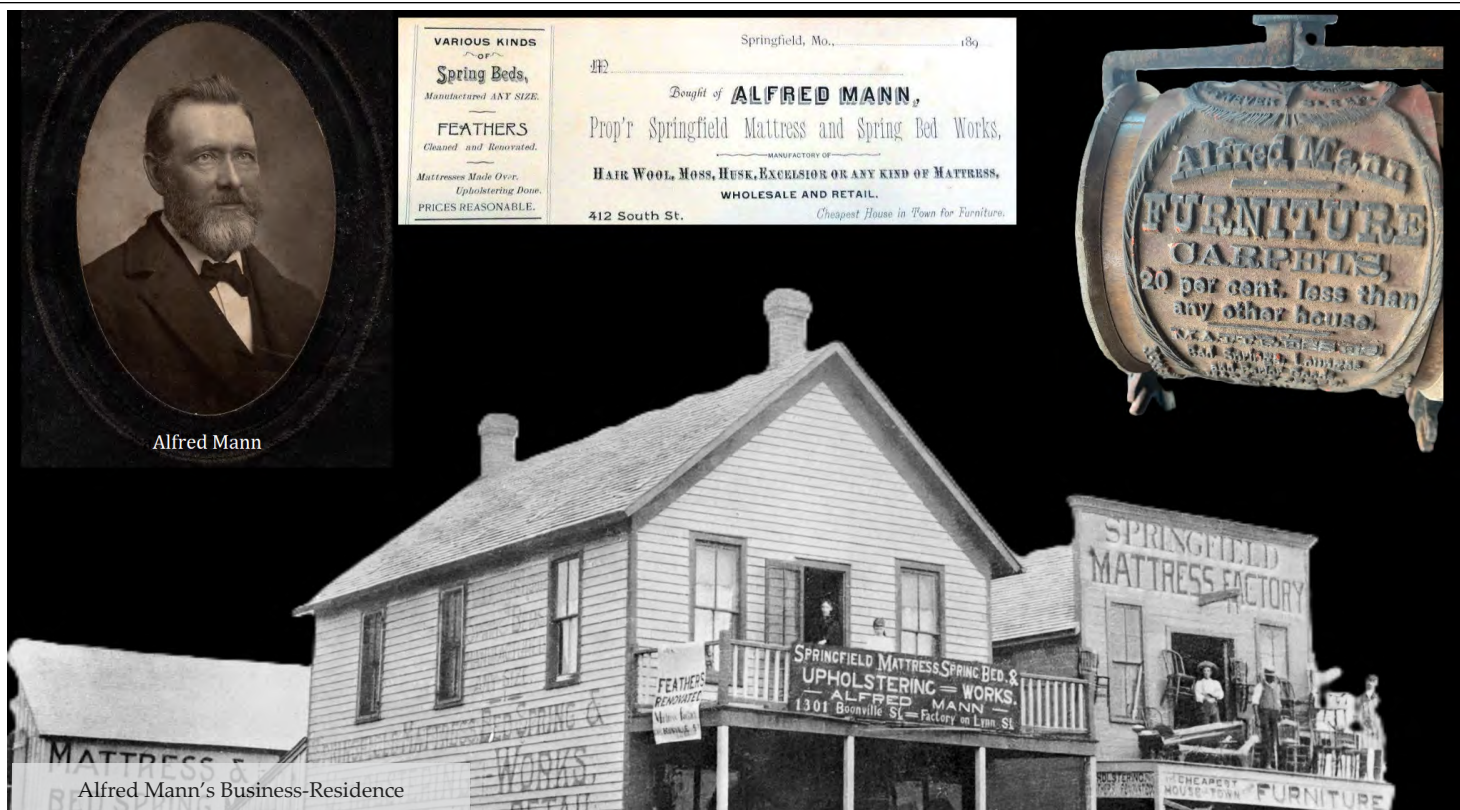
The late Dwight Weaver, cave historian and author, interviewed Ada and Maggie Mann in the early 1960s and



MANN'S CRYSTAL CAVE

COME and see one of nature's grand wonders. Hundreds of selections, only one other cave in the world known to have any. Pleasant place to picnic, beautiful spring, good fishing, etc. Admission 25 cents. Special price to go all through the cave. Six miles north of Springfield on the Pleasant Hope road - main north road from north end of Springfield Avenue.

Crystal Cave & Chandelier



Alfred Mann's Business-Residence

was among the last to speak with them about their years at Crystal Cave before their passing. "As I approached that late 19th-century house, which in some respects looked like an unpainted haunted house at that time, I saw dogs and cats watching me from every window and wondered what would happen. I had been told they probably would not talk to me, as we had not on that occasion asked for a tour of the cave. But they not only invited me into a house that was like a place out of time, but they had shut all the animals out of the living room. They were as gracious as any people could ever have been, sat beside me on their sofa, and paged through one of their photograph albums, which my photographer would have killed to copy pictures from. They had a brother who was shot and killed when the boy was about seven years old, and they were still bitter about it many decades later, blaming the city for lack of action when it came to the shooter. Yet they went on and treated me wonderfully."

Harry C. Morgan, a Springfield photographer, took the first pictures of Crystal Cave around 1909 or 1910. Many of these were printed as postcards and were the most successful way of advertising the cave besides newspaper ads. After Alfred passed away in 1925, the postcards were updated with the "Mann Sisters" name printed on the reverse. These postcards were printed in large quantities and are the most common "cave" souvenir found today. The

L. L. Cook Company of Wisconsin also photographed the cave in the 1930s and printed the photos as postcards. No brochures of the cave were ever printed until after the Mann sisters' deaths.

In 2025, a Springfield, Missouri man uncovered some early relics from the Mann family. "We purchased a small typewriter case, and these items were inside. There was a printing wheel/roller with the rubber ad insert still in it. This wheel and rubber stamp are probably over 125 years old. The stamp is for Alfred Mann Furniture and Carpets, 412 South Street, Springfield, Missouri, depicting a nice winking owl. There are two copper printing block etchings of Crystal Cave, and Mr. Mann is the man standing in the cave. The second one has the words 'Rock of Ages' on the back of it. The last items are a photo album given to Alfred Mann when he lived in Brighton, England, and many of the photos have the photographer's studio ads on the back. There is also a photo of the memorial card by itself of Alfred Mann's son, Willie Mann."

Over the years, the Mann sisters did very little to promote the cave, aside from a few highway signs, as they preferred it that way. The cave did not appear on Missouri's official highway maps until 1962. Aside from a few early postcards, much of the memorabilia found today dates from after the Mann sisters were gone, when Estle Funkhouser operated the cave. "We historically haven't done much advertising,

mostly because word of mouth has been sufficient for previous owners to make a living. Another factor is the size of the passageways and the logistics of moving more than one tour through the cave at a time. Because of this, we have a much lower max capacity than a lot of caves. We do a little more advertising these days but mostly focus on our partnership with the local tourism board and the Missouri Caves Association to get the word out."

Little information has been published about the Mann family and Crystal Cave during its first 50 years of operation. The sisters were first featured in a 1948 newspaper article. Since then, the story of these Ozark pioneers and their "Mom & Pop" attraction has been told in books, newspapers, and to those fortunate enough to take a cave tour. The cave offers a personalized and local experience distinct from other major attractions. The Mann family's legacy, paired with Crystal Cave as a roadside stop, remains a distinctive feature of nostalgia linked to Missouri, the city of Springfield, and Route 66.

Sources:

Quotes from Missouri & Kansas newspapers from 1883-2022

Quotes and information: courtesy of Crystal Cave manager Alex Sharp - January 2026

All photos courtesy of Crystal Cave, National Cave Museum, and the author.

HALLOWEEN HAVEN, AKA HOUDINI HOLE: A SUBTERRANEAN TRIBUTE TO A GREAT MAGICIAN

BY CATO HOLLER

In addition to caving, one of my life-long passions has been magic. For all fellow magicians, October is a very special month with Halloween, October 31, 1926, being the date that the great magician and escape artist Harry Houdini died.

It was Halloween day, 2018. I had left out in the early morning hours to do a bit of solo ridge walking in a somewhat remote area of western North Carolina. As I reached the top of a stony plateau, I experienced an eerie phenomenon. The eastern sun hit my body at such an angle that my enlarged, somewhat distorted shadow — looking for all the world like a huge sasquatch — was projected onto the distant forest. Well, that's a bit spooky, I thought, but how appropriate for Halloween!

I continued my hike, and after an hour or so, following the base of a cliff, I spotted some cave-like fissures higher up. After an easy climb, I was able to reach one of the lower cracks. Sure enough, here was a new cave. I explored about 120 feet of nice walking passage, apparently virgin, that terminated in a small pit that seemed to lead to a lower level. I noted several side passages as well, and there, hanging on one wall, were two beautiful eastern tri-colored bats. A multitude of cave crickets, silverfish, snails, and several large black orb-weaving spiders (*Meta ovalis*) added to the cave's interest. What a great Halloween!

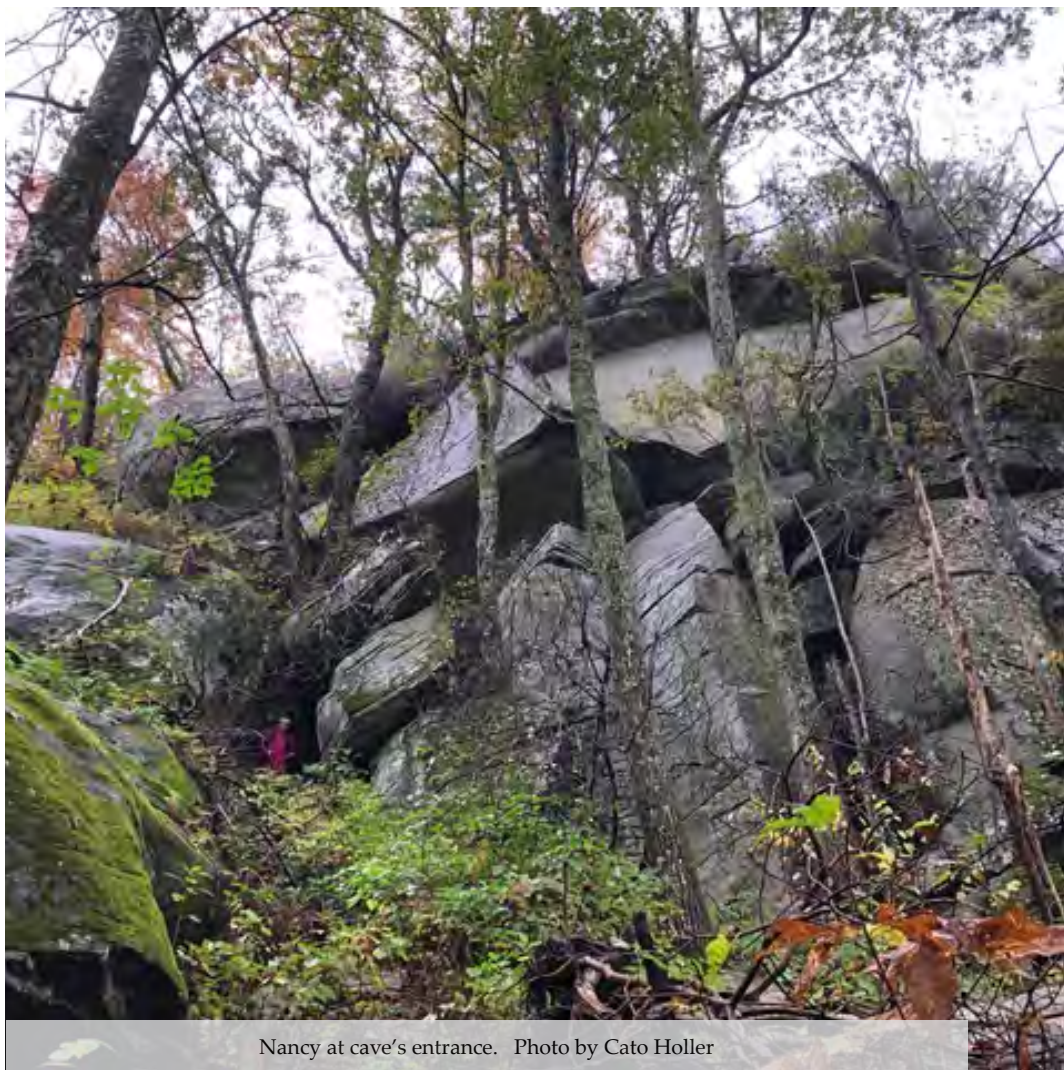
The cave was a prime example of granitic pseudokarst. Unlike caves formed by chemical dissolution, these fissure caves are formed by physical means. Joints in the rock had been enlarged, not necessarily by faulting, but more commonly by subtle shifts such as gravity sliding and block creeps. Characteristic of other similar caves in the area, this one contained lots of breakdown, sharp-edged boulders, and areas of unstable rocks. Deeming it unwise to explore solo any further, I headed back out, vowing to return with others and properly explore and survey this new find, which I tentatively named Halloween Haven. In that I had stumbled onto this cave, as if by magic, and with this also being the anniversary of Houdini's death, Houdini Hole was added as a second moniker.

It would be nearly two years before I would return to Houdini Hole, and oddly enough, on another October morning, 2020. This time I was accompanied by my daughter Nancy Holler Aulenbach, a well-known caver who has been exploring ever since she was a youngster; her husband Brent, a top-notch cave cartographer; and their daughter (my granddaughter) Scout, an ardent herpetologist. We had decided to make it a three-generation family project.

Unlike my first visit, the day was overcast and drizzly, but we all donned our rain gear and enjoyed the hike out. We spent most of the day thoroughly exploring and mapping this impressive fissure cave. Of particular interest were a half dozen large Crevice Salamanders

(*Plethodon yonahlossee* var. *longicrus*), much to Scout's delight. This variety is found only in this area, so we took time to get some good photographs.

We rigged the pit, and Brent and Nancy descended to the lower level for a quick reconnaissance. After they climbed back up to rejoin Scout and me, we all backtracked to the entrance to begin a detailed survey, using a new Disto-X laser. After mapping a couple of side leads, Nancy climbed into an impressive upper gallery which we decided to name Houdini Hall. Brent gave me a knee assist, and with a wrist-lock from Nancy, I was able to join her. She jettisoned her vertical gear and then climbed the next pitch. Brent then joined me, removed his excess gear as well, and joined Nancy.



Nancy at cave's entrance. Photo by Cato Holler

They reported finding themselves in a very unstable area, with a chance of large boulders shifting, but another entrance was in sight. It was decided that the two would delicately survey up and out the other entrance and not backtrack for fear of dislodging debris onto those of us below. In the meantime, I grabbed their excess gear, tossed it down to Scout, then began to make my way back to the main level.

Unfortunately, on my descent, I had to pass through two nasty blades of rock ("The Impaler!"). As I slid between the sharp edges, I suddenly felt a painful sting in my right belly. I experienced a pretty major abrasion, but fortunately no internal injury. At that point I couldn't help but think about poor Houdini, who had not been so fortunate, in that he had expired from a blow to the same area, reportedly resulting in a ruptured-and later gangrenous-appendix!

By that time Nancy and Brent had surveyed through the upper end of Houdini Hall and out the upper entrance which we named, "The Great Escape." They had emerged beneath a large

overhang on a cliff above us and were able to slide down to rejoin Scout and me at the main entrance. We then continued the survey back to the pit where Nancy and Brent re-donned their vertical gear and descended to map the lower trunk passage which they had reconned earlier. Following the Houdini theme, it was rightfully named "The Sub Trunk," short for Substitution Trunk, also known as Metamorphosis, one of Houdini's most famous illusions.

I lowered my camera down to Nancy to snap some photos. As she reached up to grab it, a large flake of rock began to move from the wall. She immediately leaned against it and was able to direct its fall so it wouldn't injure her or the excess rope on the floor. Another close call! After finishing the lower-level survey, Nancy and Brent ascended; we unriggered the rope and ended up with 272 feet of surveyed passage. It was a soggy hike back to the car, but we all felt elated that we had been able to survey this rather unstable virgin cave and managed to escape Houdini Hole with no major injuries.

Consumed with more urgent work, Brent didn't draft the final map of the cave until this year (2026). This is quite appropriate, however, since it marks the centennial celebration of Houdini's death. You will note other appropriately named features on the map. One quiet side alcove was named "Bess' Bower," in tribute to Mrs. Houdini, while another side lead was dubbed "The Weiss Crack" in that Houdini's Hungarian Jewish family surname was Weiss or Weisz. On my first trip, while peering down the narrow opening into the pit, I misjudged the distance at around 20 feet or more. Although it did require rigging, it ended up being somewhat less, so we referred to it as "Deception Pit."

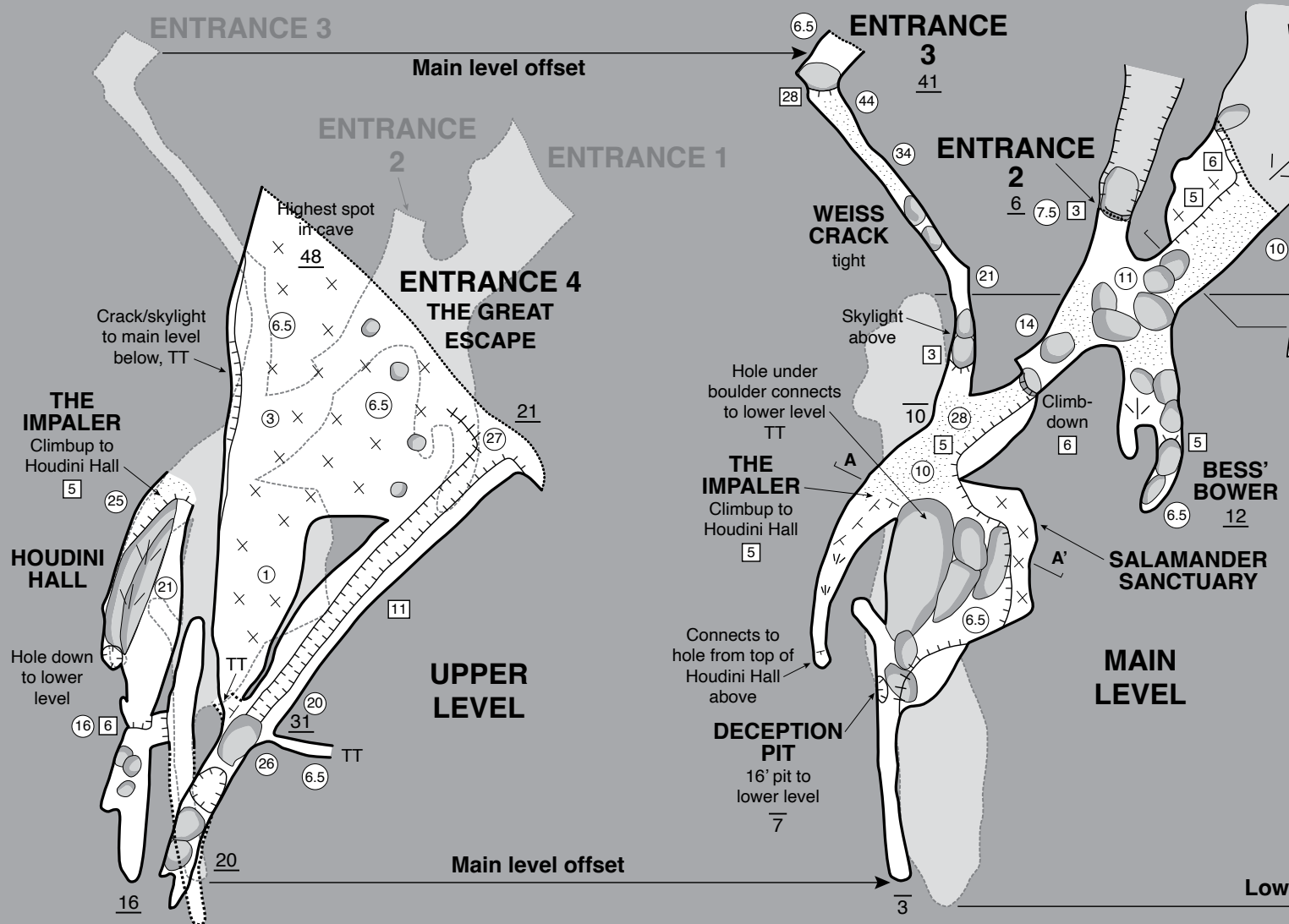
So, let it be known to all that on this 100th-year celebration of the death of arguably the world's most famous magician, Halloween Haven, AKA Houdini Hole, has been officially registered as cave #1584RU in the North Carolina Cave Survey.

Happy Halloween and
Happy Houdini Centennial, everyone!



Brent surveying in the Subtrunk. Photo by Nancy Holler Aulenbach

Nancy preparing to drop Deception Pit into the Subtrunk



Halloween Haven aka Houdini Hole

Discovered October 31, 2018

NC1584RU

Rutherford County, North Carolina

Grade 5 (Disto) Survey 10 October, 2020 by:

Brent Aulenbach
C. Scout Aulenbach

Nancy Aulenbach
Cato Holler

Total passage surveyed is 272 feet
Total vertical extent is 79 feet

Legend

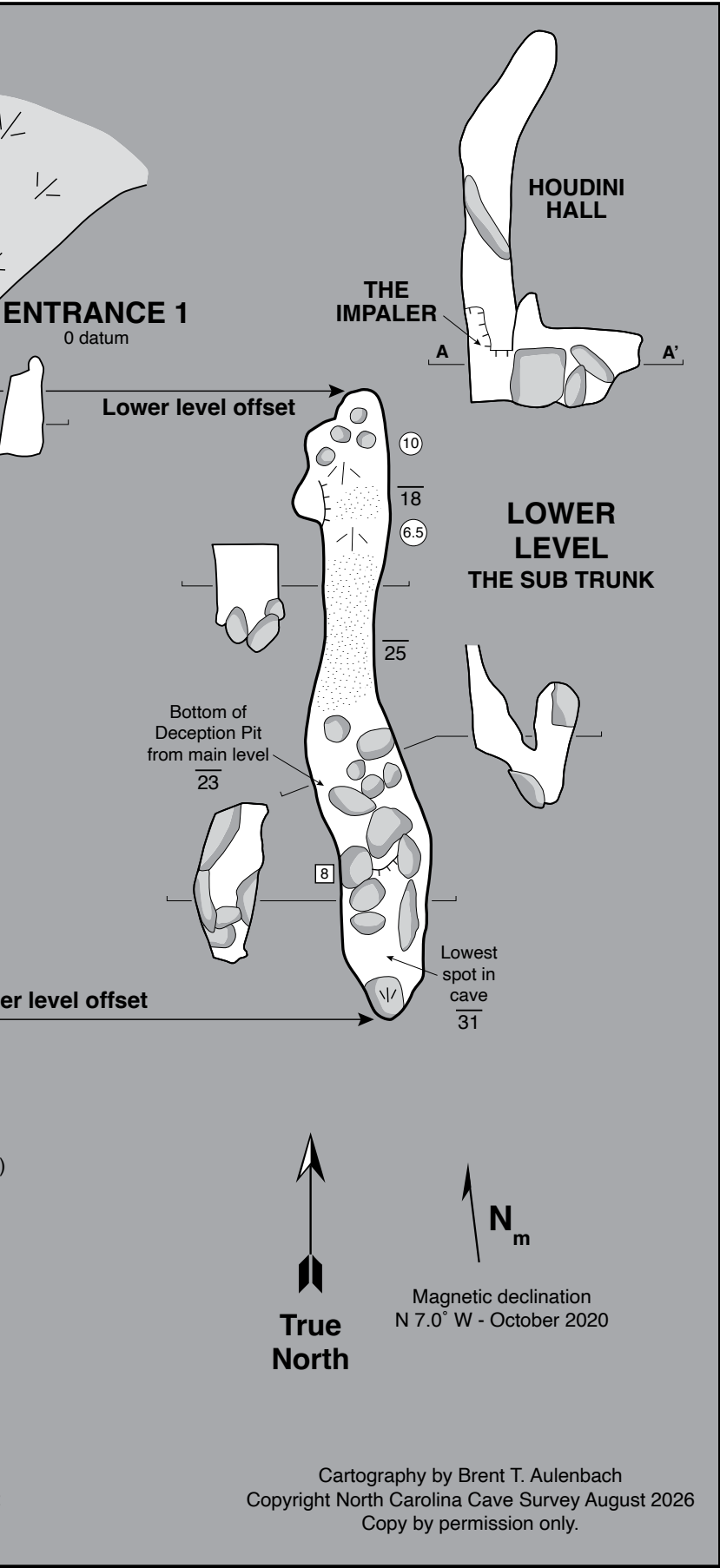
Uses NSS Standard Map Symbols of 1976
(NSS Bulletin, April 1979, Volume 41, Number 2)

Additional/Alternative Symbols Used:

- Bedrock floor
- Boulder
- Dirt floor
- Undercut shelf
- Underlying passage walls
- Underlying passages offset, detail shown on offset

All values in feet.





Cato just inside the main entrance to Houdini Hole. Photo by Nancy Holler Aulenbach



Scout delicately examines one of the Crevice Salamanders. Photo by Nancy Holler Aulenbach

SPELEAN SPOTLIGHT

OF HALI STEINMANN

BY APRIL GOCHA



How did you first get interested in caving?

Hali: As a kid, I visited The Lost Sea Cave in Tennessee at summer camp, but I didn't really get back around to caving until college. Sewanee had a great outing program that took us to a couple of the caves on campus. Like a lot of people, I had really no clue how many caves there were, so it absolutely blew my mind when I learned that there were so many. The outing club had other priorities beyond caving, but I wanted to do more caving. I was introduced to Sewanee Mountain Grotto and the NSS and started meeting other cavers locally.

At the same time I was really getting into caving, my dear friend Nancy Lilly convinced me to sign up for my first geology class with her. I was an ecology major with a geology minor at Sewanee, and Nancy and I ended up surveying our first cave together and doing a senior project on cave biology and geology. I later went back to school at Western Kentucky University and got a geoscience master's degree focused specifically on caves. In caving, you're inside the rock — doing geology from within the earth. It's a really beautiful melding of things I am interested in academically and as a hobby.

What do you do professionally?

Hali: Currently, I do environmental consulting for the Tennessee branch of Davey Resource Group, a consulting firm that's part of Davey Tree Expert Company. We do all kinds of different work. A lot of what we do is related to the Clean Water Act, so protections that go along with surface waters like streams and wetlands. We also do surveys for rare, threatened, and endangered species and their habitat. In my role as a professional geologist, I deal a lot with CERCLA/RCRA, so assessment and remediation of contaminated sites, soil and groundwater cleanup, things like that, as well as solid waste-related work making sure that old and future landfills are environmentally safe. It's kind of dirty work. I still occasionally get to pop into caves as part of this work because Tennessee has so many caves,

so some of the sites inevitably have karst features. Some of those are potential habitat for endangered species like bats, or some may require dye traces, et cetera. So our work really ranges. It's a cool job in that way because I get to wear a lot of different hats.

Does your geology background influence how you cave?

Hali: I'm always looking at the geology, seeing the joints, the little faults, different interesting formations. One of my favorite sedimentary rock features are called bedforms, and the few times I've seen them in caves, it's been really cool. It's sort of like if you're standing in the ocean looking down and see those wavy patterns in the sand based on the way the current is moving. Those are sometimes preserved in the rock millions of years later. I get such delight from seeing bedforms in caves, because it's really just the ocean floor from long ago. I can also just disappear into a little fossil layer and get totally fascinated by all the different types of shells and different life that was there. I can nerd out. Going into caves with other geologists, hydrologists, and biologists is my absolute favorite way to cave because you learn so much by seeing it through other people's eyes.

You worked for several years at Mammoth Cave—what was that experience like?

Hali: I had the luckiest position ever as a graduate student. Pat Kambesis was my advisor and set me up for success with this great gig working with the Cumberland Piedmont Network, whose office is based out of Mammoth Cave National Park. I was essentially an intern for two years, then stayed on a little longer as a geoscientist in the park, which is an AmeriCorps job. The job involved biological inventory and monitoring of caves, including Mammoth Cave and a handful of other national park units across the Southeast. I helped monitor populations of bats, cave crickets, cave aquatic biota, and forest vegetation. I got to travel a lot and had the privilege of seeing a lot of otherwise closed caves. Many of my graduate school colleagues had teaching assistant or research as-

sistant types of jobs, where they were a slave to someone else's lab or were always grading papers. Instead, I would sit outside a cave entrance until 3:00 AM watching and counting how many bats came in and out of the cave, or go out looking for new caves, or survey and document known caves. It was a really fun job. The scientists I worked with in the Cumberland Piedmont Network and at Mammoth Cave were just hugely inspirational to me; they were really great mentors.

Are there geoscience-related questions that keep you up at night?

Hali: The more we find out about caves, the more questions there are. The more dye traces we do, the more questions arise about the hydrology of caves and what is going on. I am endlessly fascinated by our Cumberland Plateau caves because they're always changing, and relatively rapidly in the scale of geologic time and sometimes in the scale of human time. Things are opening up, things are collapsing, things are filling up with sediment, things are clearing back out of sediment. They're such living systems. One huge, pressing, scary question is about caves and climate change: how much will our caves, cave biota, and the different aspects of the cave ecosystem change as the surface warms and we get more crazy weather events? We're going to have more landslides, sinkholes, karst-related hazards, floods, and droughts. These end up being good work for me as a geologist, but they are very real issues.

I think there's also sort of a regulatory lack of understanding. A lot of environmental laws don't really do a good job of representing karst ecosystems. One example is a jurisdictional stream, which has legal protections in terms of riparian buffers, pollution, water withdrawal, and so on. There are clear guidelines on what you can and can't do in terms of impacting that stream. But if it goes into a sinkhole and becomes groundwater, groundwater is not regulated the same way as surface water. So if the surface stream totally disappears and there's no longer a surface channel, which, as we know, hap-

pens in karst all the time — the regulations won't prevent you from doing whatever you want on top of that. It's obvious to most of us that it's a bad idea to build roads or other infrastructure on top of a sunken stream, but the regulations just don't reflect that and haven't caught up, and it's not necessarily obvious to the public or unaware developers. As cavers, we need to keep our eyes on things like that.

Why caving?

Hali: I think for me it's the peace of caves. Caves are a bit of a sanctuary — as much as they're a physical experience, they're also a mental experience. It's the First United Church of Karst. I love a day off that I can just go into a cave and convene with the underworld, just the cold and the quiet and the dark and the smell. It's such a relaxing experience. But I also think it's equally the cavers, the people. In my younger years, I dabbled in rock climbing, and no offense to rock climbers, but I could never fully get into it because it just wasn't my people. When I found cavers, I found my people. There are so many beautiful relationships in my life that are through caving and because of caving, people who I consider family. When you meet other cavers out and about in the wild, when you see another bat sticker, you usually find such lovely, kind, humble, and funny people. NSS Conventions are like a family reunion or Christmas to me because of the joy and good energy I get from being around cavers.

What do you think makes someone a caver?

Hali: I think it's a bit of a self-identification thing but also a communal identification thing. There are plenty of people who know about the caving world but don't engage with organized caving, and I think they're still cavers. The sort of 'next level' is engaging with other cavers in a way that's advancing our awareness of the different projects going on or the different efforts to conserve caves and learn about caves. A lot of people want to go in caves — when I worked at Mammoth, I was always tickled by visitors who wanted to tell you all the caves they'd been to and would just list off every commercial cave you've ever heard of. I think that's kind of beautiful too because they're so excited about it. They're cavers too because they're loving it, whether it was a paid tour or not. So maybe it's just people who love caves and are enthusiastic about caves; you don't have to be hardcore or be caving all the time.

Do you have a favorite piece of caving gear?

Hali: Probably my stinking helmet. I don't like feel like I'm that clutzy, but

there have been countless times I've hit my head in a cave and been thankful that I have a helmet on.

If you could have one superpower to help you explore caves, what would it be?

Hali: To become a liquid. It would make hydrologic systems so much easier to explore and going into tiny little cracks a lot easier.

Do you have a favorite place to cave?

Hali: Right here in my backyard in Seawanee, there are so many great caves. Buggytop Cave is five minutes from my house and is now part of one of Tennessee's newest state parks (Head of the Crow). It's a good beginner's cave, and

I've taken so many people on the through-trip who are new to caving.

My karst hound Roubidoux has even done the through-trip multiple times, so it's really fun to share that with other people.

Do you have any caving quirks?

Hali: I am notoriously bad at remembering how bad things were on previous caving trips. I'll be trying to recruit people to go back to a place with me, telling them it's not that bad, something like, 'you'll just have to duck under and crawl for like 20 seconds,' or, 'it's an easy hike!' And then when we're actually in the cave or on the ridge, the realization dawns that it's actually more like 10 minutes of horrible crawling or miles and miles of grueling hiking. I kind of black out some of the bad parts and just remember the good parts of the cave.



HALI RAPPELLING INTO A RAINBOW IN A MARION COUNTY, TN CAVE. CREDIT: DAVID O'NEILL

BOOK REVIEW: THE FICTIONAL WORLD OF RUBY FALLS CAVE

Book by Gin Phillips Published by: Atlantic Crime Release Date: March 2026 ISBN13: 978-0802166920

Review by Curt Harler

Author Gin Phillips sets her suspense story *Ruby Falls* in the 1930s, the era of the Great Depression. She relates the true tale of the discovery of the cave and its waterfall by Leo Lambert in 1928 when he was drilling a new elevator shaft into Lookout Mountain Cave in Chattanooga, TN. Lambert, a chemist from Indiana, named the waterfall and cave after his wife Ruby.

"From the first time I set foot at the bottom of the elevator in Ruby Falls – the first 30 seconds – I wanted to set a book there," Phillips tells me. "I was in an alien landscape. I discovered there was a whole world underneath me that I knew nothing about."

In her book, things at Ruby Falls go well until the Great Depression. Not all cave owners participated in the cave wars which made Kentucky cave operations so notorious during that era. Rather, the owner of Ruby Falls comes up with a shrewd and fictional public relations ploy to drive traffic in an age when dimes are hard to come by. He recruits a famous mind reader to go off-trail in Ruby Falls Cave to attempt to locate a hatpin by tuning into the brainwaves of a pair of employees who hid it somewhere in the cave. Will this fellow's psychic abilities generate enough publicity to save Ruby Falls Cave?

The ensuing tale is built around Ada Smith, a widow who has been sneaking into the cave alone at night. Pushing passage gives her solace and a distraction from her everyday, humdrum life. All goes well until she is discovered by Quenton, a cave employee. He does not rat her out but befriends her and eventually recruits her to be part of the team going into the cave with the psychic.

Phillips says that, during her first com-

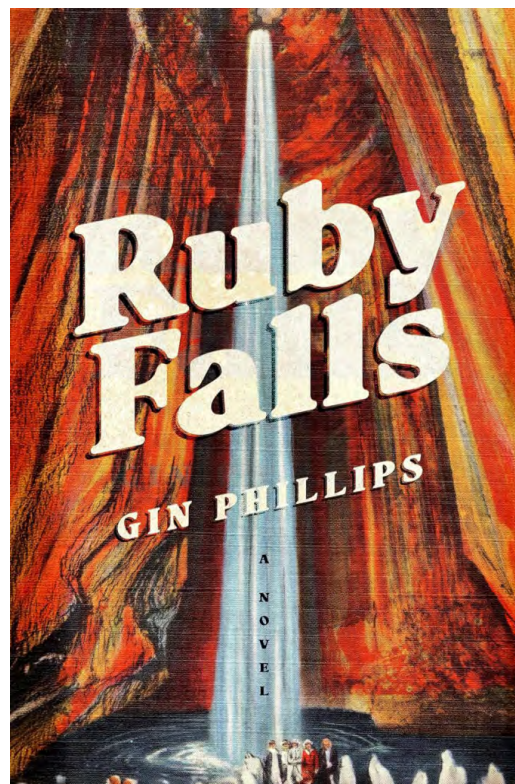
mercial tour of Ruby Falls, she was captivated. "What would possess Leo Lambert to see that small opening and think, 'I want to go in there!'"

Like much of the writing by outdoors author Nevada Barr who bases many of her national park mysteries on real events, Phillips takes a true scene and turns it dark. When one member of the psychic's team ends up dead with a stalactite stuck in the throat, the caving takes a back seat to the cavers' minds. Who dunnit?

Phillips, who lives in Birmingham, AL based much of her book on the true story of the discovery of Ruby Falls. The description of Ruby Falls Cave – at least the tourist areas -- is accurate. She also drew on the memoirs of Katie Stabler, the first female guide at Wind Cave, SD. Like the fictional Ada, the real Stabler was involved with a psychic trying to find a hatpin in a cave. Ada's adventure is based on just a few lines in Stabler's journal, Phillips says.

"I liked having a woman caving," Phillips says. "What would draw a woman at that time period to want to be free?" To assure authenticity, Phillips went to Raccoon Mountain and took their off-trail tour. Then a caver took her to a wild cave near Chattanooga. "It was a lot wetter," she laughs. She based Ada's feelings on how she felt while crawling on her stomach. "I expected to claustrophobic," she says. "Instead, I found an eye-opening world shrunk down to your headlamp. It was very pure and hypnotic."

Phillips knows how to write and how to develop characters. Her debut novel set in a coal mining town (*The Well and the Mine*) won the 2009 Barnes & Noble Discover Award. Her next book will be a mystery set in the utopian colony founded in Fairhope, AL in 1894.



If you are interested only in hard facts about Ruby Falls, get "*Caves of Chattanooga*" by Larry E. Matthews. Chapter 3, "Ruby Falls Cave," covers the Cave's history from its discovery in 1928 through 2007 when NSS published the book.

If you want a good read with nice character profiles, check out *Ruby Falls*. Ruby Falls Cave remains a going commercial operation and visitors can tour the cave most days. The book, however, costs a bit less than the standard cave tour.

The Book is available for \$28 at Barnes & Noble as well as Bookshop.org, Amazon and Audible.

THE LINCOLN MEMORIAL UNDERCROFT

BY BOB THOMPSON



Among the hundreds of thousands of annual visitors to The Lincoln Memorial in Washington, DC, few, if any, recognize that just several feet below the iconic marble statue is a scene that brings to mind a picturesque cavern.

The “undercroft” is a vast, 43,800-square-foot subterranean foundation supported by 122 massive concrete and limestone-faced pillars. Indiana limestone was used for the memorial, specifically for the interior walls, lintels, and columns. The undercroft famously features a cave-like atmosphere with striking stalactites called calthemites, formed by water seeping through the cracks of the memorial’s marble. “Calthemites are secondary calcium carbonate deposits that form on or beneath man-made structures like concrete bridges, tunnels, and parking garages. Often called urban stalactites, they mimic natural cave formations but grow exponentially faster due to highly alkaline water leaching through concrete.”

For many years, the undercroft was concealed from the public eye, recognized only by a select group of geologists and naturalists, and accessible solely to maintenance teams. In June 2026, this large underground chamber was reopened to the public for the first time in 37 years.

William T. Pecora, a renowned geologist and director of the U.S. Geological Survey, studied the rapidly growing stalactites/soda straws when first discovered under the memorial in May 1957. Pecora and other geologists famously examined this artificial ecosystem. “They used the site to study the accelerated mechanics of dripstone formation outside of natural limestone caves, finding it a unique environment right in the heart of Washington, D.C.” Pecora reported stalactites/soda straws growing up to five to seven feet long in just a few decades.

In 1968, scientists of the Department of the Interior’s National Park Service and Geological Survey also reported in newspapers that stalactite deposits were growing down from the foundation ceiling. Also, short, stalagmites were rising a few inches from the foundation floor. “A few of the stalactites have grown sufficiently long to connect with their corresponding stalagmites, forming a continuous mineral link between ceiling and floor.” The best display of stalactites was in the farthest reach of the foundation, particularly in the general area beneath the surface steps that rise from the roadway.

For a time, the National Park Service provided flashlight tours of the undercroft to the public in the 1970s and 1980s, but these were suddenly stopped in 1989 when a tourist noticed asbestos and reported it to the authorities. On June 25, 2026, after several years of renovations, the Undercroft reopened to the public to celebrate America’s 250th birthday. “The National Park Service has enabled visitors to again explore the expansive chamber and view the remarkable three-story columns and arches, which are covered in stalactites. They’re still dripping.”

Photos:

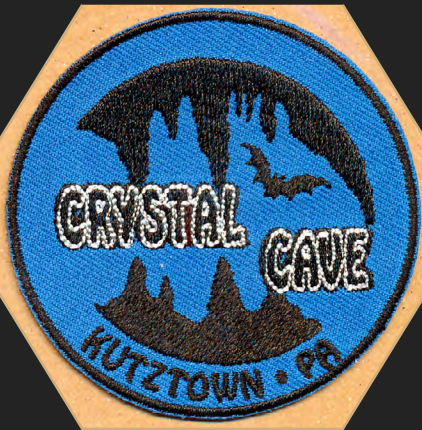
“The Undercroft” (courtesy of the National Park Service)

In photo: William Newman (left), geologist, U.S. Geological Survey, and Maurice Sullivan, naturalist, National Park Service, Washington, D.C., examine a “curtain” of stalactites growing from the foundation ceiling beneath the Lincoln Memorial. 1968.



COSMIC CAVERN

BERRYVILLE, ARKANSAS



CRYSTAL CAVE

KUTZTOWN, PENNSYLVANIA



DUNBAR CAVE STATE PARK

CLARKSVILLE, TENNESSEE



PREDJAMSKI GRAD

BUKOVJE, SLOVENIA

Historic Cloth Patches Part 42: Caves, Grottos, and Miscellaneous



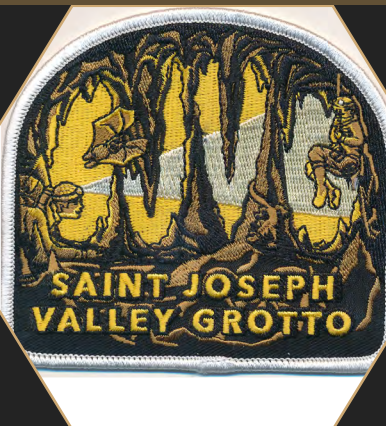
RUBY FALLS

LOOKOUT MOUNTAIN
CHATTANOOGA, TENNESSEE

MEADVILLE MOLES GROTTO
1978 TO 1980
MEADVILLE, PENNSYLVANIA

INNER - EARTH GROTTO
2003 TO PRESENT
INDIANA, PENNSYLVANIA

SAINT JOSEPH VALLEY GROTTO
1997 TO PRESENT
MISHAWAKA, INDIANA





EAGLE CAVE

RICHLAND CENTER, WISCONSIN



HIDDEN RIVER CAVE

HORSE CAVE, KENTUCKY



KICKAPOO CAVERN STATE PARK

BRACKETTVILLE, TEXAS



UPPER PASSAGE

RIMESTONE RIVER CAVE
MISSOURI

**A selection,
that continues
our series of
patches from
the archival
collection of
Gary K. Soule**



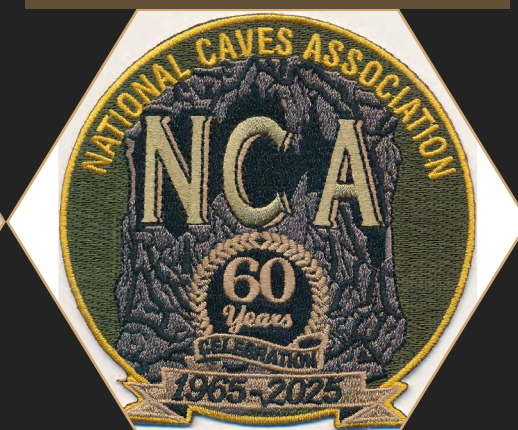
WOOKEY HOLE CAVES

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**NATIONAL CAVES ASSOCIATION
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1965 TO 2024



2026 NSS CONVENTION

CORYDON, INDIANA



REMEMBERING — BRUCE R. FOYER

BY GARY K. SOULE

Bruce R. Foyer, NSS # 19840, passed away at the age of 76 on June 11, 2026, at Mercy Hospital in Janesville, Wisconsin. He was born on July 25, 1949, in Chicago, Illinois. He earned a bachelor's degree in art history at Northeastern Illinois University.

On August 21, 1970, he married the love of his life, Mary Foyer. They were married for 56 years and lived in Evansville, Wisconsin. Bruce was a caver who had curiosity, leadership, and a deep love of the natural world. Along these lines, he was the President of the Rock River Speleological Society from 1984 to 1989. Then, again from 1993 to 1999. He was also a past President of the North Country Region of cavers.

He had visited over 300 show and wild caves in the US, Mexico, and even New

Zealand. According to his journal, his first cave trip was with Chicago-area caver Chuck Rex. They were with scouts caving in Central Mexico. He was well liked by the caving community and will be surely missed by all.

Bruce was not only content with the underground, but outer space as well. He taught astronomy at Moraine Valley College, and for more than 30 years he pursued his passion for building telescopes. He even helped build the astronomical building at Quarry Hill in Rockford, Illinois.

When not studying the universe, he led many cave trips throughout Wisconsin, Illinois, and Indiana. In later years, health issues caused him to let up on caving, but his passion and love of caves and the caving community will always be remembered.



REMEMBERING — JAMES DOUGLAS PERKINS

James Douglas "Doug" Perkins, 78, of Salem, Virginia, passed away on May 4, 2026, after a short illness.

Doug was born February 15, 1948, in Lynchburg, Virginia. He grew up in Lynchburg and graduated from EC Glass High School in 1966. He was predeceased by his parents, Vivian and Mae Perkins.

Doug was a 1973 graduate of VA Tech and began his employment with the Virginia Department of Transportation. He retired from the Salem VDOT office in 2010.

Doug had two hobbies he was passionate about: caving and swimming.

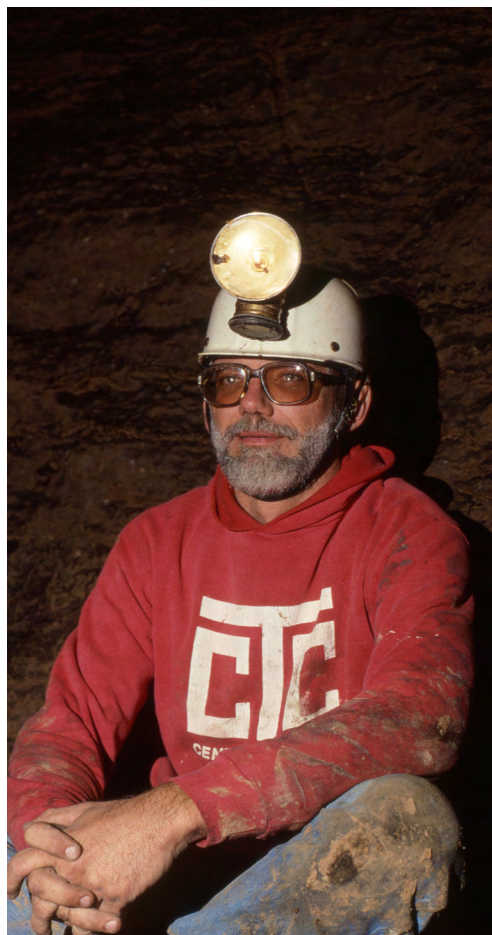
Doug joined the VPI Cave Club as a student and continued to be an active alumni member throughout his life. Doug was inducted as a Fellow into the

National Speleological Society, the national caving organization, in 2002. The friends Doug made over the years from the VPI Cave Club became Doug's family. He met and caught up with them when attending different club events annually. He purchased property with a cave on it in 1993 so the VPI Cave Club could continue to access the cave and use it to train new members.

Doug was also an avid swimmer and joined various pools over the years in order to swim year-round. After retirement, Doug volunteered at a local pool and was there daily to swim and help as needed. A position he held until 2024.

A Memorial Service was held in July at the cave site on Doug's property.

Any memorial contributions should be sent to the VPI Cave Club, PO Box 558, Blacksburg, VA 24063-0558.



The Cave Conservancy Foundation is accepting grant applications to support cave and karst-related research, conservation, and education projects. Apply for large grants before the October 1 or March 1 deadlines. Submit grant requests for up to \$1,000 at any time.



Consider applying for the Charles W. Maus Fellowship in Karst Studies if you are a degree-seeking student planning to pursue cave and karst-related graduate or undergraduate research.

For information on how to apply for grants or academic fellowships visit:

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If your grotto or region is looking for great caves to explore in the Virginia area - look no further! RASS Grotto can offer a complimentary place to camp in Bath County, VA - where more than 100 caves are located within an hour's drive. We support cave conservation and education. Some COVID restrictions still apply. Contact Richie Ellison at rellison1120@gmail.com

The Richmond Area Speleological Society (RASS) supports cave conservation, education and research by offering grants to assist projects aligned with these goals. To receive a grant request application please email us at rass-grants-committee@googlegroups.com. Applications reviewed quarterly.

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October 2026

