

ARKANSAS MUSEUM MAPS DIAMOND CAVE

Makes First Scientific Exploration of One of World's Wonders.

By Bernie Babcock.

The Arkansas Museum of Natural History has just finished a piece of work of unusual importance and scientific value to the state in the exploration and mapping of one of the greatest caves on the American continent—Diamond cave near Jasper, Newton county. Both exploration and mapping were done by Richard Buhlis, staff director of the museum.

From the official report of Mr. Buhlis to the museum, 12 pages of detail, the following facts and information are given:

How long the gigantic cavern of unknown extent has been in the making, no man knows nor when it was first discovered by human beings. Its discovery by the white man is known, however, and dates back to 1834 when a man named Hudson who had settled on Panther creek because of the abundance of game in that section, followed a bear up a mountain side and into a cave entrance.

The pathway led down, and it was a rough and tumble chase the man and the bear had that long ago day. The bear made his escape for the hunter found himself in a new and strange place of seemingly vast proportions, and dense blackness a short distance from the entry.

Named by Discoverer.

With a torch, he entered a short distance into the first chambers of the subterranean world he had discovered and because the light was reflected in the calcite crystals in shining points, Mr. Hudson called it "Diamond Cave."

For years after this discovery, the cave remained practically unknown except to local people who sometimes had picnics in its first roomy chamber.

It was not until state highways made the great cave accessible to the outside world that tourists began to visit it and although several thousand visitors have seen its wonders, this greatest of caves yet remains almost unknown to the world at large.

The cave is in the very bowels of Hudson mountain, this great pile of rock and earth covering it to a depth at times as great as 1,200 feet. The mountain spreads its majestic form along Panther creek about three miles from Jasper. The cave entrance is on the east side of the mountain about 70 feet above the creek and is reached by a zig-zag trail of 400 feet from the office.

Temperature Never Changes.

The visitor for the first time—for some visitors go many times and always to discover something new—will perhaps notice the temperature of this great cavern first. If the day is cold outside, the warmth will be pleasant. If the day is hot outside, the coolness will be refreshing for the temperature is the same winter and summer, 65 degrees Fahrenheit.

When visitors first entered the cave some years ago, they found it in possession of bats. But these fuzzy little mammals have deserted their long-time roosting place and neither the flutter of a myriad of wings nor the squeaking of the disturbed creatures is now heard.

Many Curious Formations.

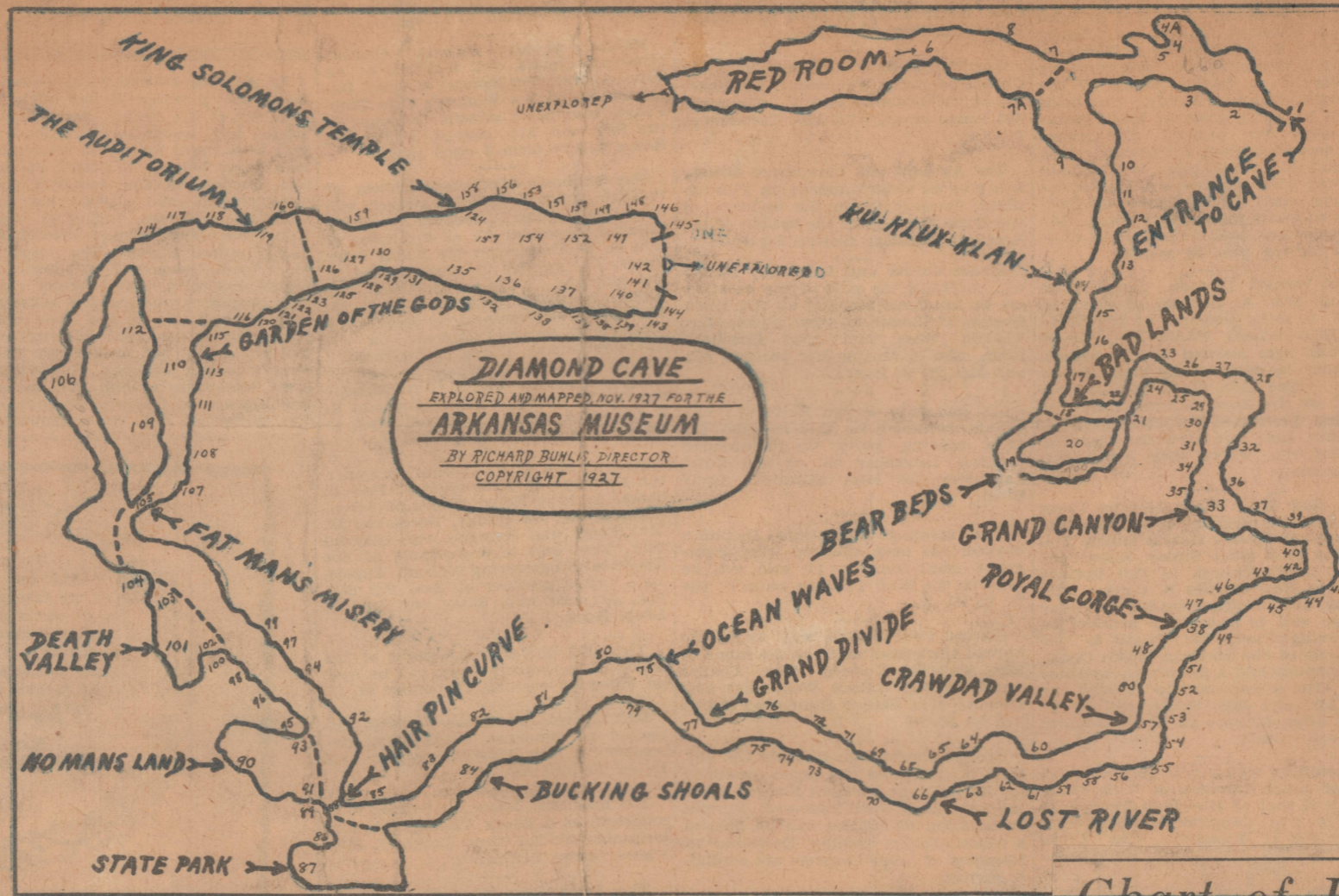
As the visitor is taken through, the explored regions of the cave, he is shown many curious and wonderful formations. These formations have been called by different names as different imaginations have seen them. In the mapping done by Mr. Buhlis, names have been given 160 stations and formations along the trail, these names agreed on by the management of the cave as official. In his explorations, which went no farther than Solomon's temple and the red room, many new features of interest were discovered by Mr. Buhlis, and he had the honor of naming a number of these.

The first curious formation the visitor will note is the "Hornet's Nest," a double nest hanging on the wall. No hornets ever buzz around it, however. "Indian Bread," a "loaf" two feet long, hangs nearby on the wall. Then comes "Red Hill" on the right of the trail, a blanket formation 10 by 12 at an angle of 45 degrees. It is a rich reddish color caused by iron stain.

"Mirror Lake" is a miniature on the top of Red Hill, and reflects the formations above. It was discovered and named by Mr. Buhlis. "Hudson's Pillar" is the first of hundreds of large pillars to be seen in the cave. It is just below Red Hill and was named by Mr. Buhlis in honor and memory of Sam Hudson who discovered the cave.

Turning to the right at the junction of the trail the famous old Red Room, 1,200 feet long, is entered. There is a spring at the entrance to this great apartment which the year around furnishes water for Spring creek which runs the full length of the Red Room and is thought to have an underground channel to Panther creek.

Map of Diamond Cave, in Newton County, One of the Wonders of The World, Prepared After Exploration by Director of Museum



Other material
on caves can be
found under
Miscellaneous.

Leaving the Red Room the trail turns back to the left and many wonderful and beautiful formations are seen. Here is the "Polar Bear" facing north and white as snow. "King Tut's" Column is here and along the way the "Ku Klux Klan," "Jacob's Well," "Christmas Tree and Santa Claus" and "Mount Ranier." No picture ever painted was more natural than this snow white stalagmite formation which was discovered and named by Mr. Buhlis. The "Bad Lands" was also named by Mr. Buhlis.

Without mentioning half a dozen fine exhibits made by handless nature, the "Battleship Arkansas" is seen. It is about 40 feet long. A "White Crane" looks as realistic as the thousands of egrets that inhabit St. Francis county.

There are battlefields, a "Fireplace" and two dozen other wonders before the shadowy place is reached where "The Angel of the Grotto" stands keeping her eternal and silent watch. She is a lovely and mysterious little angel who was discovered in 1922 and named by Mrs. Babcock.

Other wonders that are every few feet, "The Jail," "The Sugar Bowl," "The Filling Station" for nature built one a long time ago here under the ground, "House Cat," "Alaska Seal," "Old Gray Mare" stuck in a dry creek, "Mutt and Jeff" and dozens of other fantastic, mysterious and altogether fascinating formations.

"The Spirit of St. Louis" is in Diamond Cave too, a stalagmite formation hanging from the ceiling which resembles an air plane in flight when the shadow is reflected on the wall by the guide's lantern. Even "Lindy" can be seen sitting in the cockpit.

Again more stations and the visitor comes to the "state capitol" with its 17 large pillars. Back of this Mr. Buhlis discovered an extensive area of unnamed wonders which he called "State park."

Station No. 94 is of more than passing interest to the scientist. This place was formerly called "Button Ceiling." But it has been renamed "Crinoid Ceiling," since the buttonlike formations are sections of the crinoid—the stony lily of sea bottoms, uncounted ages ago. How this sea bottom formation came to be the roof of many of the rooms and halls in Diamond Cave is another story—a tale of magical interest.

From this station, the next 10 takes the visitor to the most famous of all the stations in the big cave—"Fat Man's Misery." Twenty-five thousand visitors have backed ungracefully through this tiny opening between fixed rocks. Every one of the 25,000 has hesitated. But beyond it lies "Solomon's Temple," the gorgeous—the beautiful. And so they back through unless they are too fat and know it. Several times a visitor has been too fat and couldn't be made to believe it until he (or she, for fat females have tried it) found himself stuck midway and held around the middle by unyielding bands of stone. In such cases the lure of "Solomon's Temple" is not sufficient to keep the fat man from turning back.

Leaving "Fat Man's Misery," 20 stations are passed before the great show of the entire cave is reached, "Solomon's Temple." No words can do justice to the beauty and grandeur of this vaulted temple with its marvelously wrought pillars and fringed canopies and mysterious, dimly outlined statuary. The lover of strange, unreal beauty might travel the world around without finding anything its equal.

From "Solomon's Temple" to the last of the 160 named stations are to be seen many more curious and interesting formations. And beyond the named list there are always new forms coming to view. Nor will there ever be an end to the new visions, for the cave has millions of stalagmites ranging in size from an inch to mighty pillars reaching from floor to ceiling.

At least 40 per cent of the formations in the cave are taking on growth at this time, some faster, some slower, according to the drip of the water, as well as its mineral content. Some of the stalagmites which have been broken off in the past and have fallen to the floor are now taking on growth as stalagmites do.

Permission was secured from the management of the cave by the museum, to number some of the formations and record measurements of their growth year by year in order to obtain accurate information about the formations.

The cave has never been officially explored beyond the Red room or "Solomon's Temple." There are stories of men having taken food for a three days' journey into the cave, but no information can be obtained. Even the sides of the trail, as it covers its course of several miles, have never been carefully explored. It would take considerable time to do this, and the explorer must needs be well protected, for getting several miles into the honey-combed insides of a great mountain is no everyday job.

The map which has been made of the cave so far as explored, shows its general position, the trail and the various points of interest, and while there may be slight variations as more extensive exploration is made, the scientific and educational value of the present map is of great value.

In the last few years improvements have been made at Diamond Cave, which afford the tourist comfort and convenience. There are tourist camps and a well ordered cafe called "The Panther." The highway by which the great cave is reached is in good condition and afford a view of some of the most glorious scenery in the Ozark country.

And yet this wonder of the world is so little known that its visitors are numbered by thousands only.

It is reported an offer of \$2,500,000 has been offered for Mammoth Cave in Kentucky. Of Diamond Cave, by many who have visited both, say the Arkansas cave is far the greater show. One cave, however, has been well advertised for years. The other is hardly known.

When the people of the Wonder State wake up to the fact that one of the world's wonders lies within her bounds and that tourists' money is worth gathering in, there will be a publicity campaign put on which will bring half a million tourists to Arkansas each year.

That the public may get a better understanding of the cave and its wonders, the Arkansas museum takes pleasure in presenting the map, together with the sights of interest along the explored trail.

Chart of Diamond Cave

This chart of Diamond Cave, in Newton county, was prepared by Richard Buhlis, director of the Arkansas Museum, during a recent exploration of the cave. The numbers correspond to the numbers on the above map.

- | | |
|-------------------------------------|------------------------------------|
| 1. Entrance. | 81. Traffic Post and Cop. |
| 2. Hornet's Nest. | 82. Vesuvius. |
| 3. Indian Bread. | 83. Spirit of St. Louis. |
| 4. Red Hill. | 84. Bucking Shoals. |
| 5. Mirror Lake. | 85. Spectacles. |
| 6. Hudson Pillar. | 86. State Capitol. |
| 7. Red Room. | 87. State Park. |
| 8. Cave Spring. | 88. Hairpin Curve. |
| 9. Clay Beds. | 89. Old Bullfrog. |
| 10. Low Ceiling. | 90. No Man's Land. |
| 11. Polar Bear. | 91. Hanging Garden. |
| 12. King Tut's Column. | 92. The Toadstools. |
| 13. Icicle Ceiling. | 93. The Toad Stools. |
| 14. Ku Klux Klan. | 94. Crinoid Ceiling. |
| 15. Jacob's Well. | 95. Map of Arkansas. |
| 16. Christmas Tree and Santa Claus. | 96. Ozarks National Forest. |
| 17. Mount Ranier. | 97. Two Hearts. |
| 18. The Bad Lands. | 98. Bear and Cubs. |
| 19. The Bear Beds. | 99. Bat Ceiling. |
| 20. Merry-Go-Round. | 100. False Teeth. |
| 21. Castle on the Rhine. | 101. Death Valley. |
| 22. Baby Elephant's Face. | 102. Mummy. |
| 23. The Alligator. | 103. Monkey Eating Peanuts. |
| 24. The U. S. Map. | 104. Angel Food Cake. |
| 25. The Giraffe. | 105. Fat Man's Misery. |
| 26. Battleship Arkansas. | 106. Unknown Chamber (unexplored.) |
| 27. Snow Man. | 107. Madonna and Child. |
| 28. White Crane. | 108. Poodle Dog. |
| 29. The Battlefields. | 109. Ironing Board. |
| 30. The Fireplace. | 110. Garden of the Gods. |
| 31. Plastered Ceiling. | 111. Maggie's Rolling Pin. |
| 32. The Widow. | 112. Wedding Cake. |
| 33. Grand Canyon. | 113. Niagara Falls. |
| 34. Adam and Eve. | 114. The Cemetery. |
| 35. Garden of Eden. | 115. Flowing Fountain. |
| 36. Japanese Fish Pond. | 116. Ruined Temple. |
| 37. Coral Islands. | 117. Peanut Pond. |
| 38. Royal Gorge. | 118. Easter Eggs. |
| 39. Devil's Dining Table. | 119. The Auditorium. |
| 40. Siamese Twins. | 120. Fountain of Youth. |
| 41. Milk Room. | 121. Flower Vases. |
| 42. Bird's Nests. | 122. Natural Bridge. |
| 43. Hoop Skirts. | 123. George Washington. |
| 44. Kewpie Dolls. | 124. King Solomon's Temple. |
| 45. Elephant's Ear. | 125. Plumbing Shop. |
| 46. Razorback Hams. | 126. The Rhinoceros. |
| 47. Birthday Cake. | 127. Pike's Peak. |
| 48. Star, Moon and Comet. | 128. The Piano. |
| 49. Arkansas Glacier. | 129. Statue of Liberty. |
| 50. Sampson's Clubs. | 130. Pinapples. |
| 51. Catfish. | 131. Pipe Organ. |
| 52. The Gourds. | 132. Ice Cream Cone. |
| 53. Angel of the Grotto. | 133. Arizona Cactol. |
| 54. Boa Constrictor. | 134. Chandailier. |
| 55. Jumbo. | 135. Liberty Bell. |
| 56. Frozen Falls. | 136. New Born Babe. |
| 57. Crawdad Valley. | 137. White House Dome. |
| 58. Jonah's Whale. | 138. Cocoon Ceiling. |
| 59. Snow Mountain. | 139. Channel Cat. |
| 60. Rough Ceiling. | 140. Home Brew Barrel. |
| 61. The Jail. | 141. Maggie and Jiggs. |
| 62. Sugar Bowl. | 142. The Bride. |
| 63. Filling Station. | 143. Holy of Holies. |
| 64. House Cat. | 144. Dinner Bell. |
| 65. Alaska Seal. | 145. Unfinished Chamber. |
| 66. Seven Columns. | 146. Potato Patch. |
| 67. Lost River. | 147. Tobacco Leaf. |
| 68. Old Gray Mare. | 148. Fringed Curtain. |
| 69. Mutt and Jeff. | 149. American Flag. |
| 70. Little Cicero. | 150. Saur Kraut Ceiling. |
| 71. Jack and the Bean Stalk. | 151. Chocolate Sundae. |
| 72. The Rattlesnakes. | 152. King Tut's Skeleton. |
| 73. Lot's Wife. | 153. Plasterer's Trowel. |
| 74. Mexican Hat. | 154. Praying Woman. |
| 75. Shower Bath. | 155. Breakfast Bacon. |
| 76. The Bananas. | 156. Lover's Lane. |
| 77. Grand Divide. | 157. Molasses Candy. |
| 78. Ocean Waves. | 158. Radish Patch. |
| 79. Bridal Chamber. | 159. Balcony. |
| 80. Stucco Ceiling. | 160. The Pillars. |

34

Strange Formations Found in Interior of Onyx Cave
Near Eureka Springs Opened Recently for Tourists

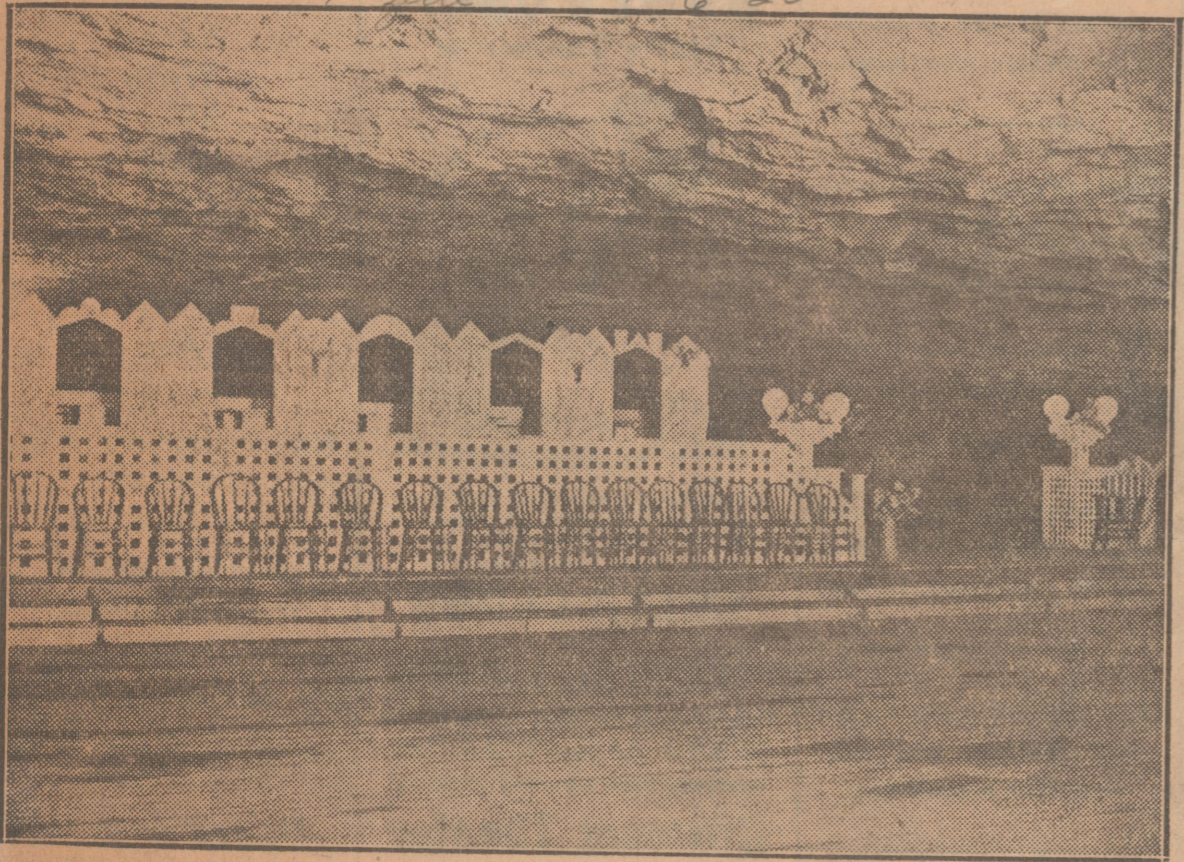
3-31-30



Special to the Gazette.
Eureka Springs, March 30.—The Onyx cave near Eureka Springs was purchased recently by Eagle Thomas and Ray Freeman, but now is owned by Thomas. He is preparing it for summer visitors. Cement walks have been laid through the cave and beside regular lighting, spotlights have been placed at several points to show particular formations.

Bella Vista's Unique Cave Cabaret

Gazette - 4-6-30



An improved and modernized replica of a famous Paris "caveau" will be opened this season at Bella Vista, the largest resort of the Ozarks. It is known as the Wonderland Cave, and is said to be the only underground amusement place in the country. There is a dancing pavilion, reached by brilliantly lighted walks and stairways; a novel orchestra pit, and refreshment booths of Oriental design with unusual lighting effects. The idea for the amusement cavern was obtained by C. A. Lineberger, resident manager, during a recent visit to Paris. The temperature of the cave, winter and summer, is 60 degrees; hence it is expected to prove popular for conventions and other large gatherings. The cave was used during the Civil war by soldiers, and has many intriguing subterranean passages. It has already been the scene of several pre-season dances, but will not be formally opened until the season begins June 1.

Newton County Times--
April 26, 1930.

The Diamond Cave Co. owners and operator of Diamond Cave near Jasper is now in the hands of the Chancery Courts as a result of demands by certain stockholders that an accounting of the operations be made by the management.

The Diamond Cave Co. was organized in 1922 with an authorized capital stock of \$25,000 of which approximately 1/2 was sold and issued, the majority of which was held by Oliver Moore and Harl Moore. With the organization of the co. in which the Moore Bros. held a majority interest

the management of the cave was turned over to them by W. J. Pruitt, formerly in control, and its operations have since that time been entirely in their hands

..... In the effort to get action on the matter, suit was filed in the Newton Chancery Court last February by Storthz Bros. of Little Rock, stockholders, asking for an accounting and partition.

.....

Melbourn Cave Is
Immense Labyrinth

By TOM SHIRAS.

Recent explorations of the Melbourn cave owned by Ralph Harris, five miles southwest of the town of Melbourn in Izard county, have revealed a maze of underground grottos and corridors comparable to the catacombs of Rome.

The latest discovery at the cave was another cave or cellar under the main opening. Last week a small opening was discovered in the floor of the main cave in a stalagmite garden, about a half a mile from the mouth.

Equipped with lights and ropes a small exploring party ventured into it. They followed the opening down a steep incline for 300 feet, where it terminated suddenly in another large grotto, deep within the bowels of the earth. They explored this grotto thoroughly before coming out. Other openings lead from it, which will be explored at some future date. It is thought now that these openings will lead from one to another and reach down as far as the limestone formation extends. They will probably extend upward nearly to the surface of the surrounding mountains.

Venturesome folks in the old days penetrated one corridor of the main cave for a distance of two and a half miles, and found another mouth, on the side of a mountain along which state Highway No. 9 now runs. This however, was only one of numerous underground passages. It will probably take several years to fully determine the ramifications of the many openings. Natives acquainted with the nature of the country predict that they will be able to follow some of the openings as far southwest as Gulon, on the White river, a distance of about 15 miles.

The main entrance of the cave is about 100 feet wide and 20 feet high. Fifteen automobiles could easily drive into it abreast. Several huge grottos have been explored and cleaned up. These resemble vast assembly halls. The largest are from 100 to 300 feet wide, and the roof in some places is 100 feet from the floor. That part of the cave already cleaned up would shelter a large part of the population of Izard county from a storm if they could reach it in time. Watching the millions of bats which hibernate there in the winter come out in the spring, one understands why Izard county has no mosquitoes.

Looking the cave over, one gets a very vivid idea of what the insides of the Ozarks look like. That is, that part of the Ozarks that are hollow. In this cave Nature has brought out all of her secondary geological formations, natural to the Ozarks, and put them on display. Chipping the walls one finds them to be nearly all solid onyx, and the stalagmites and stalactites, that have been formed by drips, during the past ages, are wonderful in both form and color. They are white, red and brown, running through all the shades of the latter colors

Many of the solid onyx columns are 100 feet high, and some are 15 feet in diameter at the base, reaching unbroken from the ceiling to the floor. At other places they take on fantastic shapes. Cathedral effects are common, and are very beautiful. Where the water has concentrated on the roof, gigantic onyx chandeliers have been created, and in other spots, nature has wrought huge inverted domes. Some of the stalagmites, which have not yet joined with the stalactites forming on the ceiling, resemble huge watch towers.

Many of the caves in the Arkansas Ozarks have streams of water running through them. The Melbourn cave is dry, with the exception of large, limpid pools which lie at intervals in the floor. The water in these pools is as clear as the atmosphere on an autumn morning, and as cold as ice water. They are peculiar, as they seem to have no source or outlet, yet one can baffle them for hours and not lower the water.

Many of the caves in the Ozarks are formed along large, well defined fault lines. The Melbourn cave seems to have been cleverly formed by Nature along numerous fault lines. Faults in the Ozark were created by the Ozark uplift, an outward pressure from within the earth, which cracked and tilted the formations in many places. The caves were formed by the water percolating through these underground fractures, and gradually carrying away the surrounding rock formations in solution. Caves are most generally formed in limestone, since limestone is more soluble than sandstone, flint or many of the igneous rocks.

The onyx formations, which are so common to the caves in the Arkansas Ozarks, were created by water heavily dripping from the ceiling. The drip is so slow that solution precipitates on the floor where it falls, from which it slowly by day, week by week, and year by year,

each drop carrying an infinitesimal amount of limestone in solution, gradually builds up a stalagmite on the floor and a stalactite on the ceiling. If this process continues long enough, they meet and a solid column is created.

The secondary deposition coming from water passing through a sand formation consists of clear crystals, called quartzite. It does not form in stalagmites and stalactites but in masses of beautiful clear pieces nearly always of square shape.

The ore in the ore-bearing caves in the north Arkansas zinc field, and in the Batesville-Cushman manganese field forms in the same way, and many times in the shape of stalactites and stalagmites.

A Complete map and descriptive article of Diamond Cave appeared in the Arkansas Gazette for December 25, 1927 (Sunday).

Prim Cave Contains Many Natural Freaks

(Special.)

Mt. Pleasant.—One of the most interesting caves in this section is the little known Prim cave, five miles southwest of Mt. Pleasant.

The chief reason it is not better known is its inaccessibility. It can be reached only in a wagon, horseback, on foot, or on a mountain goat, and by no method of transportation can it be approached closer than half a mile.

The entrance, is as the case in many caves in this region, is small. It is necessary to crawl 10 or 15 feet on hands and knees to reach the interior. The extent of Prim cave is not known, but it consists of nearly a dozen caverns of various sizes, and is said to extend at least three miles underground.

The first large room reached from the entrance tunnel is about 100 feet wide and 600 feet long, with a ceiling varying in height from 10 to 20 feet.

Near the entrance is what is known hereabouts as a bear wallow, supplied with water from a spring 40 yards beyond. This spring is one of the finest in the Ozarks; it flows the year round and flows freely at all times.

Near the spring is what is called an Indian Dance Hall. The earth is hard and resembles marble. According to legend, the Indians used the hard, smooth floor for their dances and other ceremonies.

The stone formations in the cave take on many familiar shapes; there are two that resemble coal stoves. They are nearly as large as the familiar back stove of a generation ago, and even have stone pipes running to the ceiling.

Another formation closely resembles the boiler of a power house; it has a large smokestack extending to the ceiling. Other rocks resemble the trunks of trees and some of them even appear to have been sawn and placed there to support the ceiling. However, they are of stone rather than wood. Still another stone resembles a cactus plant.

The cave has several "bottomless" pits; pebbles tossed into them may be heard rattling against the sides for several seconds before the sound becomes inaudible.

The usual stalactites and stalagmites abound in sections of the cave, while other sections are entirely bare of them.

Prim cave has frequently been mentioned as "the" cave popularly supposed to contain vast amounts of buried treasure, and it has attracted its quota of over optimistic treasure hunters.

One such hunter probably never will be forgotten by the natives, and it is not likely that he will ever forget Prim cave. When he appeared in the com-

munity he professed to be an experienced treasure hunter, and his announced method was indeed unique.

In caves containing hidden treasure, he said, he could see bright lights flash, hear strange sounds, and even discern ghosts. He had authentic information, he declared, that considerable treasure was concealed in Prim cave.

He took Tom Caraway, a native with a sense of humor, into his confidence; he explained his methods, and invited Caraway to become his partner. The latter saw an opportunity for a practical joke; so he accepted the invitation. Despite the stranger's assurance that there were seven "jenny loads" of gold in the cave, he did not consider the adventure seriously.

Caraway secretly enlisted the aid of a couple of boys and "planted" then in Prim cave on the day chosen for the treasure hunt.

"When you hear strange noises and see strange sights," said the stranger, "don't be afraid. They are all spirits, and I will talk to them."

A few minutes after Caraway and the gold hunter entered the cave, the two boys got busy with tin buckets containing pebbles, with cowbells, hunting horns, flashlights and other "ghostly" devices. The sounds at first were faint, but they grew louder, and in the darkness of the cave they sounded pretty terrible.

Caraway pretended to be frightened: "Talk to them! Talk to them!"

The stranger gasped weakly, "What meanest thou?"

Without waiting for an answer he hurriedly departed on hands and knees. Caraway followed with less haste. The two talked it over, and in the comforting daylight outside the cave the weird sounds and lights didn't seem so bad. The hunter was positive the treasure was there, so he allowed himself to be persuaded to return.

This time the "spirits" cut loose in earnest, and the stranger stood as though petrified.

"Talk to them!" Caraway again pleaded.

"What wouldst thou have me do?" the gold hunter stammered.

"Get out of here!" a voice boomed. The stranger obeyed with alacrity, and this time he did not stop running until he reached a house three-quarters of a mile distant. After that he was seen no more in the community.

Prim cave is on the dry side of the prohibition question. Certain men who have tried it say it is impossible to manufacture corn whiskey or home brew in the cave; for some reason, the mash does not work.

A Two-Story Town

By Tom Shiras.

There may be other towns in Arkansas that have an up and downstairs and don't know it, but Cave City, near Batesville, in Sharp county, knows it is a two-story town, and finds it rather convenient.

During hot weather, such as this section experienced recently, the downstairs or lower story of Cave City, is about the coolest place in the South; and in winter, when the north wind howls around the chimney, and the temperature is down below zero, it is one of the warmest places in the country. In fact Cave City's downstairs rooms maintain an average temperature of about 60 degrees the year around. So when a citizen of the town gets too hot, he goes downstairs and when he gets too cold he does likewise.

Cave City's lower story consists of one of the most interesting caves in the Arkansas Ozarks. As far as is known it has no stalactites or other water formations, but it has a lake or river, the end of which, if it is a river, or the

other side, if it is a lake, has never been seen by any human being as far back as the history of the cave goes. Explorations have not been made further back than this body of water, which is about 100 yards from the entrance.

As far as the cave has been explored it contains four rooms. The first one is about 40 feet square. Leaving this grotto you descend several feet on a 40-degree slant and come into another room about 100 feet square. Descending again several feet you come into another room larger than the second. You wander through this and step down another slant into the fourth room and onto the shore of an underground lake or river. Unless you have a guide who is familiar with the cave, you will step into water up to your knees in entering this last chamber, for the water is so limpid that the surface cannot be distinguished. You see through the water to the pebbly bottom and mistake it for dry ground.

Looking over this expanse of limpid water, you see a solid limestone roof reaching nearly to the surface, and past this low place no one has ever been known to venture. There is a legend to the effect that one of the old settlers of the section, with an adventurous nature, built a boat and set forth on a journey across this lake or down this river, and never came back. This cannot be confirmed, but this legendary experience has been enough to keep others from starting on the trip.

A half a century ago, the place where Cave City is now situated was a wide place in the woods, with Loyalty post-office a mile and a half up the road toward Batesville. The Laman family settled the town and several branches of them still live in the village. A lot of people own the upstairs, but Dr. Tom Laman owns the downstairs; that is he owns the mouth of the cave and most of the land over that part of the cave that has been explored.

Cave City was probably built just where it is on account of the cave. John Laman says that in the earlier days of the town before anyone knew anything of electric refrigerators, and ice could not be had, it was a favorite storehouse for the citizens. Eggs keep fresh in the cave for six months and fresh meat for two weeks, even during hot weather. Watermelons stored there late in the fall keep the best part of the winter. Potatoes and other vegetables keep for an indefinite period.

For many years the water supply of the town was taken from the cave, and many people still get their water from that source. A town well was drilled in the middle of the main street, which tapped the underground lake or river at a depth of 75 feet. The water is fine freestone water and very cold, and the supply never fails. Sometime in the future when Cave City grows to a sufficient size to demand a water works system, it will have the finest water supply conceivable.

The water level of the lake is affected by dry and wet weather the same as streams or lakes on the outside. In wet weather the water rises to the third room, and in dry weather it recedes well back into the fourth room. But it never gets so low that the adventurous spirits of the town raise enough courage to explore its dark depths.

Bat Cave P Uniqu

Bats, gunpowder and bumper crops appear to be widely unrelated, but investigation of Bat Cave, about a mile from Boxley and famous throughout the Newton county Ozarks as a curiosity, will disclose that the flying rodents, the explosive and good crops may be made closely kin.

The connection lies in the refuse from the bats—a species of guano—which covers the floor of Bat Cave to a depth of 10 to 15 feet and constitutes one of the largest guano deposits in the United States. The guano contains nitrogenous matter in sufficient quantity to produce niter, or saltpeter, hence its relation to gunpowder. It also is rich in phosphates, lime, ammonia, potash and other elements which make it one of the best fertilizers known.

This spring, for the first time in nearly 70 years, guano has been removed from the cave in comparatively large amounts, and for the first time in history it is being used extensively hereabouts as fertilizer. Some 40 tons have been taken from the cave in the last few months and introduced into the soil on farms in this vicinity.

The only other time that more than small quantities have been taken out was during the Civil war when a gunpowder plant was established at the mouth of Bat creek, at an expenditure estimated at \$100,000. Operations were started and a supply of the explosive was turned out, only to have the plant destroyed by invading federal troops.

Thousands of Bats in Cave.

Bat Cave has been the home, winter and summer, ever since the White man came to this region (and perhaps for hundreds or thousands of years) of innumerable bats. Natives are of the opinion that the little flying mammals are growing less in number, but they still live in the cave in almost unbelievable hordes.

Why the bats selected this particular cavern, out of many other large caves in this vicinity is a mystery. The cave differs little from others, except that perhaps it is more uniformly dry, and there are several larger caverns within a radius of a few miles.

Entrance to the cave is on a hillside about a quarter of a mile from Highway No. 43 at the junction of Edgemond creek and Buffalo river. To get into it one must go down a hole similar to a mine shaft, in which a ladder has been placed. From the bottom of this hole the cave extends horizontally back under the mountain. It averages about 20 feet wide and 50 feet high, although the ceiling rises in domes of greater heights in several places, sometimes to a height of 75 feet.

There are two prongs, or tunnels in the cavern, the main one of which measures 1,085 feet in length. Even this is not the end of the cavern, but at this distance from the entrance a hole some 50 feet deep is encountered

and the cave has not been explored beyond the floor of this hole.

Hang in Huge Clusters.

Throughout the winter when the bats are dormant, and during the day in summertime, the little animals literally cover the ceiling and walls of the cave. In many places they hang in clusters like a swarm of bees, the clusters often being as large as a barrel. Apparently they pay no attention to the visits of humans and they even may be handled without becoming excited. Upon being pushed about with a stick they first set up a squealing and if sufficiently disturbed will start flying about.

The bats never leave the cave during daylight, and farmers in the vicinity say they are not much more numerous around their homes at night, than at farm homes anywhere in this section.

For many years local observers and students of the bat life in the cave have been puzzled by the fact that no baby bats were in evidence. It was known generally that the bats were mammals and that they brought forth their young, but no one could be found who had ever seen what appeared to be a new-born bat. Recently the mystery was solved when one of these students discovered two baby bats clinging to the breast of the mother. Further search disclosed many others with babies clinging so tightly to the mother bats that they appeared part of them. It also was found that when hanging head downward in the cave, the mother bats fold their wings over their young in such a way that the babies are not visible at all.

Powder Works Started.

Shortly after the Civil war started residents of the region about Boxley were startled when a train of wagons, driven by Negro slaves, rolled and bumped over the rough mountain trail, loaded with dismantled boilers, iron pipe, huge kettles and other materials unfamiliar in the mountains. The wagon train was unloaded at the foot of the hill below Bat Cave, and the wagons went back for more materials.

It was revealed that the cave was to be the site of a powder factory. To furnish ammunition for the Confederate forces. A man named William Bennett was in charge of the operations, and he began work at once to erect the plant with a force of laborers, most of them Negroes. It developed that he had learned of the guano deposit in the cave through a small quantity which had been taken out and analyzed. Recognizing its value in the making of gunpowder, he had organized a company for the manufacture of the explosive and contracted with the Confederate States government for the sale of the product.

Old-Timers Recall Plant.

There are two men now living in this section who remember the incoming of the wagon trains and the building of

(Continued on Page 10.)

the works at the cave. Both were small lads and details are not clear in their minds, but they remember much which was told them about the venture later by their parents or other older residents.

One of the men is J. A. Villines, known throughout the mountains as "Beaver Jim." He now is 77 years old and was eight or nine years old when the powder plant was started. His recollection principally is of the wagon trains coming in, and he was impressed particularly with the Negroes, members of a race which were scare in this section.

The other witness to the building of the plant is Alex J. Casey, aged 74, one-time state senator and now owner and operator of a prosperous bottom land farm within a quarter of a mile of the cave. Russell, the superintendent of the works, boarded at the Casey home while the plant was being built and operated.

The factory was largely an open air affair, as nearly as can be determined. First a large smokestack was built of sandstone blocks, which abound in this section. Two large boilers were erected, and large wooden hoppers, similar to the ash hoppers in which lye is made, were built nearby. There also were a score or more of iron kettles, six or seven feet across at the top.

Niter is extracted. Mr. Casey said that as nearly as he can remember the guano was taken from the cave and placed in the hoppers. Water was poured over it and the chemical needed leached out in the same way lye is obtained from ashes. The liquid then was placed in the kettles and boiled down until the niter crystallized.

A large plot of ground was cleared and the timber from it used to make charcoal, the base for gunpowder, and there was machinery for pulverizing the

impregnated charcoal. Mr. Casey does not remember the source of the sulphur, another ingredient necessary to powder making, but assumes that it was brought in by wagons.

The powder plant had been completed and had been in operation some time when federal forces, successful in driving Confederate troops before them, fought a victorious battle at a ford on Buffalo river a few miles away and then captured the powder works. The smokestack and boilers were blown up, the hoppers were burned and the machinery and kettles were broken up with sledge hammers. The federal troops supplied themselves with all the powder they needed and the rest of it was blown up.

Today the ruins of the base of the old smokestack may be seen at the site of the old works, and fragments of the old kettles may be found in a score of farmyards in this vicinity. Many of the pieces are large enough to be serviceable as wash kettles, and one, from which only a "nick" about a foot across and eight inches deep has been broken, is being used for scalding hogs. This kettle is owned by Fayette Edgemond, owner of Bat Cave.

Uses Guano As Fertilizer.

Small quantities of the guano from the cave have been used as fertilizer by farmers of the neighborhood at various times, and a few years ago a practical demonstration of its value was so forceful that this year Mr. Edgemond decided to use the material in building up some of his land. With Jesse Schroll, farmer and stove mill operator of Poncha, he took out 40 tons. The two used what they wanted for their own farms and the remainder was sold at \$5 a ton to neighbors. This price, Mr. Edgemond says, is equivalent to giving the fertilizer away.

But to get back to the demonstration, a hill farmer took a small quantity of the guano and planted a handful in each hill as he planted a field of corn. The stalks grew larger than any ever seen before on a hill farm in this section, and as large as any ever grown

in the bottoms. Furthermore the quantity and quality of the corn was better than usual. The next year this field was planted to oats and as the grain grew each spot where the fertilizer had been planted the year before produced a patch of oats almost twice as high and profuse as the oats on the rest of the land. The same condition was noted when the field was planted to timothy hay the following year and the effect of the guano could be noticed the fourth year.

Mr. Edgemond has delayed removal of the guano in the past because of a belief that its chemical properties might prove of more value in industry than as fertilizer. Analyses have prompted some of the largest explosives manufacturing concerns to send agents to view the cave, and offers have been made for its purchase, but at sums not regarded as sufficient by the owner.

The deposit is dry and easily handled, and near the bottom is found a layer of saltpeter which has become crystallized through the process of nature.

By N. F. TODD. 11-20-32
Cave creek flows from a large spring in a cave about seven miles north of Batesville. It is known as Saltpeter cave, and there are 20 or more other such caves along the six-mile cliff. Only a few of these caves have been explored. Some are small, but others are large and contain invaluable resources.

The Searcy cave, one of the largest and perhaps the most valuable, contains an unlimited supply of phosphate which, if utilized for commercial purposes, would furnish thousands of dollars worth of fertilizer. It is said that phosphate was taken from this cave during the World war.

The Washboard cave also contains much phosphate and is noted for its beauty. The mouth, which is about 12 feet wide and 10 feet high, has walls of limestone, and four passages lead to larger chambers underground. On entering the cave one faces a stone formation on the back wall, a crude replica of the Statue of Liberty. To the left is a narrow passage which opens into a large cavity of remarkable beauty. Rising from the passageway is a rough incline of glittering limestone formation, said to resemble a washboard, but which looks more like ocean waves. At the head of this incline is a massive dome, dark near its base but bright and glittering near the top. Many names and dates are carved here by those who have visited this underground shrine, among them the names of pioneer settlers and dates before the Civil war. Branching from this chamber are other large spaces with walls of fine mineral formation which, in lantern light, look like overhanging moss.

CAVE REDISCOVERED.

Van Buren—The recent discovery of a secluded cave, believed to be the cave long and vainly sought by the promoters of the famous Hill's Mine project, has renewed interest in the search for the fabulous wealth of Montezuma, the last chief of the Aztecs. The cave, located a mile south of the Arkansas river, opposite the mouth of Big Mulberry creek, near Mulberry, has attracted hundreds of persons. Thus far strange hieroglyphics, similar to those found at Hill's mine, and a flint-rock rifle have been the only rewards of the "fortune seekers." 11-20-32

Bell cave is believed to extend far underground, but has never been explored because of the rapid stream of water inside and Blowing cave, which is only two miles from Batesville, is well known for the breeze issuing from its mouth. A strong current, felt 50 yards away on the warmest days, is said to be caused by waterfalls inside the mountain.

Although these cave have not been developed for commercial purposes, they are of great value to those who live near-by. Some are sources of water supply for farm homes, some serve as refrigerators for milk and butter, and those that are dry and warm inside afford shelter for cattle and hogs.

Dutchman's cave, with the mouth walled in and a wooden door in front, until recently was the home of a man who worked in the manganese mines not far away. W. A. Chinn who has several dry caves near his home, closed one with concrete and stone and uses it for a cellar. Mrs. Chinn keeps her fruit, flowers and vegetables there all winter and they do not freeze. In summer the owners use it for a storm house.

Cave creek is noted for its beautiful scenery and every summer tourists camp along its banks. The favorite resort is around the Chinn spring on Mr. Chinn's farm. This spring flows from a large opening in the side of the mountain cliff. The water is cold enough to keep milk sweet 48 hours when the thermometer registers 110 degrees elsewhere. A cool breeze always stirs and is said to be from waterfalls inside the earth above the spring

Arkansas Caves

Many Families Living in the Hills in the Northwest P
Summer Heat, and Also to Store Their
the Caverns Have Springs W
By PAUL W

When the sun shines hot and the hot winds blow, the minds of Arkansans naturally turn to thoughts of cooler places. Some are forced to think about those cooler places while they continue to fan and drink ice water; others get up and go seeking them.

In the north Arkansas hills there are a few families who are fortunate enough to have a cooling place close by their homes. Arkansas caves.

One such family is that of J. E. Copp, farmer who lives a few miles northwest of Calico Rock. A few yards from the Copp home is a cave that is a favorite spot during the hot summer months. Not only is cave important because it affords protection from the heat as long as members of the family choose to linger within its walls, but it serves as a natural refrigerator in which Copp stores such perishables as he has about the farm.

If Copp happens to kill a beef on one of the hot days and does not sell all of it that day he can take it to the cave and hang it inside and wait until the morrow and then sell the rest of it. If he wishes to store watermelons or cantaloupes in a cool place in order to make them cold and more tasty, he has only to carry them far back into his cave and let them remain there for a few hours. The cave is also a wonderful place for storing milk and butter.

E. C. Rodman, cashier of the State bank of Calico Rock, also has mother nature to thank for a fine cave cellar which was so carefully placed in his backyard. His cave opens in the yard and tunnels away

to the face of the west Calico Rock bluff, where it opens out, overlooking White river.

A farmer living a few miles northwest of Calico Rock had been reading in a farm magazine that so-called "sink holes" sometimes are nothing more or less than the mouth of a cave that has been filled with trash and sand. Remembering that there was a "sink hole" on his place in the bottom field, he immediately secured a pick and shovel and set about to investigate. His efforts rewarded him quickly. He

found the opening into a spacious underground room that gave promise of being converted into a useful storage room. Now he is using that cave both summer and winter—in the summer to save perishables, and in winter to keep things that might freeze.

Not all caves are delightfully cool. Some seem to be no more than crevices between slanting rocks and are too dry to be of much benefit for real coolers. In some caves there are springs, either at the mouth or somewhere farther back inside.

Closely associated with caves as attractions during hot summer weather comes springs. Especially inviting are those springs that are located in a deep, dark hollow where the sun's rays strike only for a few moments each day. Picnic parties know the value of such places more than anybody else.

find one of the wrecks I described. Still less did I dream that within six months the time I would be looking upon one of the wrecks and watching my divers salvage objects and metals that had been hidden from all but the fishes for three centuries. But there is a romance, a fascination in tales of lost treasure that appeal to nearly every one, and hard-headed business men who would not risk a cent on a business deal containing an element of chance will often gamble on a treasure hunt largely for the "kick" they obtain from the thrill of adventure in which they can

Between Calico Rock and Brockwell, near Flat Rock, there is a fountain of water gushing from the mountain side and a strong wind also accompanies the water. So strong is the wind coming from the tunnel that it lashes the weeds and grass for several feet in front of the opening.

Another similar phenomenon is in Stone county a few yards south of White river and about a mile west of Calico Rock. The spring is a small one, but the water is cold. The wind coming from the earth there is so strong that there is a roaring sound way back in the hill somewhere.

As a person sits or stands before this natural fan he imagines at first that the roaring is a train running over the rails somewhere far up the other hollow. But as he listens closer he discovers that the sound is constant and is coming from within the big hill.

Some have tried to explain such unusual conditions by saying that the long, narrow channel followed by the water as it coursed through the hill had another opening somewhere and everything is so formed as to cause a draft through the tunnel. At any rate it is there and it has a magnetic attraction for anybody who chances to pass that way when the mercury is soaring skyward.

Nature's Beauty Underground

Beneath Ozark Hills Huge Caverns Lead to Marvels of Nature's Art—Conventions Are Held in Great Halls Once the Rendezvous of Indians, Where Fugitives Fled for Refuge, and Mineral Substances Add Delightful Colors to Fantastic Stalagmites and Stalactites.

By MARY ELIZABETH OVERHOLT

Sept. 18, 1932

Nature made a bright garden spot in the Ozark region and endowed it lavishly with every imaginable scenic beauty. Then as though it was not enough to have made the surface of the Ozark hills a study in loveliness, the inside was wrought into incomparably weird and mystic grandeur. The beauty of the interior of these hills has been unobserved for centuries, and even now only partially known, but in a few places doorways to the inner recesses have been opened and visitors may marvel over the wonders shut away in caves.

The Ozarks are honeycombed with caves and none thoroughly explored. One general characteristic of these caverns is a small opening, which led to the supposition that the caves were small. Many have low, narrow passages and corridors that made progress difficult but vaulted rooms and corridors extend on and on. In Diamond cave, said to be Arkansas' most beautiful cave, and one of the most beautiful in America, there is a passageway so narrow that many visitors cannot get through. This passage is known as "Fat Man's Misery," but just beyond it is one of the most beautiful rooms of the cave, known as "King Solomon's Temple." This room contains snowy columns carved in fantastic shapes, fairy lattice-work, statuary, and graceful canopies of misty white. Standing in a corridor farther on is the lovely "Angel of the Grotto," an appealing white-robed angel with folded wings.

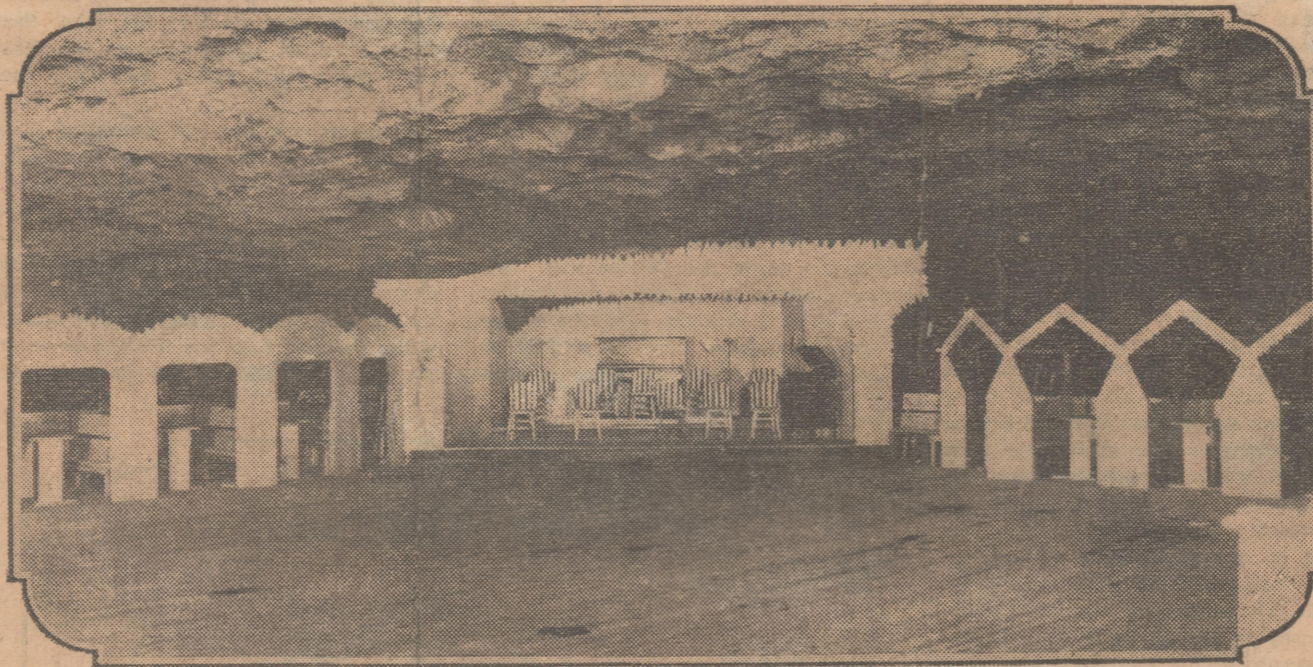
Diamond cave was named by a hunter who tracked his game to the opening of the cavern and who lighted a torch and went in. The points of light reflected from the fairy fencing of the vaulted room in which he stood suggested the name which has clung to it.

Evidently the Indians knew about this cave and used it, for they left traces of their occupancy. "Red Room," near the was a rendezvous of the Indians long ago, used for local gatherings, but evidently it was a rendezvous of the Indians long ago. The opening to the cave is reached by a zig-zag path 400 feet along the side of Hudson mountain. Three years ago an expedition representing the Arkansas Museum of Natural History mapped the cave and named 160 stations of interest in it. The explorers went only through the outer rooms. Many groups have taken food and water for a thorough exploration of the cave. They reported that they became involved in winding corridors, small cell-like rooms, vaulted auditoriums and columned passageways, with no indication of having reached the end of the cave.

Among other features that attract the attention of visitors are the crinoid ceilings, where a lily-of-the-sea bottom forms the roof of rooms and corridors, a replica of the battleship Arkansas 40 feet long and well fitted, "King Tut's column," a polar bear, a white crane, fireplace, and many fantastic and magical statues and pillars.

Subterranean rivers, bottomless pits, underground grottos and caverns, springs, pockets of icy wind, all add to the difficulty of exploration. Most of the caves are cold. Some are swept by icy wind, evidently through an unseen opening. In others is the strong, uncanny stillness felt where there is no wind. Diamond cave has an unvarying temperature of 65 degrees and Wonder cave at Bella Vista has a summer and winter temperature of 60 degrees. Others are colder and still others not so cold.

Melbourne cave in Izard county is being explored and plans are under way to light it and open it to the public. Unlike many of the other caves of the Arkansas



Main auditorium of Wonder cave at Bella Vista where conventions are held.

Ozarks, it has a large opening for a main entrance, about 100 feet wide and 20 feet high. It has other openings also into some of its rooms and corridors. If it is as large as explorers believe, it should have several outside entrances. It is believed that it extends 15 miles down the mountain side to the White river near Guion. The walls of the cave are almost solid onyx. Many onyx columns rise 100 feet high and measure 15 feet in diameter at the base. Huge auditoriums, with ceilings 100 feet high, some of them 300 feet long, separated from other rooms with onyx colonnades occur frequently in this cavern. Lately a cellar, or lower story of the cave, was discovered. The opening was found in the floor of a stalagmite garden and a descent of about 300 feet brought the party to a large grotto. Openings from this grotto extend down into other caverns, and there are probably many grottos down through the limestone formation. This curious succession of stairways, labyrinth of openings and passageways, underground grottos, and curiously beautiful formations, have led to the belief that this may prove to be one of the most interesting caves of North America.

The cave lacks the subterranean streams frequently found in the Ozarks but it has pools of cold water that appear to have neither source nor outlet. In the Ozark region there is sufficient mineral in the soil to give to the stalactite and stalagmite formations many beautiful colors. In the Melbourne cave red and amber, shading into brown, vary the crystal and white columns and formations in the many curious shapes and designs that only Nature could have conceived. Manganese, zinc, and iron have all had a part in making this cave beautiful, and their colors can be seen in the statuary and colonnades of most of the Ozark caves. It is to these minerals that the "Red Room" of Diamond cave owes its rich coloring.

Onyx cave near Eureka Springs is similar in formation to the Melbourne cave but is not so large. Although not completely explored, it has been lighted and opened to visitors. The murmur of an underground stream may be heard but cannot be found. This cave has weird, beautiful effects, both in coloring and formations. Its bottomless pits, chasms, and canyons make its exploration beyond the

lighted area a huge task but an interesting and delightful adventure. The chasms have been bridged and walks built in the rooms open to visitors.

Another Ozark cave that has been explored far enough to make it of interest to visitors and yet a mystery, is Wonder cave at Bella Vista. It is reported that during Civil war days Jesse James was forced to take refuge in this cave. The opening at Bella Vista where he entered was guarded and when he did not reappear in 10 days it was reported that he had starved or fallen accidentally into one of the yawning pits of the cave. The guard was removed, but Jesse James had emerged 40 miles distant in Missouri through an opening on that side of the cave.

Legends connected with Indian history, pioneer days, and many Civil war tales, cling to this cave. One of the principal points of interest in Wonder cave is the night club room, a quarter of a mile from the entrance, lighted and furnished, one of the most fantastic amusement halls to be found anywhere. This is America's only natural underground night club, and it is modeled after some of the artificial underground night clubs of Europe. The natural beauty of the cave auditorium gives it a distinct advantage over artificial caves. The dance pavillion easily accommodates 200 visitors and the night club is kept open until three in the morning during the season. Seats for spectators are provided and the corridors and adjoining colonnaded rooms accommodate 2,000. This is a favorite meeting place for conventions, religious gatherings and social affairs.

Under a ledge of rock near this cave is a spring of icy water and one feels a breeze just as icy. Wraps are in order for one who lingers near this spring.

Wonder cave would have been wonderful even if man had not improved on it. The "Crystal Valley" and "Crystal Palace" are among its admired features. "Devil's Crater" is an interesting black pit, seemingly bottomless. According to Indian legend, it was used by Satan as an entrance and exit to his own underworld kingdom. Here, as in other Ozark caves, stalagmite and stalactite formations take on beautiful shapes and colors and make sufficient decoration for this quiet, still world which has a templed grandeur and an awesome quality because of its remoteness from the noise and motion of the outside world.

Charting Arkansas Caves

Gazette, Jan. 6, 1935

Miss Mary Lawson of the Geological Survey, Has Begun Compiling a List of Caverns in the State. She Has Explored Many With Her Associate Worker, Ted Medearis of the State Planning Board.

When Miss Mary Lawson of the Arkansas Geological Survey undertook the task some time ago of compiling a list of caves in the state, she soon found she had assumed a task of far larger proportions than anticipated.

The store of information which daily poured in from all conceivable sources grew more and more bulky; however, instead of discouraging her, this fact seemed to stimulate her interest and activities, and now the work is well under way, with the hearty endorsement of George C. Branner, state geologist, and the Arkansas Planning Board.

One of the latest caves to be explored by Miss Lawson and her cave-exploring associate, Ted Medearis, of the state Planning Board, is located in the land of E. R. Swindler, about 10 miles northwest of Batesville. While they regard it as one of the most interesting caves yet explored, they point out that it is only another step in the development of a highly interesting and valuable phase of state geological work and state planning.

Formation of Caves.

There is something ghostly and yet intensely interesting about caves; a sort of fascination that begins in early childhood, and never quite leaves us. Perhaps that is why caves hold such an attraction for tourists and sightseers. It is one of the reasons why so many of these natural phenomena, when properly developed, become commercial assets to the communities or states in which they occur. The best known type of cave is that formed in calcareous rock, or limestone, by the dissolving effect of rainwater containing carbon dioxide. Falling rain absorbs carbon dioxide as it passes through the atmosphere, forming a solution of carbonic acid. This solution, flowing through capillaries under the ground, comes in contact with the limestone and eats out a portion of it, leaving a cavity. Later, the water finds an outlet at a lower level, and the cavity is left partially dry. Water continues to seep in at the top of the cave, carrying with it minute quantities of dissolved limestone and depositing it as a coating on the roof of the cave. The constant dripping of the water causes long formations resembling icicles to grow downward from the roof; these are stalactites. Where the water drips from these onto the floor, similar icicles grow upward; these are stalagmites. Where the water flows down the side of the cave, a white, curtain-like coating is laid down, known as "stalactitic drapery." These formations develop into the strange, beautiful, and unique shapes which constitute the principal attraction to visitors.

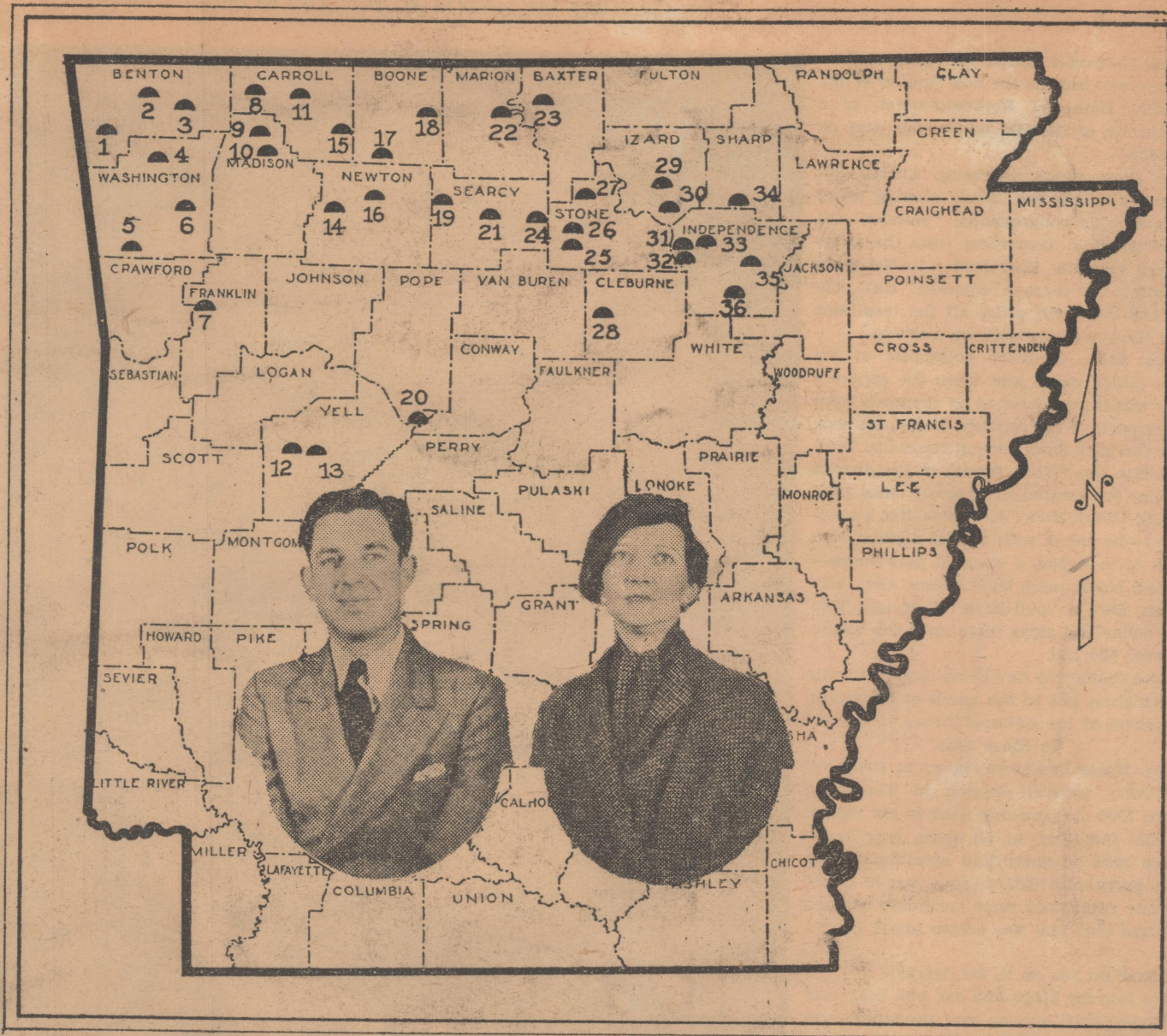
Arkansas Caves.

The best known caves in Arkansas are the Diamond Cave, near Jasper, and the Wonderland Cave, at Bella Vista. The former is very large, and boasts a great number of impressive formations, most of which have been given names corresponding to the things they resemble. These include King Solomon's Temple, King Tut's Skeleton, the Siamese Twins, Liberty Bell, and the Spirit of St. Louis.

The Wonderland Cave is unusually large, and has been used for some time as a night club, there being ample space for dining and dancing. It has also been used for several conventions. There is a story that the famous outlaw, Jesse James, was at one time trapped there, and that he escaped after several days by finding another opening several miles from the entrance.

Histories Interesting.

Many of the caves contain relics left there by pre-historic tribes. The Rock House cave in Cleburne county and the Big Hurricane cavern in Searcy county contain hieroglyphics and picturegraphs made by early tribes of Indians, and in the Saltpeter cave in Newton county was found the entire skeleton of an infant, wrapped in rags and lying in a willow basket. The Bone cave in Independence county is said to have been the scene of a massacre. A band of Indians who sought



Here are 36 of the 97 Arkansas caves already charted to date by Miss Mary Lawson of the state Geological Survey. Miss Lawson is shown with her cave exploring associate, Ted Medearis of the state Planning Board. The caves are: 1. Blowing Cave. 2. Wonderland Cave. 3. Diamond Cave. 4. Crystal Cave. 5. Devil's Den. 6. Fincher's Cave. 7. Alum Cave. 8. Highland Cave. 9. Ash Cave. 10. Denny Cave. 11. Majestic Cave. 12. Spring Mountain Cave. 13. Mt. Nebo Cave. 14. Diamond Cave. 15. Elmore Cave. 16. Saltpeter Cave. 17. Crystal Cave. 18. Madison Cave. 19. Big Hurricane Cavern. 20. Petit Jean Cave. 21. Wind Cave. 22. Rock House. 23. Jenkins Spring Cave. 24. Pruitt Cave. 25. Gustafson Cave. 26. Saltpeter Cave. 27. Cellar Cave. 28. Rock House. 29. Melbourne Cave. 30. Prim Cave. 31. Ferrell Cave. 32. Clubhouse Cave. 33. Swindler Cave. 34. Cave City and brutally murdered. 35. Washboard Cave. 36. Crystal Cave.

Several of the caves in the state have figured in the Civil war. The Saltpeter caves of Independence and Marion counties, and the Bat cave of Newton county were used as sources of saltpeter, used in making gunpowder for the Confederate soldiers. Others are reputed to have been used as places of refuge and as storehouses for supplies during the conflict. It is to Fincher's cave, near Fayetteville, that Washington county is indebted for the preservation of its records. When Fayetteville, the county seat, was threatened with destruction by Federal troops, a threat which was eventually carried out, the county records were rushed under cover of night to this cave and kept there through the period of the war.

Used by Bootleggers.

As might be suspected, there have been cases where caves were used by bootleggers. The Wind cave in Searcy county was used for the illegal production of liquor in pre-prohibition days, until federal agents apprehended the violator and made him agree to conform with government requirements. The Prim cave in IZARD county evidently has a clean record in this respect, for it is claimed that mash will not ferment inside it.

Searched for Treasure.

There seems to be a tendency for human beings to strongly associate the idea of buried treasure with caves. This is only natural, since many famous books, including the "Count of Monte Cristo" and "Tom Sawyer," contain instances of that kind. Several Arkansas caves have, at one time or another, been industriously ransacked with pick and shovel, although the treasure-seekers have been rewarded only with bones and other archaeological speci-

There is an element of danger encountered in the exploration of many caves. The Clubhouse cave, near Cushman, must be entered by descending a rope for 60 feet, and the Swindler cave, also near Cushman, is entered by scaling the side of a shaft 44 feet deep. To enter the Reeves cave, near Batesville, it is necessary to pass through a very small passage, scarcely large enough for a small person's body. It is reported that a woman of considerable dimensions became stuck in this passage several years ago, and that it required several hours to dislodge her.

There is always the danger of becoming lost in a cave, unless visitors are accompanied by natives who are familiar with every crook and cranny, or unless a ball of string is unravelled as the party progresses into the various passageways. In the Swindler cave there are huge pits which constantly endanger the explorer if he is not sure-footed.

There are seldom any wild animals to be found in caves, though reptiles, usually of a harmless variety, are often present. The Washboard cave, north of Batesville, contains salamanders and large spiders, and the Crystal cave, southwest of Batesville, contains some lizards. Once in a while bats are encountered, and their company is not at all pleasant.

Recording Explorations.

Records of cave explorations usually consist of photographs, maps, and mineral or archaeological specimens found. These records are gathered by members of the state Geology Department and state Planning Board who are personally interested in such work. There is no appropriation for this type of activity, but Miss Lawson and Mr. Medearis declare that the thrills encountered and discoveries made more

—Gazette Staff Photos.

explorations. Much gratitude is due Miss Koletka Walker, of Newark, Arkansas, and Captain B. E. Gibson, of Little Rock, for their valuable assistance in carrying on this work. When the records of these trips have been compiled, they are carefully typed and classified, for eventually there is to be a published report on all caves in the state. The purpose of this publication will be to impress Arkansas people with the advantages of commercializing these natural wonders, as the people of Kentucky, Virginia and Pennsylvania have done.

There is little doubt that proper development of caves in this section coupled with adequate advertising, would greatly increase the number of tourists who annually visit the Ozarks. Not only would the caves offer attraction for visitors from nearby states, but would furnish a drawing card for tourists from other parts of the United States. It is with a view of presenting the many interesting facts about the caves in the state that the data on them is being accumulated, most of it first hand, and prepared for publication.

The Swindler Cave.

The Swindler cave, in Independence county, is one of the most thrilling of all to explore. It contains none of the customary stalactites and stalagmites, but there are huge boulders that hang precariously overhead, and deep pits that make progress treacherous. It also contains a rare form of gypsum, or calcium sulphate, which resembles long needles. These spicules, known as selenite, appear to grow, like grass, from the sides and floor of certain chambers in the cave, and their length varies from eight to 30 inches. Some portions of the ceiling are flecked with

tiny crystals which resemble stars in a gray sky.

Auto Trip Through Electric Lighted Cave Soon May Be "Coolest Drive in Ozarks"

St. Joe—An auto drive through a cool dripping Ozark cavern is visioned by Jack Francis when he completes this and other unique features he has planned for his "Back O' Beyond Club, located on the banks of the Buffalo river, four miles south of St. Joe and a mile north of Gilbert.

To reach "Back O' Beyond" you leave highway No. 65, two miles north of Buffalo bridge, turning onto the graveled county road toward Gilbert and following that two miles to the cement slab bridge in Dry creek, where another road leads off to the south and up the gentle slope on the top of which the club buildings sit.

The cave is under the high granite bluff which is the divide between the Buffalo river and Dry creek, and the entrance is near the base of the bluff on the river side, about a mile above the confluence of the streams.

From the entrance the main passageway leads back from the river through the limestone walls with an almost level floor. Before Mr. Francis came the cave had been little explored. It has many ramifications, and while its formations are limestone, its walls are generally smooth with few of the sparkling lime encrustments found in some caves. Mr. Francis has widened the passageway in places and at other points there are rooms so large that autos might pass easily. During the last year he has moved hundreds of tons of rock from the cave in enlarging the passageway, which he has now explored a half mile back.

His soundings show that the cave leads back close to the Dry creek side of the bluff, and that a little tunneling would carry the passageway out into the level of the roadway a short distance up its present climb from Dry creek. He says that the temperature of the cave and of the big pool of water in one of its rooms has stood at 47 degrees all summer, so that when he completes the tunnel into the cave it could be advertised as the "coolest drive in the Ozarks."

Of course there might be some system of "air-conditioning" to be installed, but power from the water-driven generators he would install on Dry creek would furnish that, as well as electric lights for the cave and all other buildings and dynamos which will be installed. In places, too, the roof of the cave is not far from the surface of the ground, so drillings would be easy there.

Parties of prominent persons from Houston, Kansas City and large cities in Iowa and Missouri have been vacationing at this unique resort during the past weeks, and others are arriving. Jack Francis and his wife had previously had the management of several resorts in the Ozarks and elsewhere. When he came here a year ago looking for a location that would conform to his ideas of what a vacationing place for tired business and professional people should be, he left the highway and sought a place beyond its noise.

Two miles off the highway he found this pine-covered bluff overlooking placid waters that invited one to bathe, boat and fish, rearing its wall 150 feet above the water. At the base of the bluff, but above the flood stage of the river, poured from the rock wall a small stream of cold clear water, while a few feet above this spring was the entrance to the cavern, then little explored, with a draft of cool air flowing from its mouth.

There are several of these "cold blowing" caves here. The famous blowing cave at Zack is larger and its big rooms have been often used as cold storage plants for the fruit crop of the locality. There is another cold blowing cave in "Bull Hollow" six miles west of St. Joe. No one seems to understand the "why" of the cold breezes from these caves any more than anyone explains the ebbing spring at Bruno, but nevertheless they are a delightful fact in the summer months.

One of the first improvements was the building of a stairway of hewn steps and timbered bannisters from the bluff's top down to the spring and cave entrance, and thence, with stone steps, on down to the river, a stairway of 150 feet.

On top of the bluff the cool breezes forever waft about in the summer time the odor of pine and wild flowers, and here a large log, sleeping lodge has been built, with screened porches. The big clubhouse which Mr. Francis expects to build this winter will be 142 feet long, with a maximum width of 70 feet. Then there will be numerous cabins, a power house and garages. The club house will have lounging and dining rooms, baths and other conveniences, but no sleeping quarters.

At the foot of the stairway going down to the river is a small pavilion that juts out over one of the finest "swimmin' holes" on the Buffalo. Boats are moored along the pavilion for fishing and for boating trips up and down the river.

As mentioned, Dry creek flows on the opposite side of the bluff from the river. It is never dry, however. It takes its name from the fact that farther down its course it appears to sink and flows under the town of Gilbert, which town attracted attention 15 years ago with the enterprises of the Incoming Kingdom Missionary Unit. This creek is spring fed and many degrees colder than the river. On the hottest days this draws the bathers. It is on Dry creek that the

Two factors, according to Mr. Francis, are inducing vacationists from the city to seek out pleasure spots in the remote places of the Ozarks. One is that the fishing is better away from the traveled highways, where everybody fishes. The other is that few places in these Ozarks are really remote any more,

so well have country roads built by federal relief funds pierced every section. For example, a well graveled road leads from Gilbert north three miles to highway No. 65. Then, after traversing No. 65 three miles to St. Joe another graveled country road leads off to the west a distance of seven miles to the Buffalo river. This makes "floats" on the river very popular now and not very expensive.

The boats are loaded on trucks at Gilbert or "Back O' Beyond" in the morning and hauled over this system of relief roads and highway up the river to the old Woolum store site, or sometimes as far as Mt. Hershey, and put into the river. The fishermen then float downstream to their point of starting—an all-day trip and generally a profitable one in the number of small mouth bass taken with reel and artificial bait. The renting of boats and the operation of the truck lines has become a profitable business for parties residing at Gilbert. Also, at Gilbert, which is built on the river's bank, there is boating and bathing, and many are leaving the highway four miles north and turning off to Gilbert and "Back O' Beyond" to be away from the arteries of heavy travel, one explained.

The generosity of the vacationists at "Back O' Beyond" has meant much to many people of the neighborhood, especially the young folks. Two or three boys have actually started bank accounts by selling fish bait and acting as guides to the "dandy" fishing holes up and down the river. When wild berries were ripe many women and children became quite affluent from their sale at the camp. "Back O' Beyond" has a big garden, poultry and cows of its own, but this year at times the neighbors found a good market here.

Illustrating how keen the farmers are to supply the wants of the visitors, a Houston business man relates: "The doctor and I and our wives were loitering on a shady bar jutting into the river, when one of the women remarked: 'I would give two dollars for a big platter of fried chicken and hot biscuits and butter for us four.'"

"Got your order—coming up in 30 minutes," came a voice from the cavernous foliage somewhere along the shore, although we saw no one. And sure enough, in 30 minutes to the dot, a man we came to know as a neighboring farmer appeared with the chicken and biscuits, delightfully prepared. You have just to whisper your wants here to have them immediately satisfied."

Local labor will benefit, too, by the improvements that are to be made, as all of the cabins and the clubhouse are to be of peeled log construction. There are 50 acres in the "Back o' Beyond" tract and thousands of beautiful pine trees to supply all building needs. Mr. Francis says he has the most healthful location in the world and no mosquitoes. "Ozark ozone does it," he concludes.

And the big feature will be the underground driveway. He believes it is a practical project, that the cost will not be large, and that two years will see it in operation. The entrance will be easy for the roadway on the Dry creek side of the bluff, but at the river side a "turn-around" would be necessary, as the entrance there is in the sheer face of the bluff.

Eyeless Fish Found in Baxter County Well

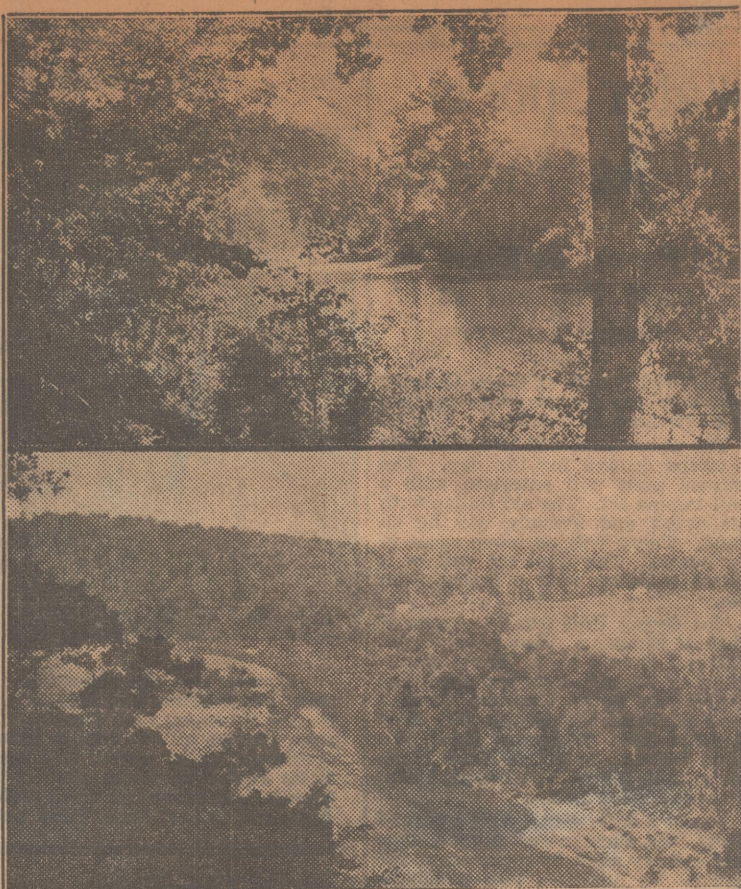
Mountain Home—Not every one can draw both drinking water and eyeless fish from the same well, but Claud Smith, who owns a farm on the North Fork river near here can and has done that very thing on more than one occasion.

Mr. Smith was exhibiting a small blue catfish here Monday that had been drawn from the well. The fish had no eyes.

The unusual circumstance may be explained by the fact that not far from the well is a large cave, just how large no one knows as it has never been fully explored. In the cave is a stream of cold running water. This stream has fish in it without eyes. The cave is located a short distance from the river and when the river reaches a certain stage it is thought that water from the river runs into the cave. It is believed that the fish came into the cave from the river and that their long period of confinement in the darkness has developed a species without eyes.

It is thought that the stream of water that flows through the well comes from the cave and the fish come from the cave into the well. This is the only cave in this section that is known to have fish without eyes.

Scenes Near Back o' Beyond



Above—The Buffalo river at the front of the new mountain resort, Back o' Beyond. Below—Another view, looking down upon the river.

SEE DIAMOND CAVE Ace of World's Caverns



Kings Way—Diamond Cave—Jasper, Ark.

Every day is Picnic Day at Diamond Cave, with its all-day shady, well-kept park, cold bubbling spring water and miles of electric lights in its subterranean passages to handle its vast throng of visitors. The management is putting on a schedule effective July 1, 1936. Trips will be made at 7:00 and 10:00 a. m.; 1:00 p. m., 4:00 p. m. and 7:00 p. m., with experienced and trustworthy guides. Special rates to Boy Scouts and School Groups of ten or more in one party, accompanied by scoutmasters or teachers, at 75c each person; other admissions \$1.12, children under 12 years, 40c each. These prices include all federal and state taxes. Many new improvements on walk-way; you can walk all the way through and come out clean.

Electric Lights for Three Miles
Gorgeous Scenes—Trusted Guides

Many Weird Stories Told of Mysterious Caves in North Arkansas None Has Explored

By PAUL T. WAYLAND.

Calico Rock—Did you know that north Arkansas has an underworld? Did you know that in this underworld it is always night, and that the hand of the law is seldom felt in spite of the fact that criminals have sought refuge there since the earliest history? Such is entirely true!

This gigantic underworld is known to natives as caves, and number too high to even attempt to count them. Their tunnels range in length from only a few yards to a distance so great that no white man has ever followed through to the end. In those long, winding, musty tunnels is to be found a blackness that far exceeds any darkness to be found elsewhere. As one explorer once put it, "the darkness is so thick you can stick your finger in it and feel it."

In this gigantic underworld is also found rivers, lakes and even ancient crematories. Also in them have been found remains of bodies placed in those dark, dry vaults probably hundreds of years ago. In one instance the bones of what appeared to have been a baby were found in a basket made of twigs and bark. The basket, like the bones, showed that time beyond average conception may have elapsed since that day when those remains were hidden away in that cold, dark tomb.

Cave Near Wideman.

In Iard county, in the vicinity of Wideman, is a large cave around which has been woven a long chain of interesting stories. It is one cavern in the foothills of the Ozarks that boasts a river so wide that no explorer has ever crossed and then returned to tell what he found on the other side. However, it is believed by some who have visited the cave and have gone down to the first bank of the river, that at some time in the dim past a person did actually make the journey across, but failed to return.

This belief is inspired by the fact that, according to the story, a strong light was used and by that light the skeleton of a person was seen sitting with back to the wall and an old musket leaning by its side, across the river. Those who brought back this story said they were of the opinion the man made a boat and managed to cross the stream. Then, after he had explored the underworld on the opposite side, returned to find his craft torn away and he was left to die of starvation.

The fear that somewhere in that river may be whirlpools, has prevented anybody of the present age attempting to go across. Time after time somebody talked of attempting a boat voyage toward that unexplored land but always fear came in as a barrier that could not be surmounted. There is always the possibility that once in the midst of that current the boat and passengers might be caught up and whirled away under the earth to a place from whence no human being could ever hope to return.

"Petrified Woman" Found.

Explorers who have visited this Iard county cavern report finding what has been called a petrified woman. Older people who saw the strange rock formation in the early days when the lure of the dark, dangerous cave had less appeal for man, say the image was even more like a woman than now, due to the fact that visitors have disfigured it by breaking away pieces for souvenirs. Probably, so the story goes, the woman was stolen during the days when danger of such might have been common in the hills, and was imprisoned in the cave, and those who imprisoned her were killed or otherwise prevented from ever returning to save her life. And, because the cave was dry her body dried into what appears to be a form of chalky stone.

Such ideas, however, undoubtedly are mythical, but they make the stories of the north Arkansas underworld more interesting. Around wide firesides, on cold winter nights, children hear such tales and those tales are enjoyed as much as those that might come from some of the

"pulp" read by city cousins under bright electric lights.

In a cave known as Salt Peter cave, on the south side of White river, in Stone county, is a formation that has been called a sheep. Like the formation in the cave at Wideman, visitors have disfigured it, but there was a time when the resemblance was almost perfect. Shreds of what might have been wool hung from its body.

This is one of the great caves said to have been the hiding place for outlaws in the old days when bank robbers, horse thieves and other such bad men roamed the hills and when pressed by the law often sought refuge in some well known cave. (We mean a cave well known to the one being hunted, not the law).

At this particular time, which was shortly after the Civil War, a band of nine robbers who had been chased from another state, sought refuge in Salt Peter cave. Officers located them and a bloody fight took place. All the outlaws were killed either in the mouth of the cave or just outside.

Based on the story of this encounter—whether it be true or false—extensive treasure seeking has been done there.

Cave Walled Up.

For a long time there has a notion hidden back in the head of many people to the effect that a certain cave in the Mount Pleasant vicinity may have an interesting past. This cave is walled up and nobody can enter. It is said that a few years ago during a seige of wet weather the water that flowed from this cave was colored and bits of pottery and other objects floated out.

Why the cave has been sealed is the one factor everybody wondered about. Strange, indeed.

A few years ago some boys were hunting in the hills south of Boswell and accidentally discovered a new cave. This one was not as large as many others but it was difficult to enter. One had to go down a deep shaft and thence back into the cave. A skeleton, said to be the skeleton of a bear was found as well as many Indian relics of not much value.

This great underworld of the Ozarks has many uses. Only a comparatively few of the caverns have been commercialized. If a farmer happens to be living near a large cave he is indeed fortunate. Take the case of Albert Lawrence of Sylamore, for instance. A large cave near his home serves as a cellar and at the mouth is a spring of clear cold water.

Then there is a cave in the back yard of E. C. Rodman, cashier of the State Bank of Calico Rock. No doubt savage men of years past, even the bluff dwellers—for the cave is atop one of the Calico Rock bluffs—may have lived there. Nevertheless Rodman has another use for it. He had workmen revamp the entrance to his cave and now uses it as a storm cellar and a storage place for perishables. On stormy nights in summer, when the threatening clouds roll up from the southwest, Calico Rock citizens always remember the big cave-cellar at the Rodman home and many of them hie away thereto.

Another underground cavern near this town has been used as a place to store fresh meat in summer. It was when the place was owned by J. E. Copp that he worried not about the weather when he was ready to kill a beef to sell in town during the week. He killed it and hung the meat in the cave which was unusually cold due to a draft from water that must have been somewhere far back down the tunnels that were so narrow that man could not crawl through.

Thus it is, the great underworld of the north Arkansas Ozarks continues to serve the people who inhabit the region. In the beginning it served the savages, following that age then it served the outlaws and renegades of the region as well as scores who drifted in from other states, and today it still is useful. But through it all this is an underworld of darkness, where the light of sun never shines and the hand of law is seldom present—because it is not needed now.