PHOLEOS

WITTENBERG UNIVERSITY

SPELEOLOGICAL SOCIETY

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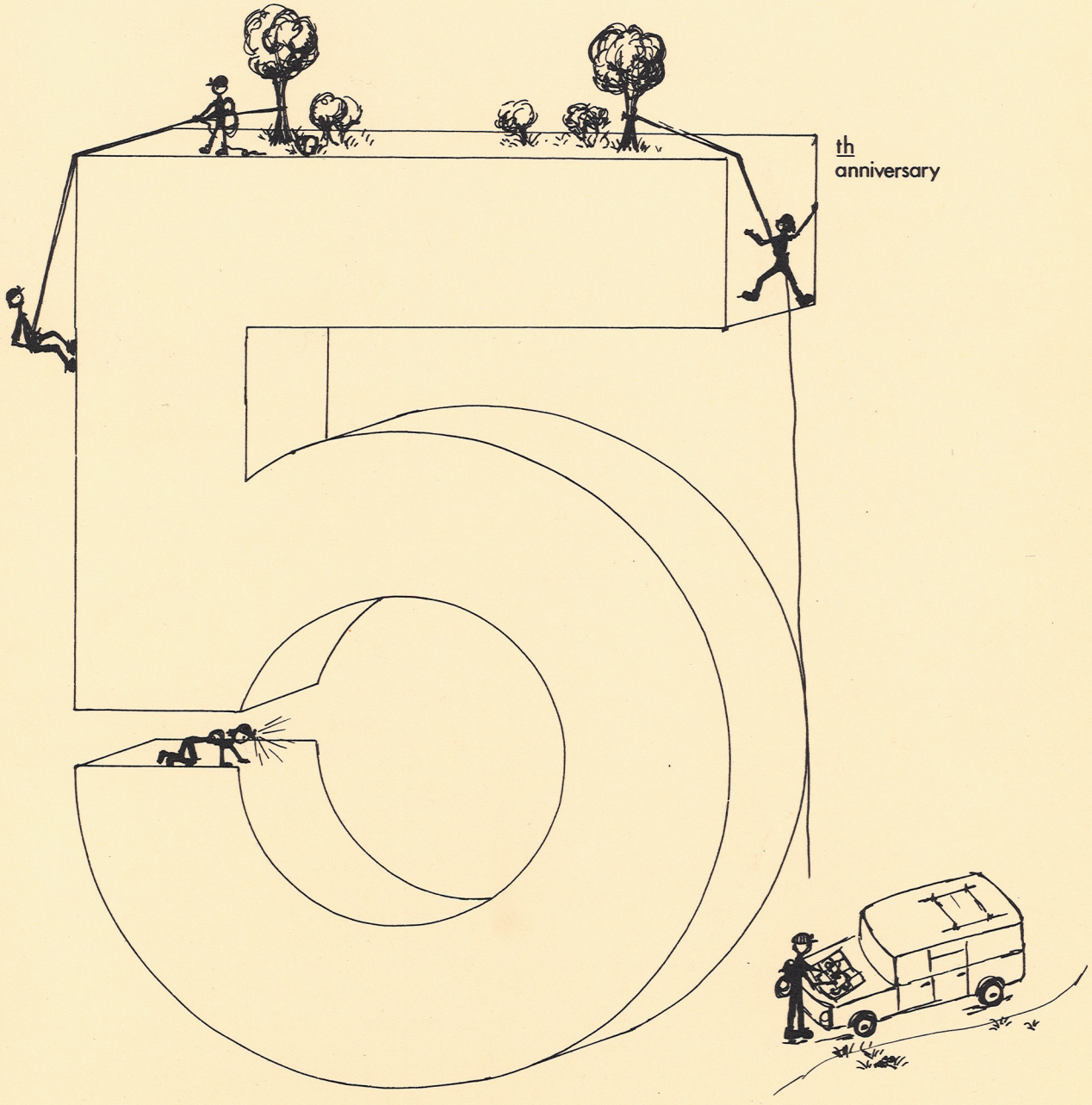

THE WITTENBERG UNIVERSITY SPELEOLOGICAL SOCIETY

The Wittenberg University Speleological Society is a chartered internal organization of the National Speleological Society, Inc. The Grotto received its charter in April 1980 and is dedicated to the advancement of speleology, to cave conservation and preservation, and to the safety of all persons entering the spelean domain.

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THE WITTENBERG UNIVERSITY SPELEOLOGICAL SOCIETY NEWSLETTER

Volume 4, Number 2 April 1984

GROTTO ADDRESS

c/o H.H. Hobbs III
Department of Biology
P.O. Box 720
Wittenberg University
Springfield, Ohio 45501
(513) 327-7029

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EXCHANGES
Exchanges with other grottos and caving groups are encouraged. Please mail to Grotto address.

MEETINGS

Second Wednesday of each month, 7:00 p.m., Room 206, Science Building, Wittenberg University Springfield, Ohio.

FRONT COVER: "Anniversary Issue" design by Susan C. Hoover

GROTTO OFFICERS 1983-84

CHAIRMAN
Donna D'Angelo
322 W. Cecil St.
Springfield, Ohio 45504

VICE CHAIRMAN
Terence J. Madigan
207 W. Cecil St.
Springfield, Ohio 45504

SECRETARY
Trish Simon
113 South Hall
Wittenberg University

TREASURER
William O.H. Freund
1110 Tower Hall
Wittenberg University

EDITOR
Laura Tarulli
933 N. Fountain Ave.
Springfield, Ohio 45504

PUBLIC RELATIONS
John Carter
304 Glendale Ave.
Springfield, Ohio 45504

Editors note

Laura Tarulli

I am proud to present the 5th anniversary edition of Pholeos. Although it is not voluminous, there is a variety of reviews, a story, and cave surveys from Ohio and Kentucky.

I would like to take this moment to look retrospectively at the past five years of WUSS. My involvement has been sporadic but exciting. As a student grotto we offer challenging and valuable experiences to individuals, which is part of a liberal arts education. But in addition to that, we contribute as a group to the science of spelunking. I would like to encourage anyone who has entertained the thought of becoming active in a grotto or is intrigued by the thought of an adventure to become INVOLVED.

The executive members of our grotto welcome any responses, comments and questions that you have about Pholeos or caving in general.

I hope you enjoy this issue.

Erratum

In Pholeos, vol. 4, no. 1 appeared a map of The Saltpetre-Moon Cave system in Carter County, Ky. The total horizontal cave (THC) was quoted as 3005 meters (9198 feet). This should be corrected to read 3005 meters (9856 feet).

Literature Review

Ohio. "Down Under" Mark Bernstein 7(10):24-32.

by Bob Davenport

The article "Down Under" is a unique desription of an expedition into the Mammoth Cave system. The weekend trip, headed by Cave Research Foundation (CRF) was broken into four parties, each assigned to a different area of the cave system. The most unusual task, lead by Tom Brachner, was to find a possible connection between Mammoth Cave and Rapple Cave and marking them off limits. Another party was given the assignment of finding a continuation of the main passage.

The article describes what it is like to explore a cave. It captures the darkness of the cave beyond the glow of your light, the sounds of distant dripping water and the color of the walls; all things that one is watchful of to keep from getting lost.

A large portion of the article is devoted to explaining the history of the Cave Research Foundation. CRF was first established in 1957 at Roger Brucker's house in Yellow Springs, Ohio. Today it is probably the second largest caving organization in the country. They have many achievements on their record, including successfully lobbying the United Nations to have Mammoth Cave declared a world heritage location.

The article is one I recommend reading. It describes trekking through a cave with such clarity that even a beginner can understand. It is also worth the experience of invisioning the exciting sensations that are part of spelunking.

Literature Review

by T. J. Madigan

"Exploring a Sunken Realm in Australia." Hilary Hauser. National Geographic 165(1): 125-142. Jan 1984.

This interesting article concerns the flooded sinkholes and related flood- ed caverns of South Australia. The biology of ponds in the sinkholes and the cave diving, which is essential to the gathering of data, are the major themes of this piece. The low phosphorous and nitrogen levels in the ponds coupled with a large flow rate of the spring water provides an environment virtually free from phytoplankton. This environment allows perfectly lucid photographs to be taken, which are included in this piece. Spelunkers, diver's and nature lovers would all benifit from reading this exciting article.

"DOWN UNDER" a poem by Laura Tarulli

How can I explain
Why I am driven underground
Where my body shares secrets with the damp or dusty earth
When I could be hiking in the sunshine or going for a country drive.
What primordial chord has been struck?

figure 1. Entrance to Cedar Fork Cave

Cedar Fork Cave

by Tom Keller

Cedar Fork Cave (Adams County, Ohio) is a medium sized cave (210m THC) developed in massive dolomite bedrock (Peebles Formation). The cave has two entrances in a bluff fronting Cedar Fork Creek. The larger, eastern entrance is slightly above Cedar Fork, and a stream exits the cave at this entrance. The main passage trends roughly south-southeast. This narrow joint-controlled passage constricts to crawling size. After approximately 60 meters it becomes too small for continued progress. There is little evidence of speleothem development.

The western entrance is located slightly higher on the cliff, and is small enough to require crawling in on hands and knees. Inside the entrance there is a large, low-ceilinged room (9.4m long, 5.3m wide, and 1m tall). There is a 21.5m. long walking connection that roughly parallels the cliff face joining this room and the eastern entrance. From the western end of the room, (note small skylight), there is one low, dry crawlway (1m. high) leading off to the south, which then turns southwest. After 30 meters the passage turns abruptly to the left and drops to join the stream. Continuing upstream, the passage meanders for 41 meters until the ceiling gradually dips too near the floor to allow further progress.

The second passage leading off of the western end of the entrance room heads almost due south. It joins the stream after about 4.5m. Immediately to the left of here (downstream), the water flows through a window that is too small to allow further progress. Upstream, the passage continues southwest for 10.3 meters where it is joined by the dry crawl.

There is a maze of small, interconnecting passages leading off the left side of the entrance room (see map). One passage leads southwest out of the maze, and then turns more southerly, and joins the stream. Immediately to the right (upstream) is the window (above). Downstream from the window, movement is possible for only two meters, where the stream again passes into a tube through which a person cannot fit. A voice connection was made downstream to another section of the cave.

The second passage off the maze heads southeast for three meters and joins the stream. Six meters upstream is the voice and water connection. The passage continues east-southeast for four meters until it becomes too narrow and too steeply sloped upward for further progress. Downstream from the maze passage, the stream flows through a low section, out into the entrance room, through the connection to the eastern entrance, and finally joins the stream from the eastern part of the cave to exit the cave and join Cedar Fork.

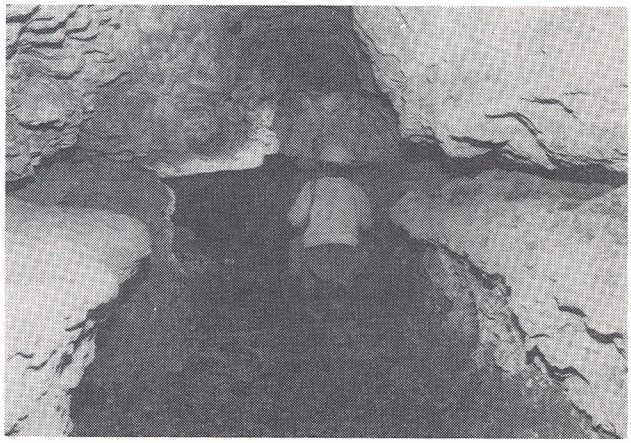


figure 2. Passage Cedar Fork Cave

figure 3. Cedar Fork Cave

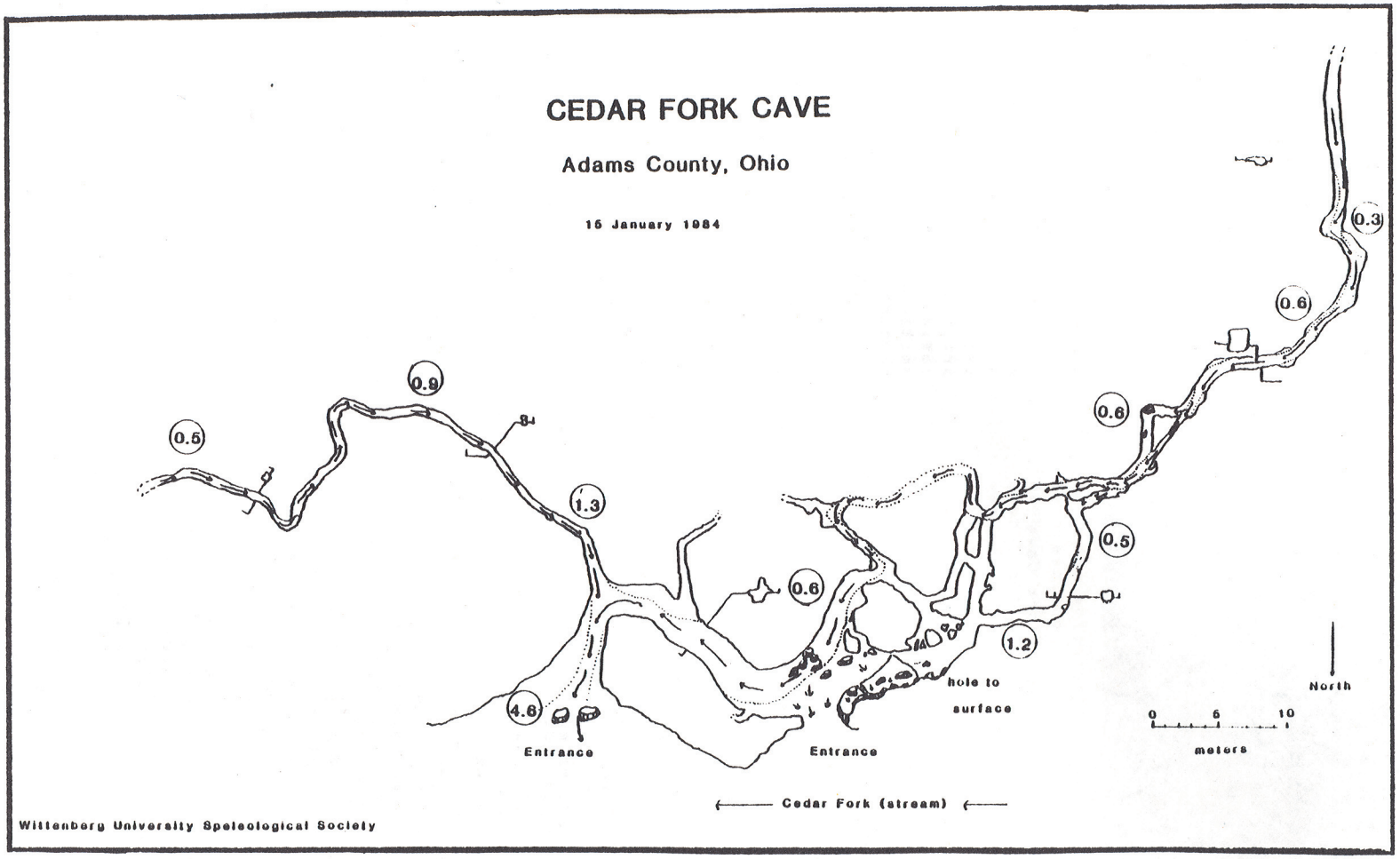
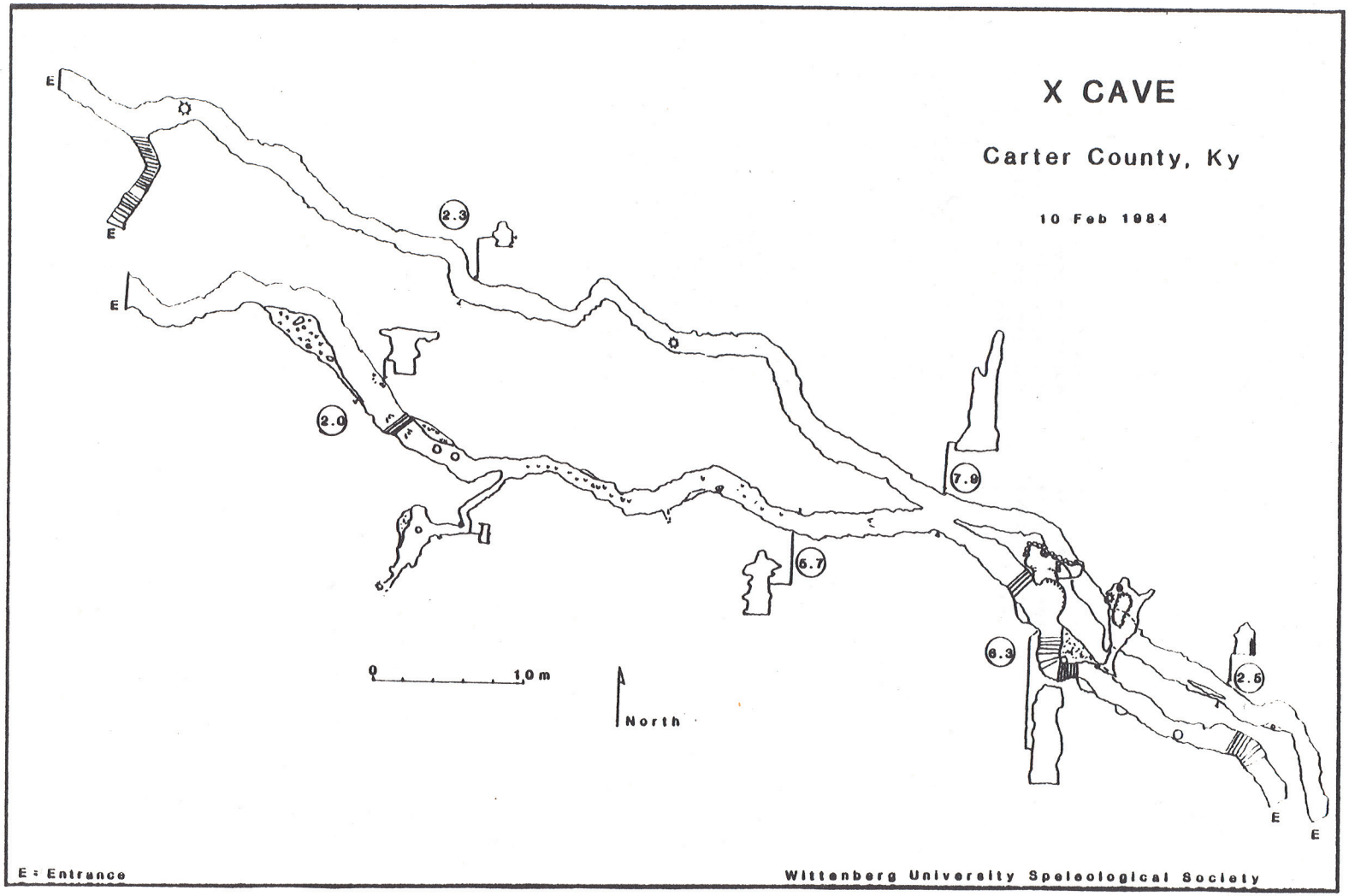


figure 1. X Cave



X Cave

Carter County, KY

by Donna J. D'Angelo

X Cave is a commercial cave located in Carter Caves State Park (Carter County, Kentucky). The rock strata of the state park consists of a Lee Sandstone cap underlain by Lower Chester Limestone, Ste. Genevieve Limestone, and St. Louis Limestone. X Cave was formed in the Lower Chester Limestone by solution along two intersecting joints.

The two joints intersect to form passages that resemble the letter X, thereby giving the cave its name. There are four natural entrances to the cave (one located at each arm of the X), a manmade entrance which joins one of the longer arms of the X and a small surface "rathole" opening that is not passable. All passable entrances are gated. The three "front" entrances (west) open into the two longer arms of the X. The northernmost entrance is a natural entrance approximately 25m above the stream bed. At one time there was a wooden bridge which led to this precipitous cliff entrance. Local legend tells of an Indian woman who jumped to her death after hearing of the death of her love, hence, it has acquired the name "Lover's Leap". The brige has since been removed and a safer manmade entrance has been constructed which connects with the passage once entered at "Lover's Leap". From within the cave one can still go to the gated "Lover's Leap" and look out off the cliff. The other natural entrance is located approximate 5 meters south of the manmade one, both of which can be reached by walking up a hillside path from the visitor's center.

Proceeding from any entrance through either the northern or southern arm of the X, one will encounter a few scattered solution domes, stalactites, and columns. About two-thirds of the way through the cave the northern and southern passages connect, at what is appropriately called the "junction room", and then branch off again. It is this last third of the cave that houses the subterranian features for which X Cave is known. About half-way down the northeast arm one encounters a spectacular dome-pit complex. The dome-pit has two "floors" or ledges extending from it and rises to a ceiling height of 4.7 meters. A rock and mudbank lead up to the first ledge that surrounds the dome-pit. From here a tube leads up to the final level. The floor at this level extends out in a southerly direction for about 4 meters and for a meter or so all around the pit. The dome-pit complex (and the rest of the cave) is lit by electric lights. This, along with dripping water, has allowed moss to grow in this section of the cave. Down passage from the dome-pit one will see more stalactites, flowstone and other karst features.

Heading from the junction room down the southeast arm are many more interesting formations. This part of the cave is lit with colored lights to add dimension to the features when viewed from a distance. There are many large masses of flowstone along the length of this passage, as well as, bacon rinds, columns and another dome-pit complex. This dome-pit (7.45m) often has water trickling down it. At the top of the pit a small roomlike area extends in a norhterly direction for about 4.5 meters. This dome-pit, although higher than the northern one, is not quite as picturesque. However, the flowstone and stalactites further down passage make it a more interesting section of cave overall.

figure 2. Passage X Cave

CHARACTER BUILDER

by T.J. Madigan

Six-thirty Saturday morning I am shocked into consiousness by my alarm clock. As I dress I am carefull to put on extra warm clothes, but no loose fitting ones. I quickly put together some lunch food and throw it on a pile of caving gear. Horton, Donna and Bill are due to pick me up in five minutes.

Looking out of my window I see the car coming so I pick up all the gear and head out into the pre-dawn day and get in the car. Horton is driving, Bill is sipping coffee on the passenger side of the front seat while Donna shares the back seat with me. We are separated by a tall box of Ohio topo maps made higher with survey gear. Today we are driving down to

con't p.7

Adams County to visit a cave feared by many club members who have heard horror tales of the discomfort felt surveying Freeland's Cave. For about two hours we listen to the radio and discuss news items, school problems, caves and of course, tell the latest jokes.

Shortly after nine we pull into a gravel patch next to a house with ripped plastic windows, peeling paint, outdoor plumbing and at least three hound dogs lounging on a dilapidated front porch. We get out of the car, squeeze into wet suits and "bide up." It is hard to imagine getting wet when the late fall temperature is only 43 degrees, but it had been a very dry summer, so maybe the water level in the cave would be low.

After brief hike, the cave mouth pops into view. Turkey Creek, which last spring was almost a foot deep, is now bone dry. We light our lamps and begin our trek to the rear of Freeland's to survey the last few points. The walls of the cave in this portion look like dolomite aluminum foil. They are incredibly sharp and blade like rocks grab at any loose clothing. The passage weaves back and forth. So far the water is low. My feet are still dry. All of a sudden, while trying to avoid hitting my head on a sharp rock, I step into a puddle. The bone chilling water oozes into my shoes, the shock as bad as the morning alarm clock. "Oh well! This is it," I say. A few turns later the ceiling starts to get low. We are monkey walking now, stooped over and crawling. All of a sudden the ceiling raises to a respectable height and the walls widen. We are in the "big room."

Now it is time to get down and dirty and wet. The first siphon is not so bad but it is low. Today it is drier than normal, if there are degrees of wetness. I think the only dry clothing I now have on is the collar at the back of my neck and my armpits, where they are not sweating. My fingers are starting to get stiff from crawling in the very cold water and the passage is fogging from the water evaporating off of our my clothes and wet suits. We enter the "breakdown room." It offers a breath of freshness from the wetness. I drain my shoes. Going on, there is still the second and third siphon to tackle. The fourth has always been full of water, up to the ceiling. The second siphon is long and there is enough breathing room at the top for my nose and mouth, but my helmet will have to go. It won't fit and the bill forces my nose under water. God is it cold. I think my feet are going numb. But we are almost there. We only have three points to survey and then we can thaw outside where the sun is shining and it is in the 60's by now. I have to keep moving to keep warm, but the wet suit helps. When I came in two years ago with Mike, Mark and Helen, Helen and I got hypothermia. We both shivered for hours. Well it is time to break out the tape and compass...

Surveying done, we head out, a laborious 45 minute trek complicated by having to walk with numb feet. The surveying was hard enough, trying to balance the compass with the frozen fingers is not easy. It was necessary to scrape an inch of slime off of the tape just to read it. The cramped quarters did not help any. At the "breakdown room," we pause briefly ; this is the first time in an hour we are able to sit up straight and relieve our cramped neck muscles. "Well, one more swimming lesson," I say, as we duck into the low wet passage between The "breakdown room" and the first siphon.

At last the "big room!" We are out of the "down and dirty" part of the cave. The rest is quick. Things are strange as it seems I have no feet. I am walking on stumps where my ankles used to be. I keep tripping because my legs seem longer than the ankles they go down to. "The heck with it, let's get the H-E-double L toothpicks out of here and into some warm, dry clothes," I say as we move into the first part of the cave. Donna commented, "I think the entrance is just around the next bend." Bill corrected her, "No, not this set of bends, this is where the upper level comes in. We still have a bit to go."

It is incredible how quickly cold cavers can slither through the most awkward turns in a cave when they are headed towards an entrance. It is even more unbelievable when considering the fact that one's extremities are frozen.

Finally the light at the end of the cave appears. Two more bends and we were out.

"Someday I hope we find a sinkhole entrance to the back of this thing," says Horton, as we dig our dry clothes out of the car. "Quit dreaming," I say. "It builds character this way."

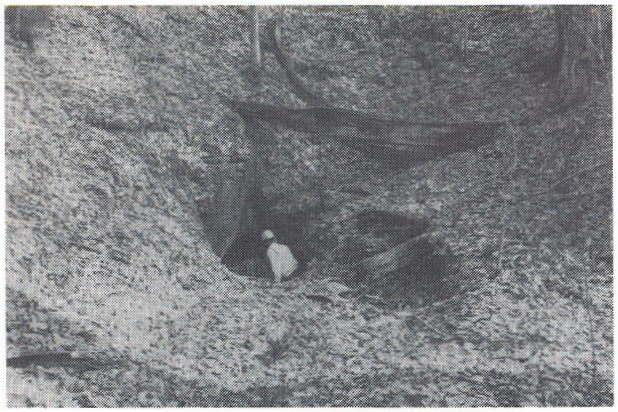


figure 1. Entrance Lost Comb Cave

Lost Comb Cave

by Wm. Simpson

Lost Comb Cave is located in the Davis Memorial Nature Preserve in Peebles, Ohio. The Davis Memorial is an 35.6 hectare wooded area, which has an intertretive trail system, initiated by the Ohio Historical Society.

W.U.S.S. grotto members discovered Lost Comb Cave on an October 1983 ridgewalking trip. This area had been probed many times in the past, which made the appearance of entrance an important discovery. During the exploritory push a caver lost his sisters comb. On the subsequent trip, January, 1984, the comb was found, hence the origin of the cave's name. This second survey trip was conducted by David Doody, Mark Pender and myself.

The entrance is at the nothern end of an elongated depression which receives run-off water from Peach Mountain (372.5m). During the rainy season this sinkhole area was filled with water forming a pond. The former pond is located on a ledge (228.6m) 12.2 meters above Cedar Fork Creek. A number of other sinkholes share this zone in a north-south range of 925.9 meters.

All progress through the cave is made on elbows, belly and knees, down a gently sloping, rocky passage. Halfway through the passage, there is a hump in the ground. At the rear of the cave the walls converge. The section between the two restricts water flow, which causes the cave to flood. Thus, erosion or dissolution of the entrance has probably been a continual process, provoked by the heavy precipitation of 1983. The "cave dilation" theory, proposed by Donald G. Davis is another possible explaination of erosion to be considered.

Several other areas of special interest are in the area. Notably Fort Hill and Serpent Mound, two remnants of ancient Indian cultures, also managed by the Ohio Historical Society. Near the Serpent Mound a unique geological feature known as a "cryptodepression" exists. This feature is possibly of prehistoric volcanic origin.

figure 2. Lost Comb Cave