PHOLEOS

JOURNAL OF THE WITTENBERG UNIVERSITY
SPELEOLOGICAL SOCIETY

Volume 13 (1) January, 1993

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 May 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.

The National Speleological Society

This is to certify that

Wittenberg University Speleological Society

having fully complied with all the requirements established by the Board of Governors, and having accepted the responsibility which such status entails, is hereby chartered in the National Speleological Society, and is entitled to all due rights and privileges: in testimony whereof the President and the Chairman of the Internal Organizations Committee have hereunto set their hands and the Seal of the Society, this 14th day of May, 1980.

M. Thomas Rea
PRESIDENT

Evelyn H. Bradshaw
INTERNAL ORGANIZATIONS COMMITTEE CHAIRMAN

G-268
INTERNAL ORGANIZATIONS NO.

WITTENBERG UNIVERSITY SPELEOLOGICAL SOCIETY
SPRINGFIELD, OHIO

Cover: Fuzzy Hole, Lawrence County, IN. Photo by Horton H. Hobbs III.

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TABLE OF CONTENTS

GROTTO OFFICERS 1992-93

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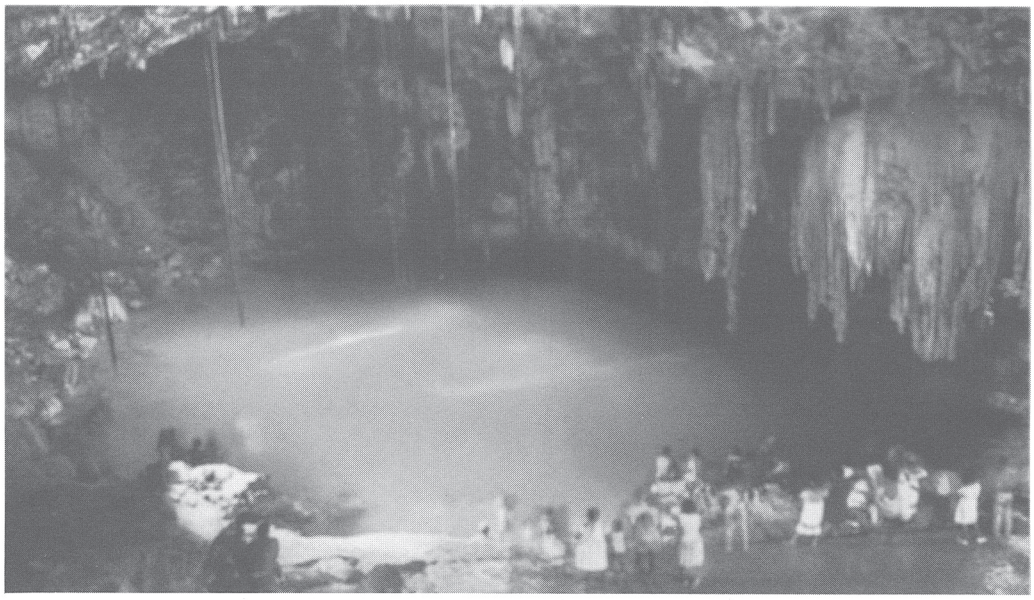
EXCHANGES: Exchanges with other grottoes and caving groups are encouraged. Please mail to Grotto address.
MEETINGS: Wednesday evening, 7:00 p.m., Room 206, Science Building, Wittenberg University, Springfield, Ohio.

From Our Archives

The Loltun Grottos, Yucatan, Mexico.



El Cenote X'keken, Yucatan, Mexico.

Editors' Note

As the new editors of *Pholeos*, we would like to extend a warm hello to all of our subscribers. This issue contains trip reports, article reviews, and a poem, all in addition to our feature article. This edition of Pholeos begins with a review of an article on the Movile Cave in Romania by Annette Summers, Vice President of W.U.S.S. She also was inspired to write a poem about bats. Dawn Fuller retraces her trip through Doghill-Donnehue Caves in Indiana in her story, Oh, No!! A Bathtub! Becky Deal also submitted an article review on cave diving. Our feature article, by Timothy L. Lewis, offers insight on Light House Cave in the Bahamas through a detailed description and analysis of the area's history.

Following this is an internal map of Light House Cave and some pictures taken there.

Other photographs appearing in this issue include members of W.U.S.S. and some of the sites our group has visited. We hope you enjoy this volume of *Pholeos* and look forward to our June issue.

– Jason Bauserman and Ellen Divoky

Why?

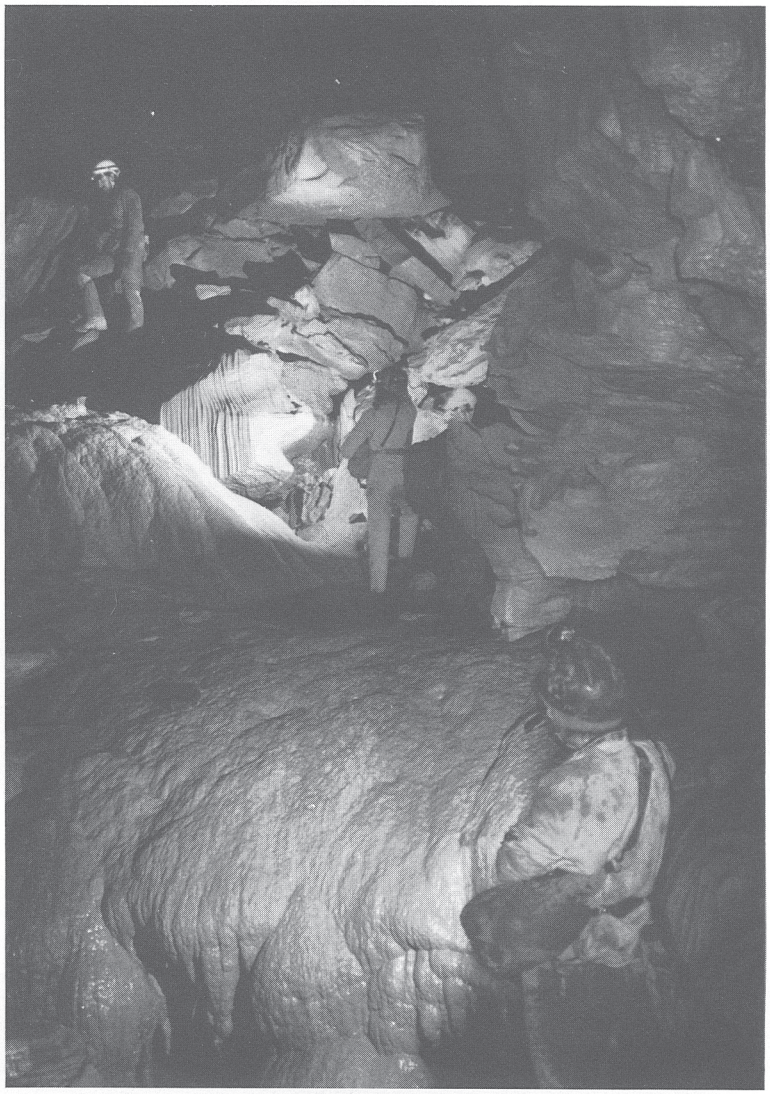
by
Jessica S. Hoane

The sound of zipping zippers, tightening laces, and packs snapping closed reaches the ears. Clouds of breath, like warm jets of steam, condense in the cold air. Anticipation makes movements hurried, but concern makes them meticulous. One by one the sounds of boots crunching across gravel and twigs fills the air. The quiet babbling of a stream fed spring soothes taut nerves. Each step brings the temperature higher, closer to 55°F. Fresh air is replaced by a pleasant mustiness. Shock occurs after the first step into the frigid pool. Tight boots loosen as water is absorbed. Toes quickly numb. Every passing foot brings a question to mind. Why?

Why indeed. I have asked myself this several times in each cave I have entered. What makes caving so special? As I think about it now, what about caving is not special? No matter how many bruises or sore muscles I suffer through, I always have a good time. I am not saying, though, that I enjoy the pain. There are two parts of caving that keep me returning for more. The first is that no two caves are alike. Each has its own unique, well, almost a personality. The formations inspire total awe, and some have even brought tears to my eyes. The beauty of the slowly formed structures is incredible. These alone make caving worth the pain.

More important, yet, is the human factor. From the beginning of my caving career, all of one and a half years ago, I have noticed the brotherhood of cavers. I'll be the first to admit that all cavers, that I have met, are a little unbalanced, but I trust them just because they are cavers. When you cave with people, your life is in their hands and theirs in yours. This trust builds bonds that are hard to break.

So, no matter how great the physical pain, I will never give up caving. I would not want to lose the chance to meet more cavers or strengthen the bonds with those I have already met.



Hidden Dome, Canyon Cave, Carter County, Kentucky. Photo by Horton H. Hobbs III.

Entrance to Gypsy Bill Allen Cave, Martin County, Indiana. Photo by Horton H. Hobbs III.

The Movile
Put This on Your Wish List of Caves to Explore!

by
Annette Summers #31319

Based on: "The Cavern of Little Monsters",
Life November 1992, pp. 64-71.

One could not find eyeless spiders, worm sucking leeches, flies without wings, carnivorous centipedes or venomous water scorpions in caves around here. But one could in Romania. Just one mile inland from the Romanian shore of the Black Sea, a "tiny hell is revealed as a miniature Eden, with mankind, looking down at it from above, responsible for preventing its fall."

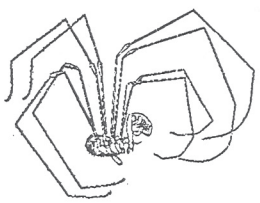
The air in the cave is lethally low in oxygen. A terrible stench caused by several factors, including bacterial ooze that coats all the surfaces and the sulfur concentrated atmosphere, overwhelm sensory organs. The water is so caustic and laden with hydrogen sulfide that metal corrodes within minutes. This was the hell discovered.

The inhabitants of the cave, however, paint another picture. Twenty seven new species have been identified thus far. At the bottom of a murky pool one might find a water scorpion, breathing through a "snorkel" extending from its abdomen. In dry portions of the cave, vampire like spiders that suck the innards out of their victims are seen. Crustaceans, with antennae like a mustache, crawl on pool edges and wet walls. All creatures breath levels of carbon dioxide that would kill similar species on the surface. Surprisingly, the cave's food chain looks quite ordinary. Large carnivores like centipedes and scorpions eat smaller life, smaller life eats tiny bacteria and fungi. However, the bacterium at the bottom of the chain is not as ordinary, because it cannot convert solar energy into food. Instead, utilizing a method developed millions of years ago, it uses energy derived from the separation of hydrogen and sulfide ions to create food. Similar caves have been discovered that survive in this manner, but the Romanian cavern is by far the most pristine. The complexity of the cave's biology is why scientists refer to it as Eden.

The Movile's discovery was somewhat unusual, and its exploration dependent on the success of an oppressed people. In 1986, Nicolae Ceausescu ordered the construction of a new nuclear power plant. When workers stumbled upon a small irregularity in the limestone, work was halted. Cristian Lascu, a caver and geologist, ventured into the unknown world through a small hole, discovering the secrets of the Movile. Lascu, after returning to the surface, concluded that the power plant project could not continue. Years of political problems slowed the barely existing scientific investigation of the Movile. Yet, since Romania's historic revolution in 1989, the cave has been studied continuously by international teams consisting of Romanians, Americans, and French.

These scientists believe the present creatures evolved from ancestors that crept into the warm cave and inhabited it approximately 5.5 million years ago during the Miocene epoch, when Romania was ending its last tropical climate. Since then, geologists have estimated that the cave has survived seventeen ice ages, that killed any surfical relations. Within the past two million years, the Romanian cave has been sealed by clay and other sedimentary deposits. By 10,000 B.C., the cave was receiving no new life from the surface no bugs, no runoff water, not even pollution from Chernobyl. The Movile is a chest containing unusual treasures and precious jewels of knowledge about the Earth at the dawn of history.

Due to the fragility of the cave, "the intoxication of discovery has been tempered by more sober concerns of preservation." The Romanians have built doors that seal the cave from cold, dry, surfical air, as well as from conventional life that could wander into the cave. All precautions are being taken to insure that the Movile remains a window and a keyhole, in which humans, a curious, infantile species, can look through to see what life is like in a place lost in time. Hopefully, we will be able to keep our composure and fight back our natural instinct of destruction. As for ever getting to see the little monsters, we can always dream.



Oh, No!! A Bathtub!

by
Dawn N. Fuller

On October 30th, 1992, I joined up with a group of cave fanatics from W.U.S.S. and Indiana [Central Indiana Grotto] for their annual cave trip in Indiana. This year the trip was to the Doghill-Donnehue system near Bedford. I had a basic idea of how "wild" this cave would be; I was prepared to get muddy, get a good workout, and to see many things that were unique to this cave. I was not, however, prepared to paddle about in a large body of water with very little breathing space. This feature of a cave is affectionately called a "bathtub".

In the morning, twelve of us entered the cave through an entrance in a culvert that goes under a highway. Stepping through a grate, we headed down the large pipe into a jumble of rocks that I could not wait to explore. This passage is in the Donnehue part of this particular cave system. After a short distance inside we grouped up again to count how many people we had. I was fascinated by what I could see and I was impatient to continue. We walked in a passage that reminded me of a scenic drive in the country with repeating s-curves. As we weaved our way through the passage we saw many small formations and I seem to remember a good variety of colors. I am always overcome with awe when I take the time to reflect on the amount of time needed to create even a minuscule piece of a formation in any cave. I hope caving becomes more popular among people who feel as I do about observing caves and other natural resources as close to their original state as possible.

Because much of the passage had formations in it we had to be very conscious of more than just where we were putting our feet and our hands. I was very surprised at the size of some of the areas in the cave. Not since Mammoth Cave, KY had I been in a cave that seemed so open. About now is when I found out we were going to enter a section of cave called "Berg Squeeze" (I thought I heard "Bird Squeeze" until I saw a map and realized my mistake. Although "Bird Squeeze" was a good idea when I saw how tiny the passage really was.) I had to wiggle , squeeze and squirm my way through, and I felt as if I was playing a very perverse game of Twister. Once the "squeeze" opened up we were entering the Doghill portion of the system and I got a chance to take a deep breath and head on to the next obstacle. This was a rock that loosely resembled a pelvic bone with an eleven or twelve inch diameter hole. I went through this feet first and felt a wave of nostalgia of almost twenty nine years gone by. This opened into a small dome that then became a short walk to a drop of about fifteen feet with a narrow ledge off to my right. Our group of twelve split into two groups at this time. Seven people continued back through "Berg Squeeze" and through the remaining section of Donnehue while Scott Fee, Annette Summers, Mike Hood, Toby Dogwiler, and I continued through Doghill's challenges.

Scott and Annette led the way out onto the ledge via a nasty looking hand rope in which no one should put too much faith. I came third with Toby and Mike following behind me. This traverse was difficult but not impassable. After a short distance I came to a natural bridge (there were about thirty), and a small drop to the cave floor. Again, going to my right, we came to an awesome sight of a huge flowstone. This reminded me of a frozen version of the lower falls at Hocking Hills State Park, preserved forever in stone. A very tight crawl was just to the right of the flowstone and under the flowstone was to become my first encounter with a true "bathtub". Oh, No!!

Scott and Mike climbed up a conveniently placed rope to the top of the flowstone to look around while Annette, Toby and I played around at the base of the flowstone until Scott and Mike returned. I wish I had climbed up there too, and regret not taking that opportunity while I had it. When we regrouped, we debated about taking the very tight crawl or the very wet bathtub. Since I had absolutely no idea what I was about to see, I volunteered myself to go through the bathtub first. I got down on my hands and knees and immediately found myself up to my bottom lip in very cold water. I thought to myself, "Brilliant, Dawn, now you've done it! Oh, No!!" When I ducked my head under that flowstone I came to the sudden realization that there was a lot to learn about caving that I had not even considered such as a fear of the unknown. I could not see anything but about four inches of airspace that seemed to end at a space of about six feet under the flowstone. My respect for caves went up one hundred percent in about four feet of the twenty needed to get to the other side of that bathtub under that flowstone. I backed out of that water and was immediately concerned about how large the next bathtub was. Knowing I could have gone around this obstacle I was very worried about the next one that I knew I could not go around. I was trembling with apprehension as I progressed through the very constricting bypass. After emerging from the crawl and a short walk I found myself again at a pool of water that went under a very low wall of solid rock. I knew there was no other way out except under that wall and through "Oh, No!! Another bathtub!!" Mike and Annette offered to help me through, by talking to me, so I followed Mike into the unknown.

I do not know where I found the courage to try what I had so recently balked at, but I believe I owe that to the patience and understanding that I found in Mike, Annette,

Scott, and Toby. Once I made it through, I realized it was not an impossible thing to do. I would actually like to try the first bathtub again because now I know that it is not as bad as it seemed at first. I felt silly when everyone rejoined on the other side until I heard similar tales of first time experiences with true bathtubs and I began to feel much better. I guess everyone has something that they do not care for in caving and I just found out what that something was for me. Hopefully, further exposure to true "bathtubs" will make each one easier to overcome.

Our small group continued on through the Doghill portion of the cave. We saw wonderfully huge rimstone dams. Some we walked through and many we had to climb over and try not to fall in. Some were only knee deep and some were between five and seven feet deep, according to Scott. The water in this area had a lot of gray silt in it and at times it had a chlorine odor to it. The pollution was distressing because it does not say much for mankind above ground. Scott and Mike said the rimstone pools used to be a vibrant blue and very beautiful to look at, and these were far from pretty. It just goes to show that every action, we as humans make, has a reaction somewhere else; not always a positive one.

We continued through a hands and knees crawl that was expected to be very nasty, or as I say mucky (a combination of muddy and yucky), and we were surprised to find it better than we expected. The passage we were following out had some big spots, and it also had some real back-breakers but not really any formations that caught my eye. I think I saw only three nice flowstones after the "tubs," but I do not recall them being anything exceptionally large.

Part of me regretted leaving the beauty I saw in that cave, yet again, another part was relieved. I really enjoyed the trip to Indiana and I hope to see more of the Indiana caves. There is still a lot to try, and hopefully someday, the water in the rimstone pools will return to the shade of blue they once were. My thanks to Scott and Jamie Fee for hosting this trip, and my thanks also to W.U.S.S. for allowing me to experience a truly "wild" cave called Doghill-Donnehue.

Dawn Fuller changing carbide in Canyon Cave, Carter County, Kentucky. Photo by Horton H. Hobbs III.

A Review of Craig Vetter's "Deep Dark Dreams of Bill Stone"

by
Becky Deel

Craig Vetter's lengthy article is about Bill Stone, inventor of the MK3R scuba tank (which converts the diver's carbon dioxide into oxygen so that the tank lasts longer) and leader of a team of cavers and cave divers. Their goal is to descend into Mexico's Huautla Cave beyond the already established frontier of 2916 feet below the entrance.

Vetter begins his article by giving a description of the team practicing in Florida with the new MK3R tanks. He explains in detail the setting and the personality of Stone. Vetter reveals Stone as a semi-god taking on the impossible. He details past accomplishments of Stone, and he emphasizes the amount of work and money Stone has put into his project.

The author then continues by giving the reader a history of Huautla Cave and the various expeditions in the cave, such as the 1969 and 1976 groups. Vetter also explains Stone's involvement in the 1976 adventure which was to later inspire him to design and build the MK3R scuba tank. Stone wanted a tank to last long enough to dive past the seventh sump in the Huautla Cave. (A sump is a hollow in which water runs, in this case, the river that runs through the underground caverns.)

After the history, Vetter lists the eight years of preparation through which Stone goes. He gives names of the people on Stone's team and short backgrounds of each. Vetter quotes many members of the teams and includes various pictures of the cavers and divers.

Vetter gives a lot of attention to the pros but he doesn't often include his thoughts and actions. He mentions these only once which was his first experience with the MK3R. Not knowing much about cave diving, I found it easier to relate to his experience better than the others in the article.

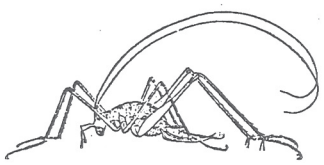
Towards the end of the article, he gives a lengthy description of the accident that occurred as the camp was preparing to leave for Huautla. Jim Smith and Rolf Adams made a final dive at which time Adams panicked and clogged his airtubes, and he drowned. Vetter calls the event "the fateful sort of momentum that propels all cutting edge exploration.'

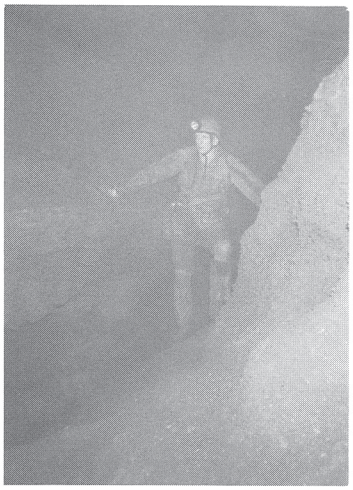
The article is a great story of the harsh preparations necessary for such a physically and mentally demanding adventure. Vetter's thoroughness in detail is excellent, but the purpose for writing the article is vague. The reader is brought through years of preparation for the climactic dive at Huautla which never comes. If the author's purpose was just to tell his experiences, he fails because he rarely mentions his thoughts and actions. Overall, the article is a disappointment to the adventure spirit, but interesting in the intellectual view (from the detailed processes on which Stone's team prepared for Huautla).

The Coming of Dusk

by
Annette Summers #31319

Grasp no more to the well in which you cling.
Hang no more;
It is time to be gone
Go.
Explore the cool air.
Breath deep evening's scent.
Venture deep in forest graves.
Discover blessings hidden at water's edge.
Go.
Make your journey an adventure;
Fill it with ideas and memories.
Remember the past,
Yet always strive for knowing what the
future holds in store.
Cherish the time you have.
Find a peace only you are able to find.
Go.
There's no mere reminding;
It is time to be gone.
Go, little one.
Take flight into the night;
Let your wings carry you away.
Go.

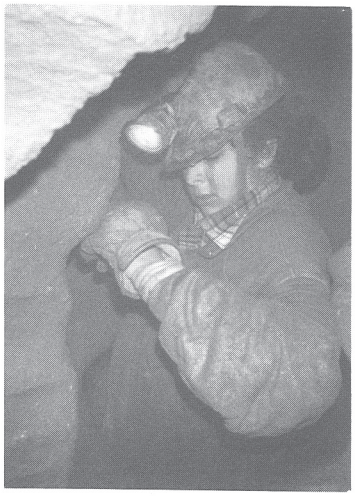




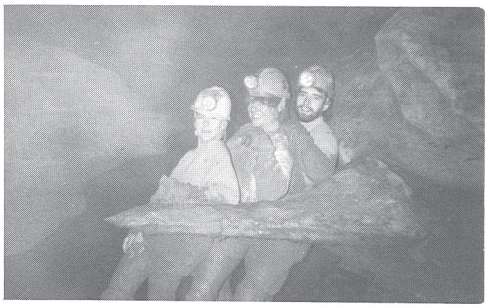
Mike Hood in Doghill-Donnehue. Photo by Julie Thorp.

Eric Higbie covered in mud in Doghill-Donnehue. Photo by J. Thorp.

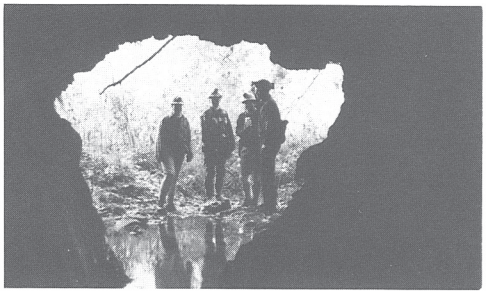
Cooperation was the key to getting through Donnehue Cave for Dawn Fuller, Mike Hood, Scott Fee, and Toby Dogwiler. Photo by J. Thorp.



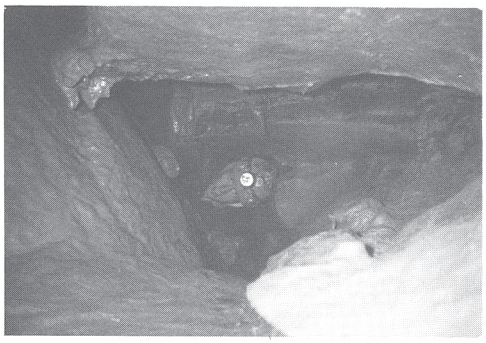
Sarah Amin squeezing through a tight passage in Doghill-Donnehue. Photo by J. Thorp.



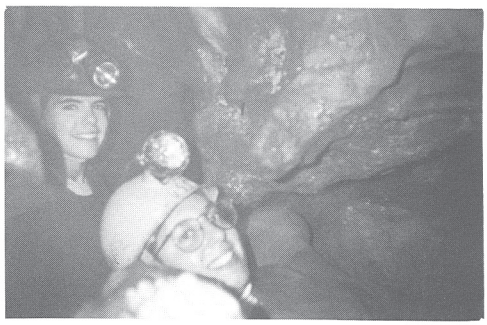
Anne Huddle, Jessica Hoane, and Eric Higbie having fun in Doghill-Donnehue. Photo by J. Thorp.



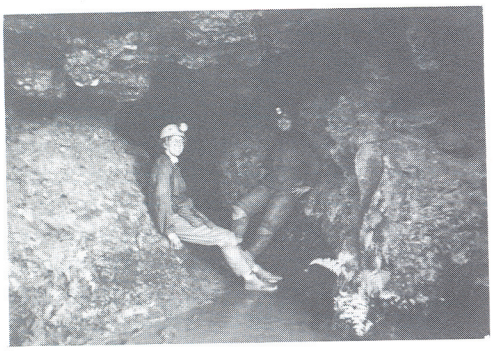
Vicki Wheply, Lindsay, Heather Meiser, and Chris Frost at Freeland's Cave. Photo by J. Thorp.



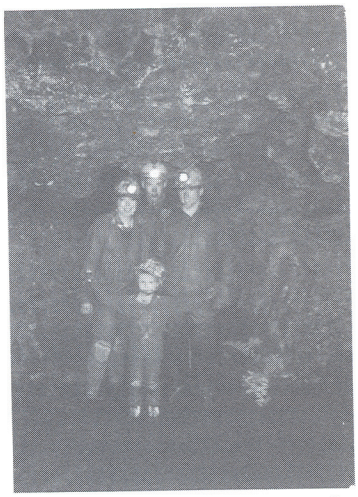
Toby Dogwiler inching his way through Donnehue Cave. Photo by Annette Summers.



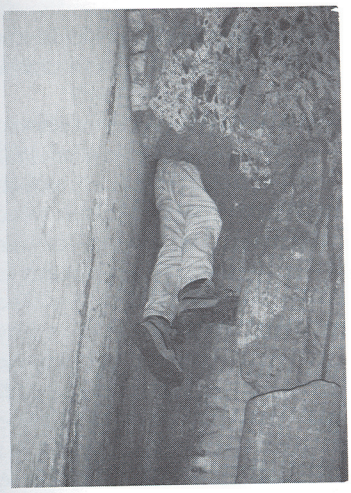
Vicki Whepley, Lindsay, Heather Meiser, and Chris Frost at Freeland's Cave. Photo by J. Thorp.



Julie Thorp and Heather Meiser at Freeland's Cave. Photo by A. Summers.

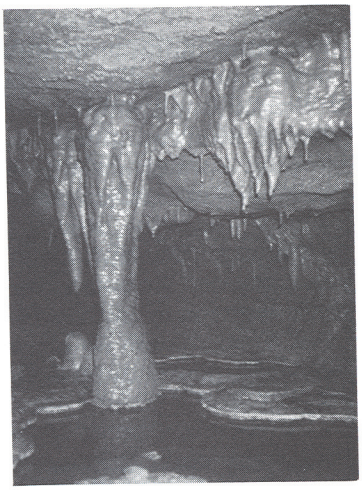


Vicki Whelpley, Chris Frost, Toby Dogwiler, Jesse Fuller at Freeland's Cave entrance. Photo by A. Summers

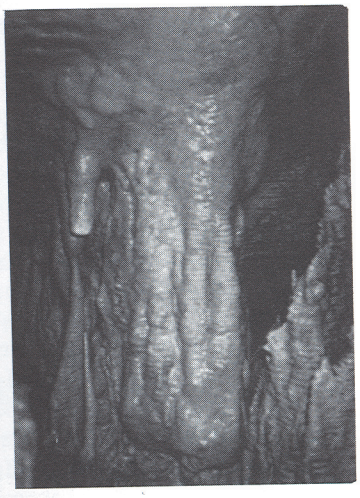


Chris Frost in Bat Cave. Photo by A. Summers.

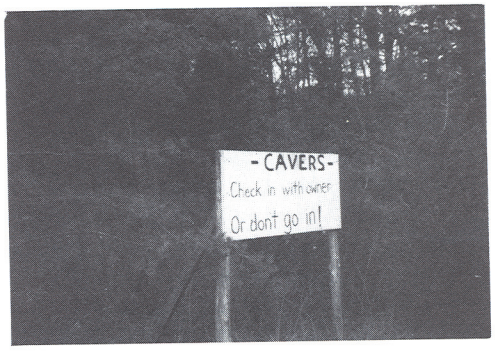
Cave formations in Bat Cave. Photo by Donna Stremmel.



Formations in Unnamed Passage in Climax Cave, Kentucky. Photo by A. Summers.



Formations in Unnamed Passage in Climax Cave, Kentucky. Photo by A. Summers.



Entrance to Garbage Pit, Sloane's Valley Cave System. Photo by A. Summers.

Light House Cave, San Salvador, Bahamas

by
Timothy L. Lewis

It has been exactly five centuries and some odd months since Columbus first stumbled onto the Bahama Islands, declared the land Spain's, and bid the Bahamas adios. Many islands in the area claim to be the site of Columbus' first land fall, but tradition generally grants that to the island of San Salvador. On the island, there are plenty of monuments to Columbus. Perhaps the most noticeable, and least intentional, is the lighthouse. The signal from that immaculately cleaned and polished tower now guides sailors to the island pretty much eliminating the challenge Columbus traced in 1492, that of finding any land. It also serves as a beacon to the most interesting cave on San Salvador.

Most of the people who come to the island face outward, and study the magnificent coral reefs. Now that Club Med has opened a resort on San Salvador, the number of scuba divers and snorkelers is certain to increase. Unfortunately, the easy access of Lighthouse cave the clean and accessible main passages, and its popularity amongst the local population will likely lead to its over use. The island has many karst features, with small pits and short solution caves dotting much of the easily explored areas.

Access to the island used to be limited to charter flights. Now with the resort, you can get to the island via American Airlines. Besides Club Med, some other resorts do exist, including the Riding Rock, home of the Wednesday night limbo dances. The island also has a former U.S. Navy base now used as a research station for marine biologists, archaeologists, geologists, and assorted travelers.

There are other caves near Lighthouse Cave (see Mylroie 1980 and 1988 a,b for descriptions and maps), and scattered about the island. Near North Point, south of the former navy station is a "Blue Hole" called Reckley Hill Pond. The pond is hyper saline and has tidal flow. The path from the field station leading to the pond is short, as are the caves themselves. There are many solution features in the area, with small arches and 2 meter pits. The surface searches are often as interesting as the restricted caves. Most caves on the island are the result of dissolution of ancient, solidified dunes. There are 11 of these that traverse the island, and searching these will reveal many karst features. It is not easy to search the dunes, however, since the vegetation is very thick.

Lighthouse cave is located under Dixon Hill, approximately 0.5 km from the lighthouse and 1 km from the ocean? on the northeastern corner of the island. Lighthouse cave has been described by others (Mylroie 1980 and 1988, Kieser 1982, Sealey 1985). The cave is never deeper than 2 meters below sea level, and not more than 7 meters above current sea level (Mylorie 1988). The cave was formed during one, and maybe two eras of higher sea in the past 100,000 years.

To reach it, travel east on the northern coastal road past north point and the high school to the town of United Estates. Park near Fresh Lake and walk up the paved road to the lighthouse. Greet the lighthouse keeper, and tour the lighthouse before visiting the cave.

The lighthouse keeper clearly takes pride in the condition of the lighthouse, and cave mud would not be appreciated.

When hiking the trails of San Salvador, you should take some basic precautions. Many trails are lined with cactus and other prickly, thorny plants. If you are not on a main trail, a machete becomes necessary. Poison wood (*Metopium toxiferum*), the Bahamian cousin of the itch-producing plants of the states is ubiquitous. Learn to identify its smooth, dark leaves and greenish berries. The island also has some fascinating tropical birds, many which are insectivorous. If you do not wish to participate in their food web, by feeding the bird's food, bring insect repellant. The mosquitoes and no-see-ums can rival those of the north woods. Along many trails, tucked back in the woods, are gardens or crop lands. The natives farm these using slash and burn techniques. The island has been repeatedly cut over, so the farming does not have the ecological damages found in the tropical rain forests. These crops are essential to the natives, however, and should be left alone. Finally, don't leave the trails unless you enjoy getting lost, or are quite skilled with the maps and compass.

Due east of the lighthouse is a small gate in the wall that encircles the hill top. Go through the gate and immediately turn south (right). Continue south to the valley below the hill, and part way up the other side. In a small clearing, easily contused with a wide spot on the trail, you can find rock outcrops with many solution features. Follow the trail up and down a few more rises, and at another rocky area, you will find two cave entrances. The trail pretty much ends here, although 25 meters further southwest is a second entrance (the Cactus Entrance) and 30 meters west from the main entrance is a small pit with several side passages, one of which sumps. In 1987 a cave diver (John Schweyan) connected that passage to the lighthouse cave. Although several local youths told me that they swam this with no equipment, I doubt their stories, and if true, I doubt their sanity. A map of the cave (Mylroie 1988) puts the sump itself at 10 meters length.

The cave passages roughly form a figure "8" with the cave entrances all on the bottom (south), and the long axis pointed north. Lighthouse Cave is directly linked to the ocean via underground conduits, and the porous nature of the island rock. Depending on the tide, the upper, or far loop may not be accessible on your visit. Time your visit accordingly.

You can enter the cave by climbing down 3 meters using the metal ladder, or free climbing an adjacent hole. The entrance is a collapse-modified solution pit. Although the cave shows sculpting, the direction of water flow during cave formation is not evident. The cave has some stalagmites, stalactites, and flowstone, although no active spelothems were noted. Some stalagmites are completely submerged, indicating a time when sea levels were up to 2 meters below present levels.

Facing north, the passage opens into the Aeolian Chamber. This chamber reaches heights of 3 meters, although much of it is significantly lower. Once in this chamber, you can see water to the left, and cave walls that readily show the high tide mark. The water is saline, and fluctuates up to a meter at spring tides.

The Aeolian Chamber appears at first inspection to be breakdown. Breakdown is rare in Bahamian caves (Mylroie 1988)7 and upon closer inspection. you can determine that most were fractured in place.

Off to the right is a large crevice. Beyond it is a maze that snakes its way under the surface trail used to reach the cave. This passage, Hydrology Hall, has from 0.3 to 1 meter of water, and up to 1.5 meters of air space in most of the lower passages. It also offers some interesting levels of crawlways. A side passage to the south is the Bat Series. The cave's bat colony (primarily buffy flower bat (*Erophylla sezekorni*) uses this passage, so extreme care should be used when in this area.

Back in the Aeolian Chamber, head southeast, to the left of the crevice that led to the Hydrology Hall and the Bat Series. Far to your left is a tree root that extends down from the surface, an interesting sight in the cave. Heading southeast, this extension of the Aeolian Chamber is called the Bug Passage. The northern end of Bug Passage is linked to the Aeolian Chamber by a short crawl. A second route is a wet walk or swim through the northern loop of the cave, known as the Water Loop.

Since the cave temperature is a warm and humid 25 C. (70 F.), unless it is high-tide, the water loop is quite refreshing. The walls here are scattered with fossil gastropods (snails of Cerion spp. - Mylroie 1988). These limited the upper date of the cave at 85,000 years ago. Beyond the low arch, which is completely submerged at high tide, the passage opens up to 3 meters height above water line in some phreatic domes, with pits in the floor that reach up to 2 meters. Follow the east (left) wall to reach the Aeolian Chamber through a series of crawls called The Slide. If you follow the right wall, or go generally straight and south, you end up in the maze of passages beneath the Aeolian Chamber. Continuing on, another low arch will appear. Ducking under this returns you to the entrance. Again note that this arch is submerged at high tide.

In the wet passage behind you is the sump that leads to the third entrance. Despite a brief search, I was unable to convince myself that I had found it. Samples of a submerged stalagmite in this passage give the lower limit to the cave's age at 71,000 years ago.

Keep the main entrance to your left, and push on to the Roller Coaster. This passage is essentially an angled pit leading to the caves Cactus Entrance. Beneath this entrance are some rock filled passages that serve as the water source for the cave. As the tide changes, some current can be felt.

The cave is not very large, and daylight reaches into much of the Aeolian Chamber. On our visit, we observed several troglophilic shrimp, a few isopods, a few large cockroaches, and the bat colony. Carpenter (1861a, 1981b) surveyed the invertebrate population of the cave, and also reported on green alga (*Cladophora*) in the cave. Diehl et al. (1988) produced an invaluable guide to the invertebrates of San Salvador Island. The diversity of the fauna Carpenter reported was not unlike what we noted. Clearly more detailed study of the cave fauna is warranted.

While not as spectacular as the coral reefs, the cave does present an interesting diversion. The rugged terrain of the island, the jungle-like vegetation, and the mangrove swamps all conspire to hide much of the island's features. The inland areas clearly present an interesting, irresistible call to the adventurous. I am certain that there are more undiscovered features of significance, and new species to be found.

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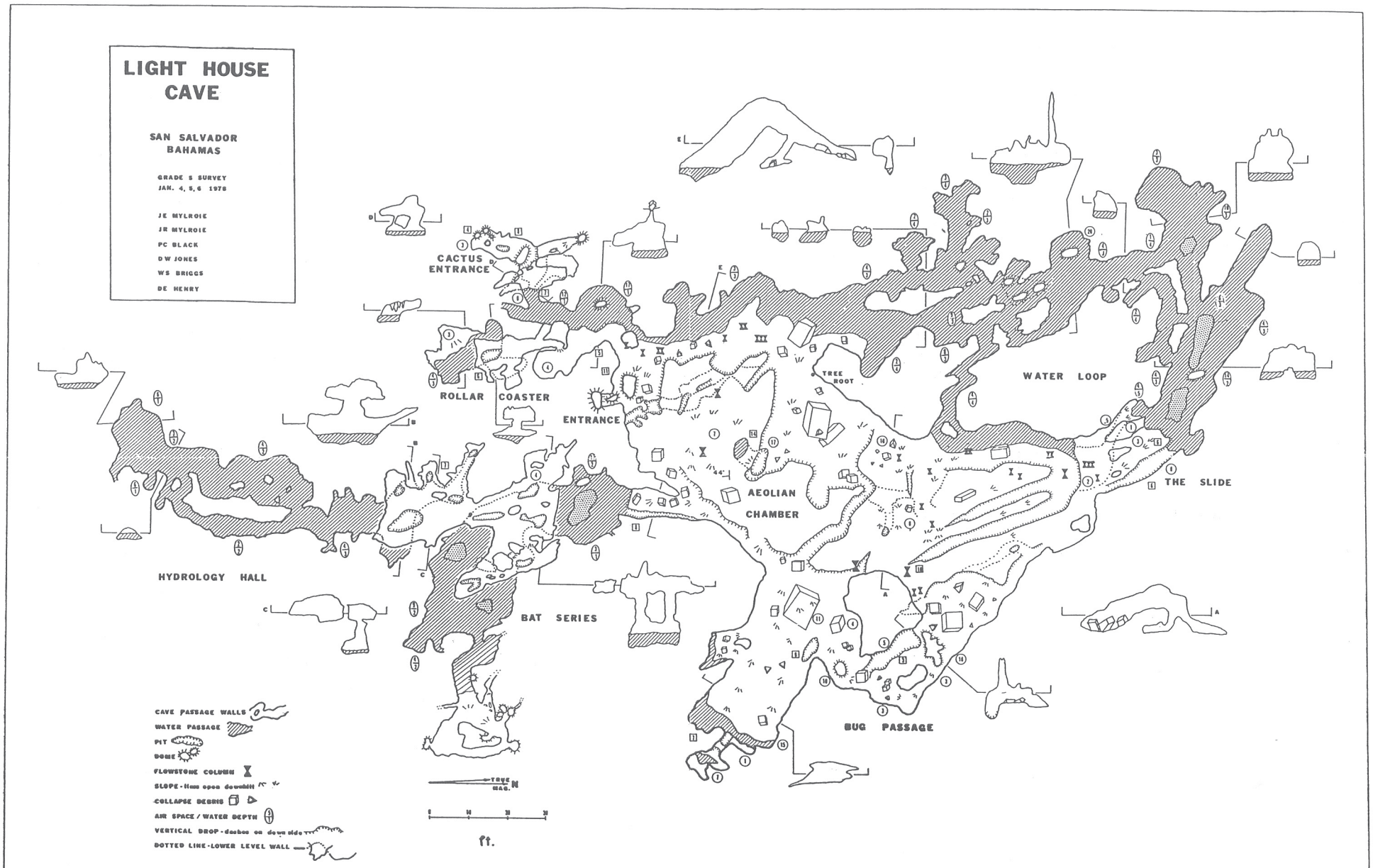
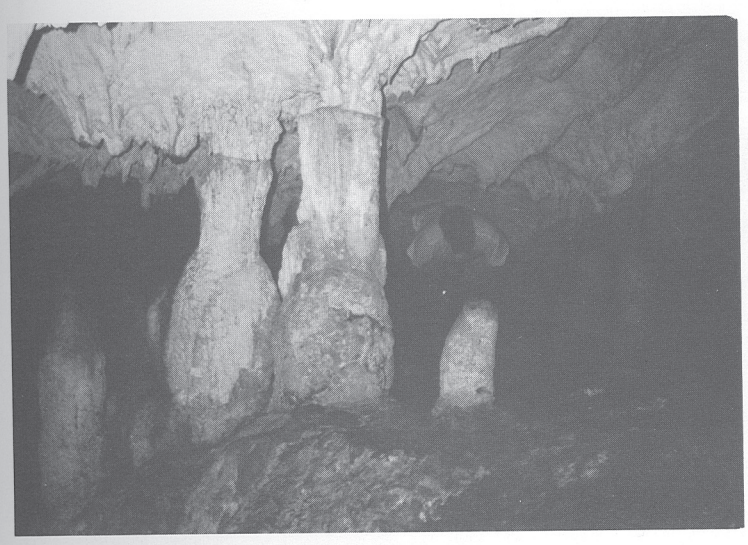
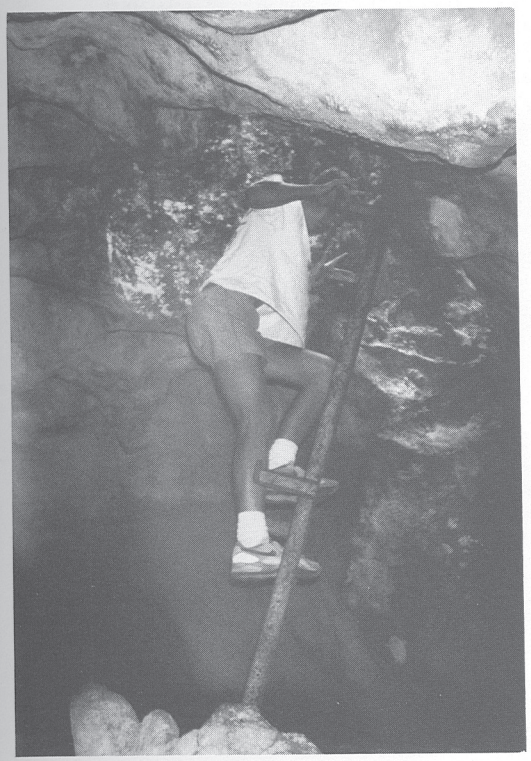

LIGHT HOUSE CAVE
SAN SALVADOR BAHAMAS
GRADE 5 SURVEY
JAN. 4, 5, 6 1978
JE MYLROIE
JR MYLROIE
PC BLACK
DW JONES
WS BRIGGS
DE HENRY
CACTUS ENTRANCE
ROLLAR COASTER ENTRANCE
TREE ROOT
WATER LOOP
THE SLIDE
AEOLIAN CHAMBER
HYDROLOGY HALL
BAT SERIES
BUG PASSAGE
CAVE PASSAGE WALLS
WATER PASSAGE
PIT
DOME
FLOWSTONE COLUMN
SLOPE - Hash open downhill
COLLAPSE DEBRIS
AIR SPACE / WATER DEPTH
VERTICAL DROP - dashes on down side
DOTTED LINE - LOWER LEVEL WALL
TRUE MAG. N
ft.



Formations in Light House Cave. Photo by T. Lewis.

Preparing to investigate the interior of Light House Cave are Anne Huddle, Tina Evert, and Alisa Abookire. Photo by T. Lewis.



Entering Light House Cave is Nick Jerimiah. Photo by T. Lewis.

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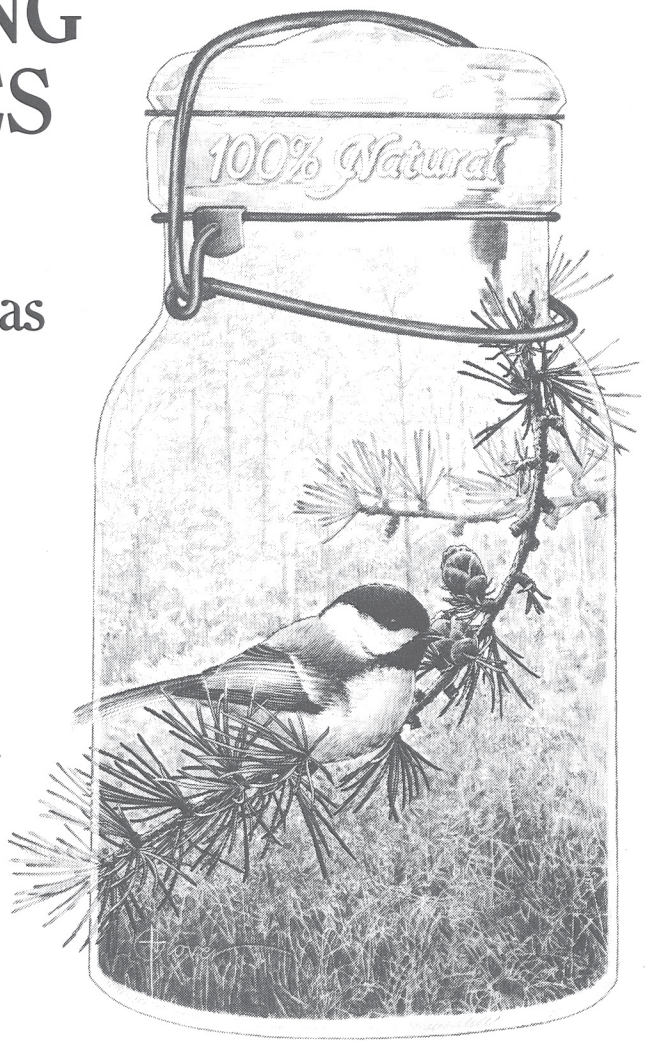

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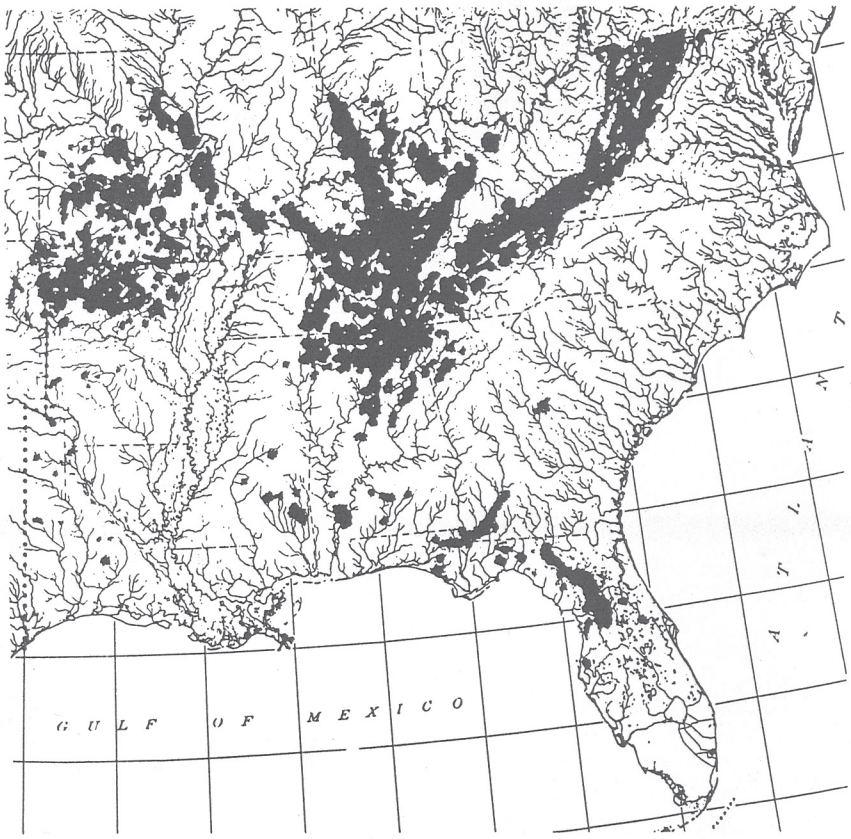

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Jeff Lapp using aspirator for biological studies in Patton Cave, Monroe County, Indiana.