

PHOLEOS

WITTENBERG UNIVERSITY
SPELEOLOGICAL SOCIETY



Volume 10 (1)

January 1990





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.



Front Cover Photo: Cave pearls from Zane Caverns
by H. Hobbs

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*Guest Editor for this issue is Warren Phillips Luther, NSS 2438.

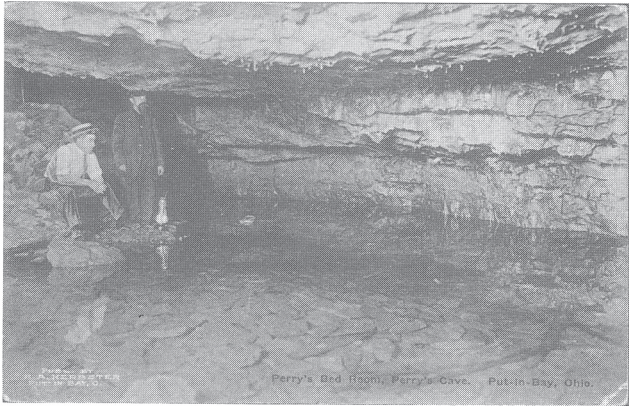
GROTTO ADDRESS: c/o Horton H. Hobbs III, Department of Biology, P. O. Box 720, Wittenberg University, Springfield, Ohio 45501-0720,
(513) 327-6484

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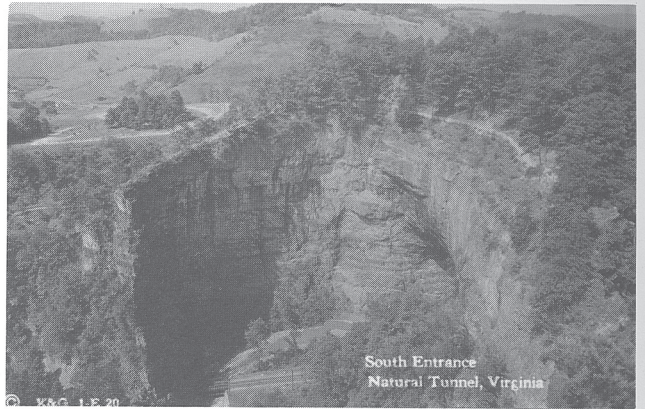
EXCHANGES: Exchanges with other grottoes and caving groups are encouraged. Please mail to Grotto address.

MEETINGS: Wednesday evening, 7:00 p.m., Room 206, Science Building, Wittenberg University, Springfield, Ohio.

FROM OUR ARCHIVES



Perry's Bed Room, Perry's Cave. Put-in-Bay, Ohio.

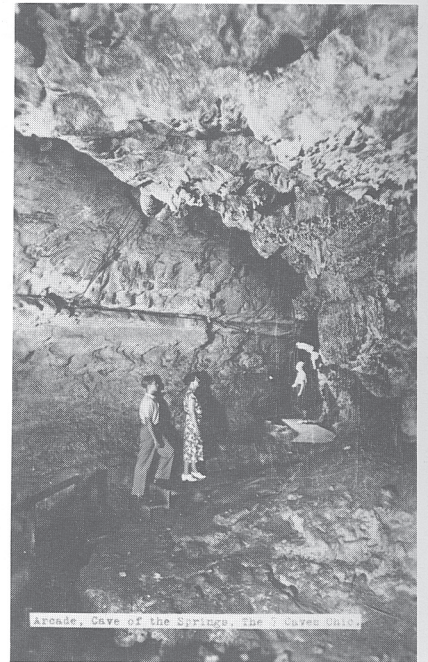


South Entrance
Natural Tunnel, Virginia

Above left; Perry's Bed Room, Perry's Cave. Put-in-Bay, OH.

Above right; South Entrance, Natural Tunnel, Virginia.

Right; Arcade, Cave of the Springs, The 7 Caves OH.



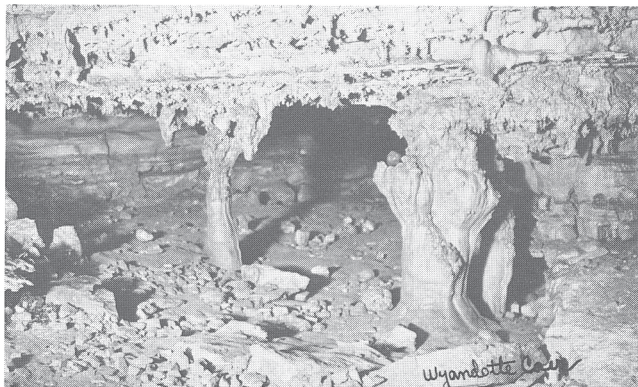
Arcade, Cave of the Springs, The 7 Caves Ohio



Left; Fountain of Youth, Endless Caverns, New Market, VA. At the "Fountain of Youth", its precious elixer distilling from the drip of one slender stalactite, a jar gathers two and a half gallons of clear, cold, drinking water each day.

Below left; Wyandotte Cave.

Below right; M'Kimie Cave entrance, The 7 Caves, OH. Picturesque and intriguing with its travertine covered walls, but M'Kimie was more interested in its security as a hideout.



Wyandotte Cave



M'KIMIE

EDITORIAL

This issue of *Pholeos* marks its tenth year of publication. An editorial commemorating an anniversary might be expected to remind the reader how the journal has risen from humble, if not shaky, beginnings to attain its present format, dimensions, and quality. It is not so in this case, since *Pholeos* has not changed; its first issue established a reputation which has been maintained through succeeding editorships and changing Grotto personnel, the improvements being mainly in its legibility (clearer printing and type-font), its size (longer articles, and more of them), and accuracy (fewer errors; vigorous proofreading). Otherwise the nature of its contents has remained the same. *Pholeos* is primarily a journal of cave exploration and cave sciences, the latter including geology, biology, and ecology, with special attention given to the caves of Ohio and eastern Kentucky - reflecting the two main projects of the Wittenberg University Speleological Society. The Ohio Cave Survey, under the directorship of Professor Hobbs, publishes results of its continuing inventory of the state's caves regularly in *Pholeos*, which is perhaps the journal's unique contribution to speleology. The Grotto's work in eastern Kentucky began as a complete inventory and re-mapping of the Carter Caves, resulting in the discovery of several new caves and pits; reconnaissance has been started in other cave areas with varying potentials further south, areas apparently not yet investigated or reported by other organizations.

With this issue we enter the realm of speculative fiction with a tale entitled "Memory;" the present editor hopes that those readers of *Pholeos* who prefer more "action" and dialogue in its contents will be hereby appeased. Its distinguished author, Ralph Wollstonecraft Hedge, is a brilliant parodist well known to this editor, and now, it is to be hoped, to an elite and discriminating readership. Mr. Hedge (for that is not his real name) prefers to keep his first appearance in these pages anonymous, lest the advance reviews of his offering turn

threatening, if not worse. For those with gentler tastes we include a poem by Grotto member Dan Alsmeyer of Columbus, expressing simply, yet with great feeling, two-thirds of the National Speleological Society's familiar motto, the necessity of leaving footprints being tacitly implied. We also present a "first," at least in these pages, a delightful account of a visit to Carter Caves by a very small - (but let's not spoil the secret!).

Reprints of articles from other (and sometimes obscure) sources are included in *Pholeos*. These are chosen for three reasons: 1) their interest as "current event" speleological topics deserving wider exposure; 2) their supplementation of the Grotto's several current projects, for example, the Ohio Cave Survey; and 3) their value (we must admit) as mere filler. An editor in a pinch would rather reach for the "filler bin" than put together a hastily-concocted article himself, but in this issue the editor has chosen a brief paper of his own authorship, written in 1963, and never before published. Its inclusion seems warranted because the Grotto is now beginning to explore the Natural Bridge State Park area of eastern Kentucky for new caves; the next issue of *Pholeos* will contain Grotto member Bill Stitzel's description and map of nearby Ace Bowen Cave - or what presumably is that cave.

The editor owes his gratitude (perhaps "grottitude" might be the *mot juste*) to the Grotto officers for allowing him full editorial duties in the temporary absence of its elected editor, Jonathan Proctor, who is represented in this issue by a "Letter from Africa." Professor Hobbs has done much to put this issue together and to supervise its final stages, besides taking time to complete the survey of Zane Caverns and to write his long-awaited important article on it. A special thanks goes to Grotto president Monika Palunas, whose energies in service of the Grotto and its continuing success seem boundless.

— W. P. Luther

* * *

LETTER

10-24-89

Dear W.U.S.S.es,

I love Kenya! I have done so much that I don't know where to begin to tell you about it. Right now I am on the coast. It is beautiful, but I prefer the arid Rift Valley. Don't get the idea that this is a vacation, though. I have to write 7 papers, learn Swahili, and do a small independent study - all by Dec. 29. And I have 4 hours of Swahili every morning and lectures and field trips often. But this is not what I wanted to write about. I wanted to tell you about - CAVES.

I have discovered the Cave Exploration Group of East Africa. It is the only caving organization between South Africa and Spain, and it is in Nairobi. In fact, I have gone caving with them twice: once just for an afternoon and the other for 3 days last weekend. This second trip

was spectacular. Four land rovers and about 16 people (all Europeans who have lived in Kenya most of their lives) went on this expedition to Mt. Silali, which is in the Rift Valley north of Lake Baringo. We were looking for lava tubes, and we found them.

After we left the road and drove for a few hours across beautiful Africa (just like on Wild Kingdom on T.V.), we set up camp and had tea, or course. Anyway, the next morning two Pokot men met us and led us right to the caves. They were huge; the entrance was about 20 feet tall and 40 feet wide on one end of the collapse. Of course they made me enter first to be the first "European" ever to enter this cave.

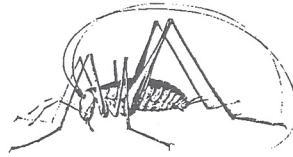
We surveyed over 1km of passage (rough survey - not too accurate) and found much evidence of animals. The dry

guano was very thick with a strong ammonia odor. In one section of the cave were so many flying bats that I was bombarded constantly by them. We also found porcupine droppings and quills, a mummified baboon, many skins from a lethal snake, a hyena jawbone, and other various bones (probably dragged in by porcupines). We also found pottery near the entrance and a giant termite mound that

went through the ceiling to the surface.

I am writing a paper on lava tubes and their formation on Mt. Silali. Maybe Pholeos will want it next time. Anyway, I'm having a great time and I'm getting a great tan! See you in January.

Sincerely,
Jon Proctor, '90



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ZANE CAVERNS: AN ISLAND WITHIN AN ELLIPSE

by H. H. Hobbs III
NSS 12386Re,Fe

[EDITOR'S NOTE: Horton Hobbs' article on Zane Caverns is the fourth serious study ever published about any cave on the Bellefontaine Outlier, the third being Donald L. Peters' 1987 essay on the hypothetical origin of the breakdown rooms in Ohio Caverns (published in *Pholeos*, 9(1), p. 7). The other two studies considerably antedate these - Thomas Hills' 1916 article on Ohio Caverns (then called Reames Cave) appeared in the *Ohio Journal of Science*, as did George White's partial inventory of Ohio's carbonate caves in 1926, which included both Ohio and Zane Caverns. These two caves are successful, well-maintained commercial operations and are among the largest in the state; each represents a different type of cave, thus perhaps a different or at least diverging speleogenesis: Ohio Caverns has developed horizontally, Zane vertically. One is low, sinuous, and branching; the other high and straight, resembling a fissure. Their patterns have been controlled by joints, and bedding-plane enlargement has occurred in each, but Zane is conspicuously formed in what looks more like a major fracture, perhaps a fault. Some of the caves studied by Dr. Hobbs in the Appalachian Plateaus of southern Ohio are of similar type — single linear passages in Silurian dolomite with no lateral development (see his article, "Paralleles in Pike County caves," *Pholeos*, 4(1), 1984, pp. 4-6, 14-15). The Ohio Cave Survey has examined five of the Bellefontaine Outlier caves; so far they seem to fall into one or the other type, and rumors of additional caves yet to be explored by the Survey seem to corroborate this assumption. Furthermore, caves of one type tend to group together at the exclusion of the other type, with (in some instances at least) a locally well-defined sinkhole topography. The Bellefontaine Outlier, named for that city on its western flanks, lies north of Springfield, Ohio, and embraces a portion of Champaign County and much of Logan County; some authorities believe it to be a remnant of the Appalachian Plateaus left intact during many epochs of erosion and glaciation, now isolated from the main plateau by some 50 miles of featureless till plain. Though a significant geomorphological relic, the Outlier seems not to have attracted the attention it ought to get, both for its general geology and for its potential as a major Ohio cave area. It is too soon to write the definitive "Caves of the Bellefontaine Outlier;" all we can do now is to report what little is known and to comment on its potential; with Dr. Hobbs' paper we take a step towards a more systematic investigation.]

INTRODUCTION

Beneath the rolling, glaciated hills of west-central Ohio lie unknown hidden spelean realms. Many of the topographical features of this gentle hill country are of glacial origin (thus a comparative paucity of karst), yet an isolated mass of limestone sits near the crest of the

Cincinnati Arch and forms a cave-bearing upland. The upland or "bedrock high," the so-called **Bellefontaine Outlier**, is surrounded by more ancient Silurian rocks (Fig. 1) and consists of a variety of rock types, including a modest band of Devonian limestones and shales that surfaces in the environs of the highest point in Ohio, Campbell's Hill (elevation 472.6 meters, 1550 feet). This "ring of limestone" outcrops in a band around the Outlier which is covered with a veneer of Ohio shale and glacial till (with a soil cover of St. Clair silt loam and the Weikert shaly silt loam - Waters and Siegenthaler 1979) that mask the nearly horizontally layered Columbus limestone, a profusely-jointed and often cherty bedrock. These Devonian units are situated 30 - 40km west of the parent mass of Devonian rocks in the central part of the State from which they have been separated, primarily by erosion (Moses 1922). Within the Outlier, the carbonate rock unit is exposed only rarely and intermittently on the slopes or along the flanks of small local streams that have flowed off the resistant shale to breach the limestone. Relatively few karst features (sinkholes, sinking streams, springs, caves) are apparent; thus, access to and exploration of the underlying limestone solution features are grossly limited. With modest surface drainage, localized sinkholes, apparently some diffuse and considerable conduit flow, and numerous bedrock fractures that "breathe" large volumes of air, it is very likely that significant development of solution features has occurred (and continues to occur?) in the Outlier, yet locally only a few caves are known to exist in this crystalline limestone. Of particular interest to this discussion is Zane Caverns, a commercial cave situated on the east-central side of the Bellefontaine Outlier. This cave is located near the eastern slope of the Outlier and 5km northeast of Zanesfield in Jefferson Township (see Fig. 1). This two-level cave passes through a spur of a dissected hill and has a total length of 465.8 meters (1528 feet) as determined by a recent survey by the Wittenberg University Speleological Society of the National Speleological Society.

HISTORY OF CAVE

Several tales have passed down concerning the discovery of the cave and it remains unclear who first entered the cave and when. One story indicates that a young boy found the cave after his dog fell in a "hole" and dropped down into the cavern. This occurred sometime around 1892 and supposedly the dog was never again seen. A hunter, a Lawrence or John Dunlap, is generally given credit for its discovery in 1893. However, an article appearing in the September 1891 issue of *The Mineralogists' Monthly* (Anonymous 1891) indicates that the cave was discovered in that year. George Unangst owned the farm on Jerusalem Pike where a brother of his discovered the cave while hunting:

"He noticed in a small depression a hole in the ground which aroused his curiosity. He widened the orifice by digging until he came to two stones between which was a small crevice.

"He broke the stones and descended about thirty feet, where he came to a stone ante-chamber, leading into a large passage, the size of which was not discernable."

A partial exploration showed the cave to be about "600 feet long and lined with numerous smaller rooms. At either end is a lake one of which is 25 feet deep." Shortly thereafter people began to enter the cave (then called **Unangst Cave** or **Unagst's Cave**) for brief visits. They were lowered through the hole via a basket and given a kerosene lamp for a self-guided tour of the cave (Platt, 1989, indicates that during the early 1900's these tours cost \$.10). There were no restrictions about the removal of speleothems and the cave was virtually picked bare by memento-seekers. One should note that these visitors were not seeing all of the cave shown on the enclosed map but were restricted to the **Old Cave**, the only portion known at that time. In 1922 two school boys are said to have enlarged the entrance to an animal den on the opposite (east) side of the hill and thus discovered the **New Cave** (this cave was not then contiguous with the Old Cave). A Mr. Richey was next to enter the new section and view the passage with its profusion of speleothems. To protect the resources of this cave a building was constructed over this new entrance which was enlarged and modified and concrete steps and a door were put in place. On 30 May 1924 the cavern was opened to the public and was called "Zane's Caverns" in honor of the Zanes, a family steeped in regional Ohio history. Tourists entered and viewed the New Cave, were brought out, and then were taken to the Old Cave. Because this procedure was logistically cumbersome and since the two caves were developed along the same joint system, the narrow, impassable crevices between them were enlarged during the winter of 1924-1925. This resulted in the connection of the Old and New caves and allowed tour parties to enter one entrance and exit the other (the original opening was covered - see Fig. 2). In 1925, for an admission fee of \$.85, the cave could be toured along lighted paths and bridges (White 1926). Presently the cave is owned by Sally and Casey Mann who have recently put the cave on the market for sale.

CAVE DESCRIPTION

Very simply stated, Zane Caverns is a small, isolated, karst feature situated in a dissected crust of carbonate rock. It is a linear, relatively straight fissure resulting from solutional enlargement of joints in the Columbus limestone (see map). The major portions of the cave are developed along a NE-SW trending joint (Fig. 3); a lower level near the southwest part of the cave is an expanded, intersecting, north-oriented fracture. No stream occurs and no scallops are observed in the cave, thus it is highly unlikely that the cave has ever carried large volumes of water. The lower levels almost certainly are of phreatic origin and the upper level probably has resulted from a combination of phreatic and vadose activity coupled with incision of the roof and slumping of wall rock.

The southwest entrance to the cave is the "entrance"

used for commercial tours and the northeast entrance is the "exit," both of which have cinderblock buildings enclosing them. The entrance is an artificial opening whereas the exit is a modified natural orifice. The tour consists of coursing the entire length of the upper level of the cave, a fracture enlarged by solution.

After entering the entrance building via an enclosed ramp extending from the cave shop, a descent of two flights of stairs drops the visitor some seven meters to the actual entrance to the cave (Fig. 4) at an elevation of approximately 373 meters (1223 feet), some 4 meters below ground level. An additional five steps down leads into the 6m wide **Reception Room** (Fig. 5). Here a prominent bedding plane and several thin layers of chert can be observed and traced throughout most of the cave. Also the major joint or fracture that has enlarged to form the cave is visible here. (Throughout much of the cave this fracture is visible and gravel washed in from the surface has filled the upper portions of this joint in some areas). From this area the largest continuous passage in the cave (essentially a canyon) can be viewed (Fig. 6). A railing is encountered in this room some 16m into the cave and 10 steps descend to an 8.5m long bridge (Fig. 7) which crosses a lower level that is often filled with water. When "dry", this lower passage is very muddy with numerous pools and a maximum ceiling height of 1.8m (most of the passage is less than 1m high). In cross section the passage is wider than high with a relatively flat ceiling. This is in sharp contrast to the upper level which is generally a tall, narrow triangle in cross section (see map). This lower level is oriented generally N-S with more passage development to the north (the **Subway**). A low, slimy crawlway to the south (Fig. 8) leads to a small dome having many signatures dating back to the 1930's and 1940's. For historical purposes, some of the names observed are: Elsa Parker 7/2/39, Phil Osborn 26 July 1947, Frank Yogler, John F. Nuniviller, M. Folsom, L. Brown, and H. Graham.

This lower level and others to be described below are inundated with water much of the year. No stream flows directly into the cave but water continuously seeps in, particularly along the prominent ceiling joint. The overburden covering the limestone is relatively thin, thus surface water trickles down into the cave through this and other fractures. The amount of water entering via this route is insufficient to account for the volume of water filling these lower levels. Thus, the source of water is probably related to the local ground water base level.

Back on the upper level, 10 concrete steps lead upward from the bridge to a flat floor, the terminus of the long canyon passage. Here water droplets from the ceiling land on a "nest" of **cave pearls** (Fig. 9 - see Hill and Forti 1986). In this area the **Rock of Gibraltar** and **Niagara Falls**, rock and speleothem, respectively, also are observed. Although few stalactites, stalagmites, and columns are present in this part of the cave, small flowstone deposits virtually cover the walls, ranging in color from crystalline white to orangish-red. Also, the **Honeycomb Crystal (Bee Hive Honey Crystal - Fig. 10)**, is a prominent speleothem observed on the gravel path leading to the original entrance (Fig. 11). This portal is 9.5m above the floor of the upper level and is situated in the top of the fracture in which the cave is developed. This

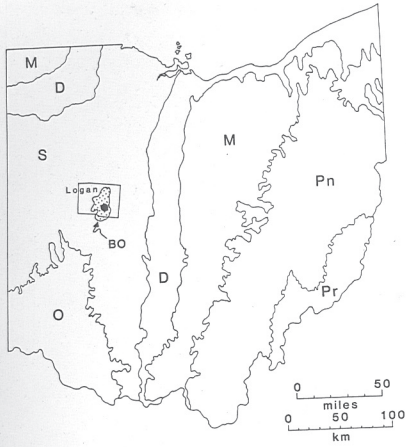


Fig. 1. Geologic map of Ohio showing age of surface bedrock and location of Bellefontaine Outlier (stippled area, BO) and Zane Caverns (filled circle). D, Devonian; M, Mississippian; O, Ordovician; Pn, Pennsylvanian; Pr, Permian; and S, Silurian rocks.

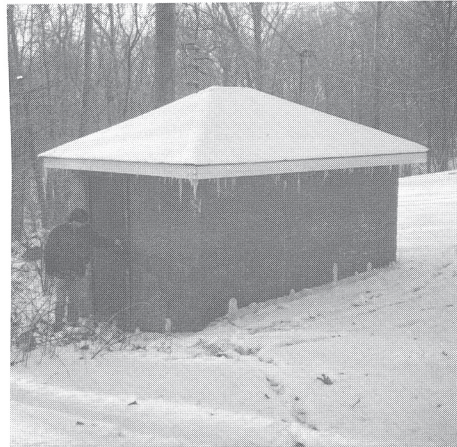


Fig. 2. Small building constructed over original entrance.

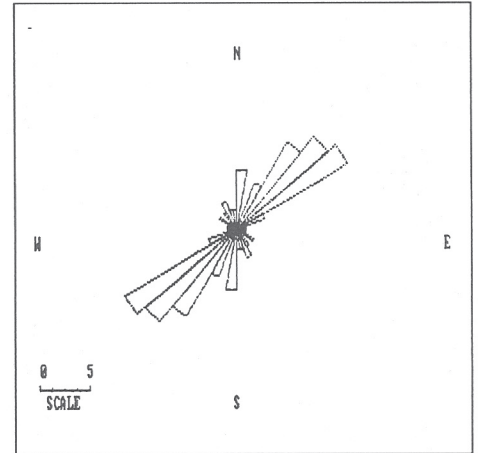


Fig. 3. Rose diagram of Zane Caverns.



Fig. 4. View from within entrance looking up stairway.



Fig. 5. View of entrance from Reception Room (note enlarged fracture in ceiling).

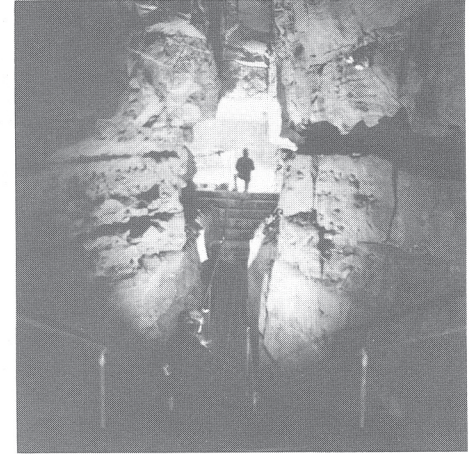


Fig. 6. View from north end of canyon passage looking toward entrance.

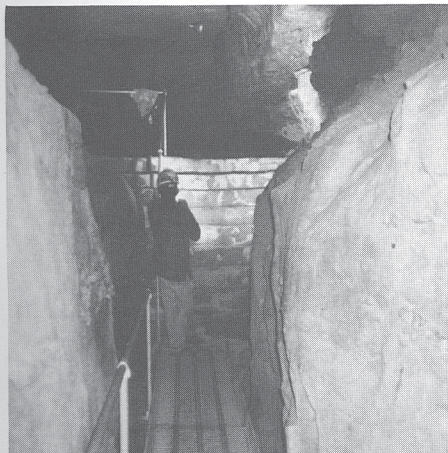


Fig. 7. Bridge in canyon passage; lower level leading to Subway and Signature Room lies below this.



Fig. 8. Low, muddy crawlway leading to Signature room.

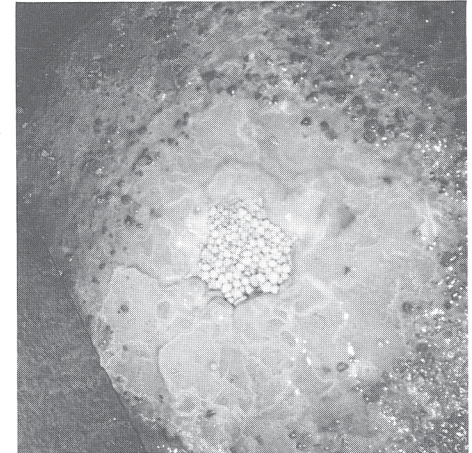


Fig. 9. Nest of cave pearls located at north end of canyon passage.

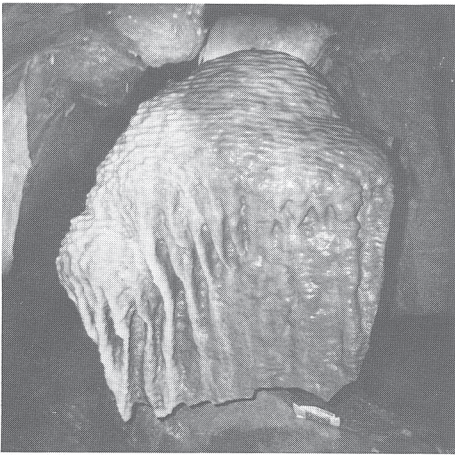


Fig 10. Honeycomb Crystal in main passage.

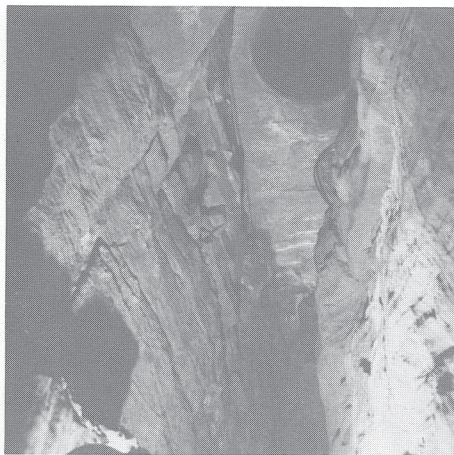


Fig. 11. View of original entrance shaft from main passage (note corrugated pipe).

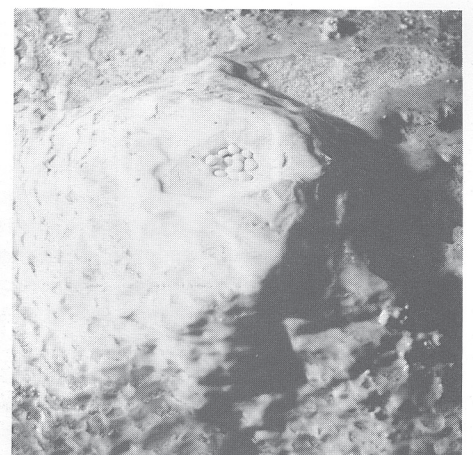


Fig. 12. Cave pearl nest in Cathedral Hall

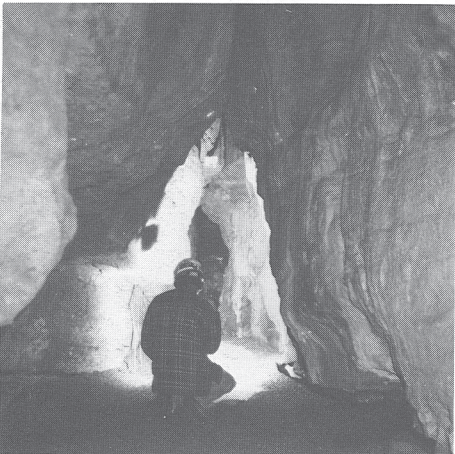


Fig. 13. North end of Cathedral Hall where walls constrict.

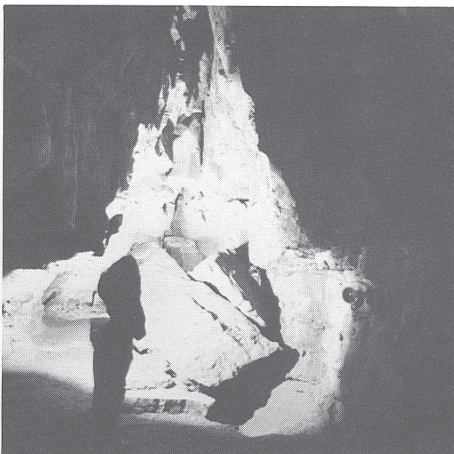


Fig. 14. Breakdown in main passage; entrance to lower level is beneath breakdown block.

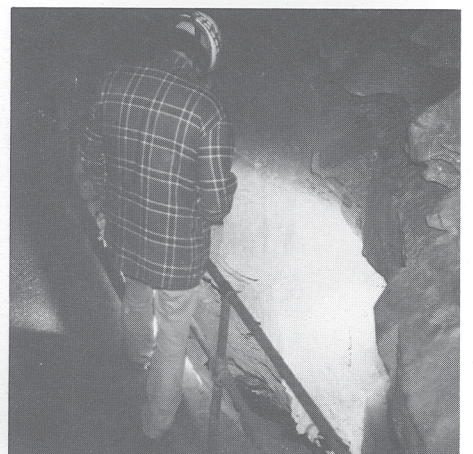


Fig. 15. View into lower level from Oval Room.

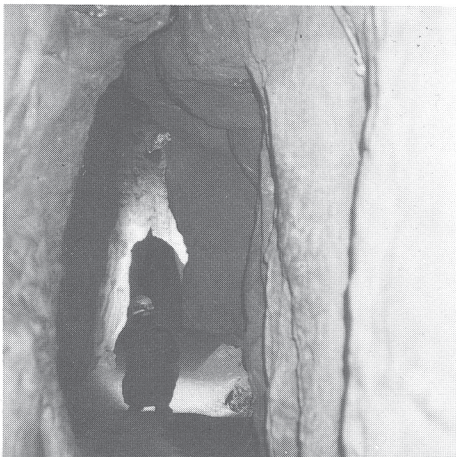


Fig 16. Bat Passage.

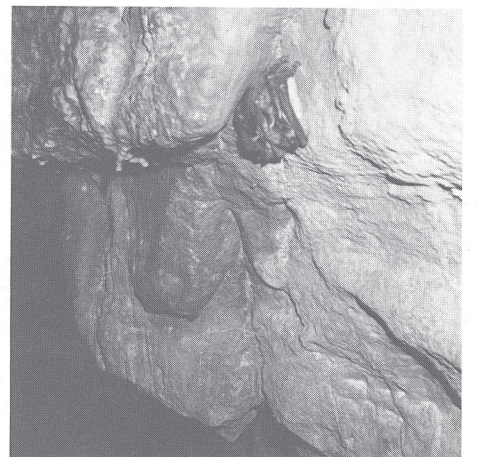
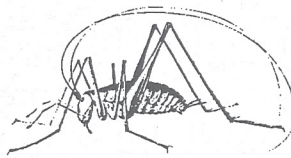


Fig. 17. The Big Brown Bat (*Eptesicus fuscus*) is fairly common in cave during winter months.



Fig. 18. End of "Old Cave" where passage splits.

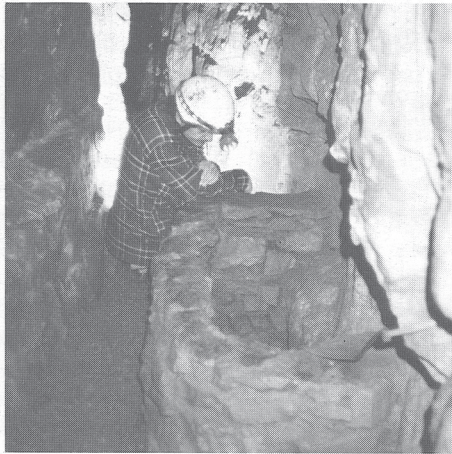


Fig. 19. Caver looking down "Wishing Well". This is entrance to lower, parallel passage.

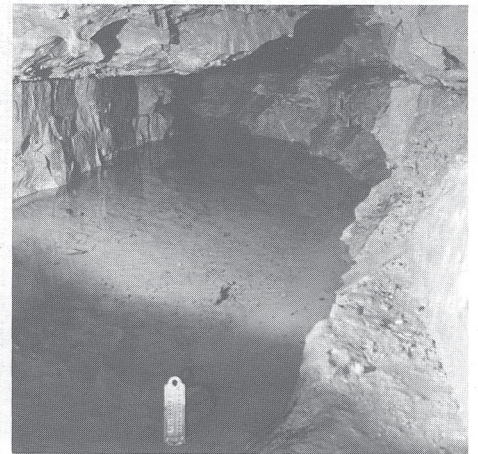


Fig. 20. Rainbow Pool with thermometer; end of "New Cave."



Fig. 21. Main passage with Bottomless Pit to right of caver.

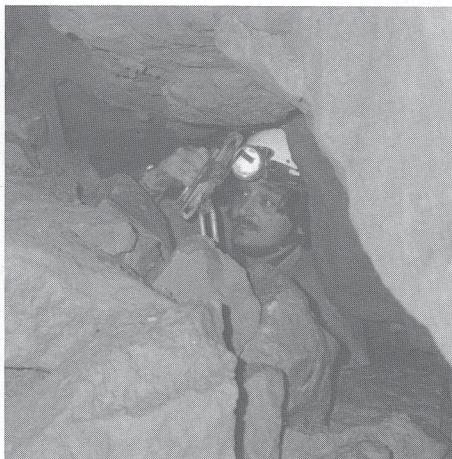


Fig. 22. Breakdown and debris, resulting from prior trail improvements, partially block lower level passage reached from Bottomless Pit.

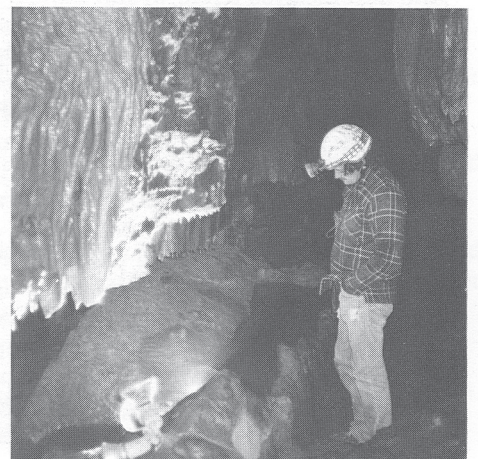


Fig. 23. Disneyland.

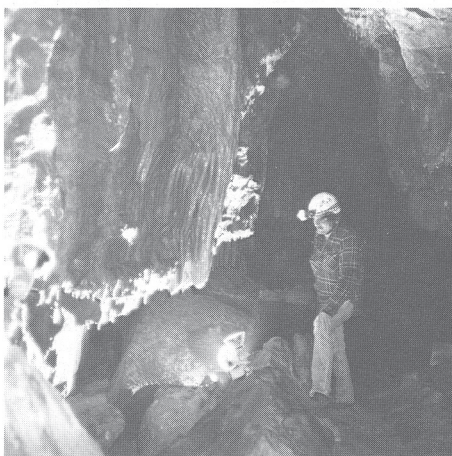
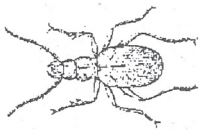
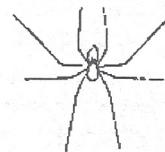


Fig. 24. Disneyland.



opening resulted from surface waters cutting down into and thus intersecting the cave; a corrugated pipe has been cemented in place to stabilize the now rarely used entrance.

The path continues to the northeast through the **Caveman's Room** (Fig. 12) to the **Cathedral Hall** where another cave pearl nest is noted (Fig. 13, front cover). The walls at the end of Cathedral Hall constrict (Fig. 14) and within a few meters the passage is partly blocked with breakdown (Fig. 15). A large block rests over an obscure passage sloping downward to a lower level. Approximately 12m further into the cave an opening in the floor of the Oval Room can be observed which also leads to the lower level (Fig. 16). Unlike the previously mentioned lower level, this passage is developed beneath and parallels the upper level. This bottom passage is low and wide and is floored with mud and breakdown. A small, very tight crawlway connects back to the sloping passage entering from the upper level and a 4.5m high small dome is the only prominent feature of the **Witches Caldron**. A low crawl (**Candlestick Crawlway**) leads out of this room to the northeast and becomes too small within 20m for further progress.

Beyond the Oval Room, steps lead upward to a constricted part of the upper level (Fig. 17) which quickly enlarges into the **Bat Passage**. This section is named for the presence of varying numbers of Big Brown Bats, *Eptesicus fuscus* (deBeauvois), that are particularly noticeable during the winter months (Fig. 18) and represent the only fauna observed in the cave. Several meters beyond the Bat Passage steps lead up to the former terminus of the Old Cave, a point where the passage splits into two formerly very narrow slots (Fig. 19). The right-hand or southerly passage (**T Passage**) has not been modified and remains narrow for approximately 9m; a small window into the continuing main passage is observed about halfway along its length. The left-hand or more northerly situated passage has been enlarged for approximately 35m where the New Cave is entered. Along this modified passage a pit to a lower level is encountered. The opening has been surrounded by a low stone wall, the **Wishing Well** (Fig. 20) and the snug slot can be descended to reach the underlying parallel passage. This mud-coated avenue with undulating floor extends to the northeast and to the southwest but does not allow continued passage to the other closely situated lower levels due to passage constriction.

The upper level continues from the Wishing Well in a northeasterly direction to join the New Cave. At this point the **Rainbow Pool** (Fig. 21) is encountered and is a nice paradigm of a perched reflection pool. This part of Zane Caverns is much more heavily decorated with speleothems than other sections; many of these undergo phosphorescence when exposed to an electronic or bulb flash - a real treat!! See Hill and Forti (1986:166-168) for further discussion of luminescence of speleothems.

The **Bottomless Pit** (Fig. 22) is observed by climbing nine steps up from the Rainbow Pool. The pit leads to another lower level which also may be reached by an additional floor slot along the south wall, 10m down passage. This level also parallels the upper one and is muddy and floored with pools and breakdown. Much gravel, rock, and debris have been thrown into this level (Fig. 23) and thus it is difficult to determine its full extent.

Its southern extremity lies in close proximity to the northern reaches of the more southerly lower level (see map) and is at the same general elevation.

Immediately above this northernmost lower section lies the most heavily decorated section of the cave: **Disneyland** (Figs. 24, 25). The Doorbell Chyme [sic], The Elephant Ear Crystal, and numerous stalactites and colorful flowstone decorate this passage. White (1926:96) states that, "Some of the stalactites are 18 inches long, and two or three inches in diameter but the usual length is not more than a foot." Such long stalactites are rare today and none were observed that measured 18 inches. A few meters beyond this area a large block of breakdown is noted along with a solutionally enlarged joint situated to the northwest of, and parallel to, the main passage. From this point the cave becomes narrower and within 25m the north entrance is encountered. A climb up 34 steps brings one to the surface, some 240m northeast of the entrance and on the opposite side of the hill.

ACKNOWLEDGMENTS

The owners of Zane Caverns, Casey and Sally Mann, have been extremely helpful during the survey of the cave. They have genuine interest in cave conservation and were particularly helpful with efforts to aid in the passage of Ohio's cave protection bill. The following individuals helped in various ways with the survey and study of the cave and thanks are extended to each: Chris Cooke, Teresa Keenan, Bob Klaphor, Charles Kronk, Howard Kronk, Steve Kronk, Debbie Moore, Monika Palunas, Nate Pfeffer, and Bill Stitzel.

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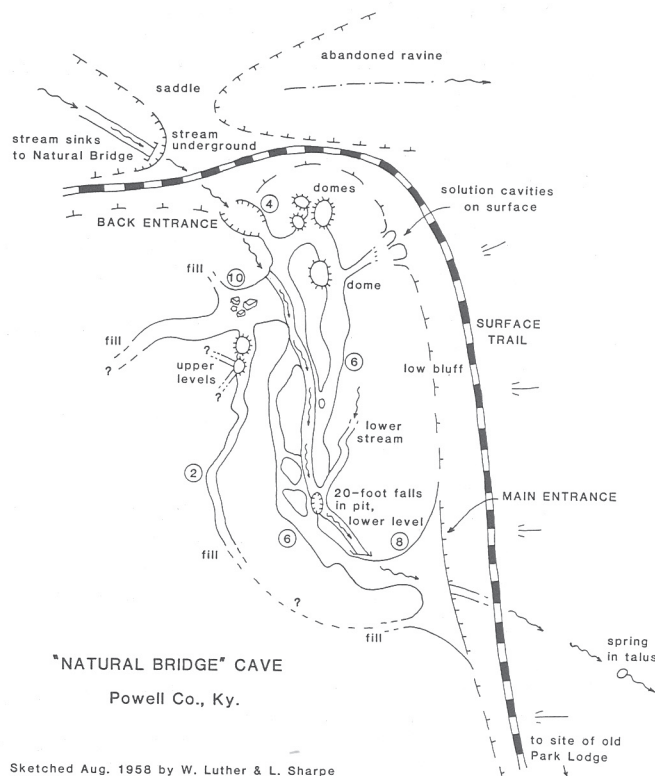
NATURAL BRIDGE CAVE

by Warren Phillips Luther
NSS 2438

[EDITOR'S NOTE: This short introduction to the second (and often overlooked) main feature in Natural Bridge State Park, Kentucky - the first being of course the famous Natural Bridge itself - was written in 1963 for the N.S.S. News but never submitted. The accompanying map, though a sketch and not a survey, is accurate in its general orientation and proportions, having been aligned to an old map of the Park on which the cave's main passage is indicated by a dotted line. Unfortunately no scale is available.]

Natural Bridge Cave is located in Natural Bridge State Resort Park, Powell County, Kentucky. Its main entrance is along the trail which ascends to the Natural Bridge from the site of the former Park lodge. This main, or lower, entrance is under a wide ledge of limestone at the head of a steep ravine directly above the old lodge site; the back, or upper entrance is further up the trail as it begins to climb the hollow below the Natural Bridge. In A. C. McFarlan's *Geology of the Natural Bridge State Park area* (Ky. Geol. Surv. Spec. Pub. 4, 1954) is a photograph of the main entrance, referred to simply as "the cave."

The stream flowing down the hollow from the Natural Bridge sinks near the back entrance, leaving a saddle or narrow divide between the sinkhole and the now-dry lower section of the hollow. This tight watercourse may at times be entered; the stream appears in the cave's largest room a short distance inside the back entrance. No doubt the cave well antedates the present surface topography, making this an instance of stream piracy as flowing water reaches an already cavernous limestone. Some of this captured water drops into a narrow slot near the main entrance after coursing through the cave, emerging presumably in the spring seen below this entrance in the steep talus slope. Under the main entrance overhang, and to the left, is a silted-up crawlway which likely once carried the stream (or part of it) out of the cave.



The cave consists mainly of this stream passage (though "trickle" might better describe its usual condition) which curves gently in a broad "S" from front to back and is nowhere far from the limestone bluff along the surface trail. Some solution cavities viewed from the trail are adjacent to a side passage leading to a series of small domes, apparently very close to the surface. Inside the back entrance is the cave's largest room which seems to be a truncated segment of a major passage, now blocked by fill. Digging into this might prove not altogether pointless, since it leads away from the area of shallow overburden. From this larger room extends a silt-filled crawl which once likely connected with the low passage left of the main entrance, mentioned above.

We explored this interesting little cave several times in 1957 and 1958, after the electric lights which once kept the cave accessible to hikers bound for the Natural Bridge had ceased functioning; the cave was no doubt a welcome shortcut or diversion on a hot day. The cave's main configurations attest to phreatic development: loops, windows, solution pockets, and a braided main conduit (see map), modified by surface waters either through stream piracy or from overhead trickling. The cave is in a ledge or shelf of limestone from which the overlying impervious Beattyville Shale has been removed, a process which has allowed for the formation of domes on a small scale. One dome, off the largest room near the entrance to the silted-up crawlway, leads into short segments of upper level passage, where also occur the cave's only intact speleothems. We got into it by standing on one another's shoulders, a neat circus trick which rewarded us with a bit of what we believed to be virgin cave. It is possible we were also the first to squeeze down the difficult slot near the main entrance (into which the stream drops also), discovering, to our astonishment, a second stream already on this lower level. Future exploration might prove this an independent stream;

perhaps it only represents some of the water captured at the back entrance, pirated earlier into the lower level. This stream passage is quite constricted and not explorable beyond a few dozen feet in either direction. In some distant aeon of the future this part of the cave, deeper underground and actively enlarging, will supplant the abandoned and perhaps by then breached upper part of the cave as surface and subterranean erosion continue their simultaneous creation and destruction.

Natural Bridge Cave's main passage is approximately 500 feet long. The cave is formed in the so-called "Mammoth Cave" limestones, an obsolete term for the undifferentiated Mississippian limestone sequence, now called by some authorities the Newman Formation, here about 60 feet thick. The ridges in the Park area are all capped by the Rockcastle Conglomerate of basal Pennsylvanian age, a massive, resistant, pebbly stratum which sustains the many natural bridges, rock houses, "light houses," and steep-walled coves found not only here but throughout eastern Kentucky behind the escarpment of the Cumberland Plateau. These spectacular formations are amply described and illustrated by McFarlan. Several other limestone caves are known nearby, including Chimney, Gladie, and Ace Bowen Caves.



CAVES IN THE NEWS

by Warren Phillips Luther
NSS 2438

[EDITOR'S NOTE: *Pholeos* has regularly printed book reviews and reprints of articles; this column will combine the two functions, summarizing articles too long to print and offering comments on them, as a means of disseminating their contents to a wider readership - and perhaps to stir up additional controversy. While it is not always necessary to bring *National Geographic* articles on caves to anyone's attention (readers of the more specialized ecology and "outdoors" magazines would also likely peruse the *Geographic*), its occasional coverage of new cave explorations or research is often accompanied by spectacular illustrations neither easy nor legal to reproduce in these pages. Sooner or later the recent discovery in Alaska will be publicized; Lechuguilla Cave in New Mexico already has, and the reader might draw his or her own conclusions on what happens when too many people hear about things imminently exploitable.]

1.

"Record pit found in Alaska," by Julius Rockwell, Jr., in *The Alaskan Caver*, 9(4), October 1989, pp. 3-4.

The setting of records brings out the sporting aspect of cave exploration ever since the French began taking speleology seriously nearly a century ago. In the United States, which has the proverbial lion's share of caves measuring well up into two-digit mileage (and greater),

depth records are perhaps not yet on a world scale, so the discovery of any deep caves or pits causes quite a commotion in speleological circles. Recently a pit was located in Alaska on Prince of Wales Island which promptly broke the old record held by Ellison's Cave in Georgia (Fantastic Pit, at 586 feet). Alaska's El Capitan Pit (as it has been named) surpassed the former record at 598 feet, not by much, of course, but that's not the point. Six hundred feet (an approximation for both pits) is a significant free drop anywhere underground, and if a 100-foot pit was a formidable obstacle in speleology's infancy, it now seems that a mere 600 feet will become routine, as is already happening in countries with much deeper caves. Mr. Rockwell points out that it should not surprise anyone, this record-breaking on Prince of Wales Island, since Alaska is after all a land of superlatives; next, after scaling the highest mountain in the United States and plumbing the deepest pit, these single-minded explorers might perhaps find the deepest cave (current record: Columbian Crawl, Wyoming, at 1,550 feet) and the longest one (surpassing the Mammoth Cave system at more than 330 MILES). The latter speculation is rather like counting your trophies before the game begins (and with the odds against you anyway), but, although improbable, it is not impossible. Long caves have been found in mountainous regions of folded, tilted, and deformed strata, and some of these are in alpine regions; Switzerland's Hölloch ("Hell-Hole") surpassed Mammoth Cave during the era of cave-length battles, but when Mammoth's mileage suddenly increased by a factor of ten during the current Great Age of Connection all the other contenders put down their plane-tables and compasses - and went on to other worthy matters. But remote, or little explored, parts of this continent are yielding some surprises: caves of all types and sizes are

being found where in previous generations nobody would have wasted time looking. The islands on the Pacific coast, from Vancouver Island northward, are wild and rugged; they contain much limestone and other carbonates which have been deformed and raised into what are now the peaks of submerged mountains; it was only a matter of time, and necessity, before explorers investigated them for caves. Both Canadian and Alaskan portions of the islands have proven cavernous; the climate along the Pacific coast is mild, though cool (at least in its southerly parts), and receives considerable rainfall - which is in some ways analogous to a wet tropical climate, where caves can form fast, and large.

The pit takes its name from El Capitan, the mountain which contains it. Surveys have already shown over 9,000 feet of passage in El Capitan Cave, about 2,000 feet below the pit, with many unexplored possibilities. Near El Capitan Pit is Snow Hole, which at a depth of 450 feet is already the third deepest pit in the United States; the potential of the entire karst area on this single island seems enormous. Fortunately, the Forest Service is cooperating with the Glacier Grotto (who are given credit for discovering the pit) to map, study, and protect this important speleological resource - yet vandalism has been a problem already. No matter how remote or inaccessible a new discovery may be, it is never safe from abuse and destruction as soon as anyone else finds out about it.

The remainder of this issue of *The Alaskan Caver* is mostly devoted to the Prince of Wales Island karst, including accounts of discovery, exploration, and assessment of the caves, and Kevin Allred's interesting geological summary of El Capitan Cave.

2.

"Welcome to the Cave of Contention," by Lisa Twyman Sessone, in *Outside*, 15(1), January 1990, pp. 15-16.

Lechuguilla Cave, near Carlsbad, New Mexico (and nearer to Carlsbad Caverns), was discovered in 1986. It has turned out to be a major find: over 40 miles of pristine wilderness, a labyrinth of mineralogical wonders, rivaling only a handful of other caves in the United States in length, volume, depth, and - in dazzling beauty. Since its entrance is on National Park land, the Park Service controls and with good reason severely limits access to the cave, but it may extend under Bureau of Land Management holdings, bringing part of the cave into disputed areas, and into disputed potential use. The City of Carlsbad would like to open the cave, or its alleged part of it, as a commercial attraction - and a fine one it would be, BUT: is it necessary? Or is it possible to sacrifice a small portion of the cave to satisfy the needs of an economy based largely on tourism, keeping the rest of it (under Park Service protection) in its original condition? And if attempts to establish the entire cave and its surface environment as a wilderness area fails - what then?

A cave open to tourists, as anyone knows who has visited any of the several hundred "developed" caves in

North America and has maintained a certain critical detachment, has to some degree ceased being a cave. Very often, in spite of a minimum amount of "improvement," it is simply the electric lights which spoil the effect; then comes a staggering array of gimmicks, slogans, and gadgetry (both within the cave and without), not to mention dioramas, amusements, and spectacles, to put the finishing touches on it. No cave, no matter how plain and insignificant, or adorned and magnificent, needs such a treatment, because a cave is not an "entertainment" but a natural wonder to be taken as it is, or as near to its original state as possible - and some caves are too delicate to survive any kind of development. The public certainly needs to see caves; even as developed, some caves afford adventures for persons otherwise unlikely ever to visit one in its wild state. For some people—the present editor included—one visit to a "show" cave while an impressionable youth might lead to a life devoted to the science and exploration of caves, and their conservation. So some sacrifice of a cave has a purpose, and can yield good results. When a commercialized cave descends to the level of a phreatic-vadose Disneyland, or worse, a pseudokarstic Wally World [sic - Ed.], then it is a fraud, and the public has been soaked. Lechuguilla is a wonderful cave; it should be seen, but by whom? And under what conditions?

The other disputed issue here is that of ownership, which includes rights and responsibilities. A cave may be owned, as part of a tract of land, since property rights descend vertically from a boundary. Shameful "cave wars" have resulted from this seemingly innocent bit of legal wisdom, since caves tend to disregard property lines. The mineral-rights laws allow ownership of whatever treasures lie beneath your property, giving you recourse if someone siphons off your oil pool from the safety of his own property, or strips your cave of onyx, if he can gain access to it beyond your boundaries. But a part of the same cave under someone else's property is not yours, even though you may control the entrance. Thus cave wars flare up now and then in certain areas, notably Kentucky, when the economy has grown weary and moribund, or where perhaps an isolated cave has brought considerable wealth and fame to its owner - and a jealous and unscrupulous neighbor calculates that a part of that celebrated cavern is only a week's work away with a backhoe... These wars sometimes turn "hot," that is, with firearms, sabotage, and liberal dosages of T.N.T. Perhaps the various parties involved with the Lechuguilla dispute, being corporate rather than individual, can resolve it by more reasonable (and gentlemanly) means; perhaps not.

The different cave-protection bills, now law in nearly half of the states, re-define a cave's status, considering it a *whole* [Here the editor stoops to an insipid pun. - Ed.] no matter who controls access or under whose property it extends; it should be interesting to see how this applies, if at all, to Lechuguilla Cave, with part of it under wilderness protection and another part perhaps in the public domain. One can predict legal maneuverings to nullify the cave's protected status; perhaps a real shooting cave-war would be less dishonest.

For detailed information on Lechuguilla Cave, refer

to the *N.S.S. News* (Jan. 1987; July, Oct., & Nov. 1988; Nov. & Dec. 1989), and *Smithsonian* (Aug. 1988).

3.

"Nest gatherers of Tiger Cave," by Eric Valli and Diane Summers, in *National Geographic*, 177(1), January 1990, pp. 102-133.

Diners in gourmet and exotic restaurants do not always consider the nature of what they are eating, even less ponder on the great lengths to which the suppliers of certain delicacies have gone to procure them, or how rare they may be. The true gourmand will of course savor each toothsome morsel with eyebrows subtly arched in recognition - for that one item of olfactory and tactile delight may nearly have cost a man's life.

Bird's-nest soup - yes indeed, and no ordinary nest will do, so when you pay out the equivalent of a week's salary for a fragrant steaming cup of this mucilaginous broth, you know you are consuming the *crème-de-la-crème*, edible nests of *Aerodramus fuciphagus* and *A. maximus*, two varieties of swiftlet indiginous to parts of Indochina, Malaysia, and Indonesia. Here, in scattered coastal caves, these swiftlets make their homes, nesting (inconveniently for the harvesters) high up on ceilings, in ledges, and among massive stalactites. The agile harvesters, skilled in an occupation with certain great risks to life and integrity of limb, perform their acrobatics on networks of bamboo rigging - without benefit of safety precautions - in reaching those heights to pluck out the precious abandoned nests. The photographs of this scaffolding, with its human burden scampering along dizzying angles, make the labor of an American saltpetre

miner seem like armchair caving by comparison.

This highly entertaining article describes the history of this singular enterprise, pointing out that the Chinese (ever on the prowl for rare treats, in this editor's observation) have remained the primary consumers of edible nests, the principal market being Hong Kong. The nests are neither as scarce nor as difficult to locate as the prized truffles unearthed by specially-trained hogs in the mesophytic woodlands of southern France (which novice diners at fancier French restaurants are quick to discover when reaching for their pocket-books), but they are held in equally high esteem by gourmands everywhere. The authors visited Rimau ("Tiger") Cave on the southeast coast of Thailand, braving not only rickety heights but considerable distance - over two miles - in the cave, accompanied by an ammoniac stench emanating from the slime underfoot; bat-guano caves might seem like a perfume shop by comparison - but no, that cannot be true; bat guano is often knee-deep and alive with crawling horrors too sickening to catalog here. Still, it is fascinating, the saga of the nest-gatherers, supplying the tables of gastronomes from Addis Ababa to the Zuider Zee (or from Pago Pago to Punxsatawney) with this aromatic nidamental delicacy.

[In a future issue of *Pholeos* the editorial staff hopes to bring you the true and amazing story of that other speleogenic alimentation, Caver's Gorp, which, although sounding like a disease, is really a nutritious life-sustaining foodstuff; its origins are shrouded in apocrypha and folklore, and its composition is anyone's guess - a veritable manna which, like Spam® and Eagle Brand® condensed milk, tastes good only in a cave...]



MEMORY

by Ralph Wollstonecraft Hedge

Etiam disiectae membrum hominae. — Horace.

[EDITOR'S NOTE: With the appearance in 1979 of a long-awaited scholarly account of the 1925 Floyd Collins misadventure (Robert K. Murray & Roger W. Brucker, *Trapped!*, N.Y.: G.P. Putnam's Sons), a copy of the first printing was acquired for the modest library of Happycrest Convalescent Home in Sauk City, Wisconsin; this volume became the center of a very curious incident. One of the patients, a chronic amnesiac named Alonzo McWilliams, opened the book to a certain illustration, emitted a loud shriek, and collapsed insensate to the floor. Later, in his own cubicle, he recovered from his apparent syncope and, unbeknownst to the night-attendants, en faced several pages of closely-written manuscript; then, with the aid of a shredded length of bedsheet, a chair, and a convenient section of exposed ceiling pipe, performed *felo-de-se*. Inasmuch as the late Mr. McWilliams's written comments are thought to illuminate some aspects of his adventurous earlier life and career, and may also shed

light on (or further confound) the dilemma surrounding the whereabouts of a purloined femur (with its attached tibia, fibula, and world-famous left foot), the manuscript is presented here as its author composed it, though with one name rendered by initials and one entire passage, in the interest of general publication, deleted by a line of asterisks. The author has managed to reproduce the nuances of the local dialect with extraordinary accuracy; students of comparative linguistics should find it of interest. The author's own quaint orthography and vocabulary are retained here, as perhaps relics of a defunct era in American *belles-lettres*.]

I.

When a traveller in central Kentucky forsakes the state motor-routes in the region of Munfordville, Cresap's Corners and Bee, and pursues the often unkempt secondary arteries leading westward into rural Edmonson County, he comes upon a curious and perplexing section of country. The generally flattened landscape closes in, and uncouth limestone outcrops thrust from the ground like the extremities of a rudely-disinterred corpse; while a sombre vegetation riots over the nitid rocks, banishing

sunlit cheer from the ever-deepening glades and "cuts" and the bewildering serpentine anfractuosités of the mad-deningly rutted and uneven lanes. Withal, there is presented to the eye (and, as it seemed on a certain autumn afternoon in 1929, to some subtler inward sense as well) the suggestion of a vexatious unease - as of a gathering-in of distinctly inimical forces, like the monstrous prologue to some unthinkable tragedy.

As with progressive difficulty I sought to negotiate my small motor-car along the sodden roadway that took me, on that darkly overcast afternoon, into the depths of this adumbrated setting, I experienced an alarm at my apparent surrender to such untoward impressions. For, in my capacity as the chief agent of that eccentric connoisseur and indefatigable collector, W— R—, of M—, I had on more than a few occasions been required to penetrate less reassuring portions of our globe - yet without having suffered any such assaults on a serenity which was naturally mine. Had I not, amid the frozen wastes of utter Tibet, stolen a hideous, grinning thing from a mountaintop sepulchre, fleeing with my charnel booty over uncounted miles of frigid desolation? And, to secure a dead and twisted anomaly from its forgotten stone pyramid in equatorial Gondwanaland, had I not negotiated the poisonous river-courses of an impassable and malarial rain-forest? And - more often than I may remember - my unique errands had brought me unto those ultimate repositories of unhallowed abnormality, where terror keeps court and stares down unblinking from its ebon throne: the ancient, crumbling and ghoul-haunted church-yards of rural New England. Yet now, it was with a sinking of heart, and the thrill of some fatidic fear, that I turned aside in this derelict woodland, where it seemed that from the misshapen outcroppings, over-bearing verdure and twisted lanes, there could be heard some whispered prophecy of my own doom.

A simple enough event had taken me to this region. I recalled how, only a week previously, a small packet had arrived by post, addressed in the unmistakable miniscules of that unrelenting virtuoso, W— R—, of M—, and it was with no ordinary anticipation that I proceeded to examine its contents. In this I was at first disappointed, for its bulky accumulation of newspaper cuttings merely recounted events of a few years before, when (to the vast amusement of a news-hungry public) a fanatical but hapless cave-explorer had become caught in a rock-littered underground crevasse beneath these hills, and all the appliances of rescue having proved in vain, the invaginated wretch had perished hopelessly in the midst of his subterranean predicament. Of this I was already informed. Then my interest quickened with a succeeding enclosure: a mortuary photograph of the unfortunate burrower's mortal remains. The cadaver's singular pallor - its partial decay - the odd effect of its single protruding gold tooth, and the curiously reduced ears (noted as having been *eaten* by cave-dwelling crickets) - all were most strikingly displayed, and presented a rather remarkable ensemble. But it was only when I examined the last of the enclosures, that the purpose of W— R— in the matter became clear. Here was another newspaper dispatch, of quite recent date: and it told of a ghoulish intrusion on the ill-fated explorer's tomb; of the purloinment of the embalmed

corpse; the subsequent recovery of the stolen remains; and as a distasteful postscript to the affair, the mention of a *discrepancy* in the reclaimed relics. It was this: that one portion of the cadaver had *not* been recovered; and the whereabouts of this limb (for such it was), and the question of who had effected its detachment, remained an unsolved and utter mystery! Round this paragraph, centered at the word "leg", my urgent communicant had drawn, in his familiar violet ink, a broad and emphatic cartouche.

I required no further explanation. The vast and unique collection of W— R— lay incomplete, a mere fatuous and truncated sketch, for lack of an item which (given my persistence and skill) might be located in a certain region and brought away; thus, after a few hasty preparations, I had journeyed into the Commonwealth of Kentucky.

II.

Preoccupied with these details of my quest, and still oppressed by some indefinable malignity in my new surroundings, I was soon presented with yet another annoyance - an increasing difficulty in guiding my small sedan over the evilly-constructed road I was perforce to take. Enervated as I was, steering the vehicle through the ever-deepening runnels of the narrowed track had become nearly beyond my capacities, and I must confess a coarse oath escaped my lips when, of a sudden, my attempt to evade one particularly treacherous gutter with the auto's front wheels merely sufficed to precipitate its rear carriage into the selfsame trap, with an apparent finality that no spinning of the tyres or reversals of the transmission would undo. Aghast, I emerged from the cab and, after regarding the decided engulfment of the drive-wheels, I proceeded to stare in confusion around me. A maze of trees and vines nearly joined their leafage overhead; and the barriers of layered rock, grey and desiccated as defunct mortality itself, leaned together where the road commenced yet another of its saurian deviations. In the humid and disturbingly oppressive air, nameless insects ticked out a nervous tattoo.

And this, unexpectedly, was accompanied by another sound.

Most compelling of all surprises are those which include some extra measure of the *incongruous*. It may then be understood that I experienced an actual shock when, from out of that dismal landscape, there issued the tintinnabulation of a child's laughter - a lilting, treble mirth, sudden, silvery and scintillant. I turned and gaped about me: from what quarter of this odious cloaca of nature could such a charming gingilism emanate? There was a pale presence among the shadows by the filthy roadway. I obtained a general impression of candid jewel-green eyes; of a cascade of gold-red locks; of an enticing shy smile - and of the smooth curvature of a childish form only half-concealed by a threadbare linen frock... It seemed almost an apparition to my own astonished eyes.

"Be caught in the mud, Mister?"

* * * * *

With increasing apprehension, still fumbling with my recalcitrant trouser-buttons, I had gained the next

divagation in the lane. In the increasing gloom my little companion had disappeared - was it merely my imagination that I still perceived her laughter, like the tiniest bells on some distant carillon, somewhere about me in the obnubilated woods? Then, with what must have been an audible gasp of relief, I made out the squat, dilapidated one-room cabin at the forest's edge, precisely as she had fortold ("Yew jes' wait thar, an' Uncle Tom-Bob, he'll come along an' - ooh, do thet agin, only not so hard - he kin haul ye out, thet's for sartain: jes' wait!"). For all its darkened vacancy and disrepair, it promised a bit of shelter and a respite from the vertiginous weariness that was beginning to overpower me. I trudged up the ruined steps, pushed partway aside the sagging plank door, and peered inside.

III.

"Here, yew come straight in, feller; us got no four-mallities goin' down here, no-how! Be down from th' city, er sutthin', are ye? Take a cheer."

In the reluctant light from several vacant window-apertures, I could not at once determine who had spoken. Amid a dun-coloured murk, it could be noted that an incoherent jumble of trash burdened the walls and floor of this single odoriferous room - old packing-cases, vacant tins, mildewed rope-ends, some curious rocks, disused bottles and miscellaneous broken lumber lay about in dusty disarray, testifying to long abandonment. An intense scrutiny of the darkened chamber at length disclosed the dim form of an individual whose rawboned, coarsely-clad frame sprawled in a weathered chair, where the blackest shadows fell in a cluttered corner. It was preposterous that anyone should inhabit such a place - but the unmistakable odour of a cheap, mephitic-smelling whiskey which permeated the interior, together with the notably slurred diction that had assaulted my ear, clearly indicated that some oaf, confused with inebriation, had stumbled before me into this hovel of wreckage and squalour. Disgusted, I was tempted to go out directly. "Why, yes," I muttered, "my auto has become lodged in a rut nearby, and -"



"By 'tarnal fire, how I used ter tell 'em about thet bit o' road - heaps o' times. But here now: I ain't bein' no-how perlite; lemme pour ye out a bit o' this here, now. Ain't sayin' hit be yer store whiskey eggzackly - but this here hit be good fer you, like the feller say. Warm yer insides real good, be hit ever so blamed cold about ye - cold all around, an' pressin' down, drippin'... Take a cheer, why dun't ye?"

Irritably I sank onto a packing-crate. I knew better that to refuse the ritual potation, even when I saw he had decanted the liquid into what looked suspiciously like the upturned cap of a petrol-can; and as I picked up the corroded vessel he placed before me, some bloated, whitish insect crept sullenly out of the fluid and dropped with a chitinous click to the floor. Presently, when the speaker had drawn back into his chair, I contrived to swallow some of the ammoniacal beverage. It was horrible as only an amateur distillation can be, with its reek almost

as of aether, and a flavour which could be more felt than tasted - a sort of metallic irruption behind the teeth, as from masticating tin-foil. Shocked, I jerked the foetid dram from my lips with an intake of breath.

"A-hyek-hyek-hyek—yew like thet Ol' Mule Killer - I knowed hit," gobbled the voice from the shadows. "A smart feller knows what's good, an' nothin's righer fer a man as drinkin' is - why, hit'll shore-nuff *presarve* ye, thet hit will, a-hyek-yek-yek!" He cachinnated at the ancient joke, emitting a gurgling, viscous crepitation as of swamp-gas bubbling through thick, rotting seepages in some saprophytic bog. "Say now, Mister," he went on - and while in the darkness I still could not make out his features, it was as if he had commenced to regard me more sharply - "What is hit's fetched ye t' here, did ye say? Wantin' some cans full o' what's good, mebbe? Now I do believe Cousin Henery might -"

I will not encumber the reader with a precise record of my reply - the bland fiction by which I had determined to explain my presence in these withdrawn vicinities. But, perceiving in this unexpected encounter the chance for some beginning, however small, of the quest I have already explained above, I shortly contrived to turn my remarks to a feigned interest in the numerous celebrated grottoes and crystalline labyrinths of the region, and thence, with no great delay, to the recent scandalous disinterment; and - daring to approach my subject yet more specifically - I dared to remark on the curious matter of the stolen limb. And as I reached mention of the embalmed and elusive extremity, there was drawn from my unmoving listener a kind of racking, hollow respiration, and in a deliberate and portentous drawl, he spoke.

"Wa-al, thar's mebbe sutthin' I could be tellin' ye about *thet*..."

Now it must not be thought that I applied, at first, any literal interpretation to this remark; proceeding as it did from an alcohol-besotted cranium in which facts, notions, gossip and pure hallucination were very probably combined into one undifferentiated whole. Yet, as I strained to see into the dusty shadows, struggling against the feverish and dyspeptic sensations which one draught of the venomous whiskey had begun to inflict upon me, I did hearken with an increasing eagerness to the slurred syllables that (or so it commenced to seem) might by a fortunate piece of luck help to provide a way to the goal of my singular quest.

"'Tarnal fire, thet were a nasty thaing - jes' horrible-nasty. I purely cain't make out how they thunk they'd git *away* with hit, not no-how! Jes' wuthless is what thet kinder trash is, dawgbone wuthless an' lustin' after th' filth o' Mammon, like hit tell in Gawd's holy word, fer a sack. Hit's jes' thet what's done fer pore Floyd in th' fust place - all them up-town folks a-comin' an' pokin' around an' lookin' to sell more o' their dad-burned newspapers, an' all th' time leavin' the pore feller down thet hole all lonesome - water drippin', an' nary a sound, jes' screamin' - prayin' an' screamin' an' nobody ter hear: nothin' but rock, all around, squeezein', drippin' - Gawd! hit were so monstrous awful - jes' goin' crazy-like: Angels! Angels o' Gawd, Mister, an' chicken sandwiches..."

What was the drunken fool babbling about? The dreadful liquor was making my ears ring... "And the leg,"

I insisted, heedless of my own lack of caution: "When they found him, it was - "

"An' that was th' worstest! 'Tain't enough the pore feller done *died* down thar: then they is got ter fill him up with funny-smellin' likker, an' wax him over like some kinder doll-thaing, fer folks t' laugh at - an' then all over sudden he gits dragged out, an' bumped about sutthin' jes' tarrible, an' fer Gawd sakes them wuthless animules is hack his *laig* clean off'n him! But they ain't goin' ter take no good out'n hit, not no-how, them thievin', coward-ass critters, 'cause hit's -" And then I saw it.

I have said that the cabin was suffused with shadow; but now, from the shattered interstices of a window that faced the road without, there was briefly cast a fugitive yellow glow, giving to one portion of the room a momentary illumination. It happened that my eyes, during that instant, were fixed on the mass of shadows round the ruined chair with its besotted occupant - at a point where fading day-light had dimly limned a rude cupboard attached to the wall; and I saw, to my everlasting heart-shock, how one of its shelves bore an oblong object of modest size - of a ghastly whitish hue - and of a perfectly recognisable outline: Great God! on that cracked board there rested a human -

"But here, I been fergittin' my manners, talkin' on an' on - an' yew wantin' another shot o' 'shine! A-hyek, hyek, yek; here be ye - I likes talkin' ter a feller if'n he knows what's good anyhow..."

From without, there were more suggestions of a yellowish illumination, and now the rising and falling intonations of a truck's motor were proceeding from no great distance. And as the yellow light of its head-lamps swayed crazily on the ceiling above me, I suddenly perceived that the babbling inebriate had risen and,

nearly collapsing sideways, was lurching toward me with his greasy jar of intoxicants. Battling an incipient panic, I attempted awkwardly to stand; and while his black outline swayed and staggered ever closer, and as I felt my fingers groping numbly and idiotically for the nickel-plated revolver I carry for emergencies such as this, there occurred to me a desperate plan - I would fling myself into the shadowed corner of the room, snatch the dreadful object from its shelf, and flee with it into the gathering darkness...but this was not to be.

For there was a roar of the motor outside, and simultaneously came projected a yellow glare of full intensity, flinging its candescence through the unglazed window-frames, the half-unhinged door and a dozen smaller apertures in the rotting walls, lighting the whole interior about me and throwing, at last, a searching and pitiless illumination across the uncouth personage who now leaned tottering before me. And I shrieked and shrieked with the insupportable horror of suddenly *familiar* lineaments now brightly lit and thrust close to my own: The pallid flesh, pinched in decay - the gnawed ears - and the protruding gold tooth; and above it - final obscenity! Clinging upon the nose, a fat, whitish cave cricket slowly chewing, chewing; with its hideous arthropodic deliberation -

"YOU! YOU!! YOU!!!",

Headlong, bawling, I fled that chamber of carrion horror. And then there was blinding yellow light before me, and the sudden, crashing blow that brought the mercy of unconsciousness, and the sweet clemency of forgetting. And now within the walls of this refuge for the demented, I shall seek with a noose of bed-linen the only rescue from the MEMORY that has shambled back across half a lifetime to reduce me utterly to this state of phantasmagoria and oblivion.



MY FIRST CAVING TRIP

by Winston James Klapthor

The weekend finally arrived. My dad and I packed up our car and headed south to Kentucky and Carter Caves State Park on a fine October day for my first caving trip. It was great, FINALLY I was going with Dad on one of HIS weekend excursions. For four years I had watched him pack up his outdoor gear and drive away without me, then return smelling of the great outdoors. We have always done a lot of hiking in the woods, but NOW I was going CAMPING and CAVING with my DAD. This would be GREAT!

We arrived at Carter Caves late Friday night, Dad and I set up our tent and laid out our sleeping gear. We took a long walk (the first of many) around the campgrounds while awaiting the arrival of our fellow Wittenberg cavers. I was ready to go off hiking, but Dad insisted we wait for tomorrow morning. I was so impatient; the trails looked so inviting and the smell of CAVE was in the air. The way I put it was: So many trees and so little time.

Finally the rest of our group arrived, AND I got a little lucky. They wanted to visit the SALTPETER system entering through the MOON CAVE entrance and only my dad could find this entrance at night. Dad didn't feel like caving that night, so all we did was help the group get started on their trip. When we got back to the cars and were walking around the area, a park ranger came to visit and started chatting with us. Dad and the ranger talked so long that I actually napped a little. After about three hours our cavers returned to the cars and found us still shooting the breeze with our new-found friend. Dad had told me that cavers tend to be a friendly, sociable group of people. So true it was; this wasn't our last "little" chat of the weekend.

Saturday morning arrived and Dad and I set off for a little two mile pre-breakfast hike down the trail I noticed last night. Breakfast was calling us, so we went back to camp to eat and to find out the caving plans for the day. Dad and I decided to explore the Horn Hollow cave systems. Instead of joining the main Wittenberg group and driving there, we decided to follow the hiking trails

so I could check out the different trees along the way. We took a few side excursions along our route to explore the entrance areas of some interesting caves near the trail. This was GREAT fun, the trail was just right and the caves sure seemed big to me. My dad's pretty tall, but these entrances towered over him. I was a little spooked by them so Dad decided to start me out easy by exploring a small but pretty cave called Rimstone that was located upstream a ways. I hurried Dad along while we climbed up the main ravine to the top of the waterfall above the LAUREL CAVE entrance. What a neat view, looking down and seeing some of our fellow cavers far below us as they started their own explorations.

We turned around and headed off up the valley towards Rimstone. After passing by several sinkholes, and poking around them a little, we arrived back in the main streambed. We joined, and of course visited, with a family group that was just finishing Laurel Cave and hiked with them to the entrance of HORN HOLLOW CAVE. Dad and I went over the top of Horn Hollow Cave to its upstream entrance and explored around that end of the cave. Dad tried to take some entrance photos, but I was so impatient that it didn't go too well for him.

The family then came out so we joined them and walked back a hundred yards or so to the Rimstone Cave entrance. Some of the Witt Caving Club members had joined us by now, so in we went to explore the dark reaches of RIMSTONE CAVE. Dad says it's only about 100 yards of cave, but to me it seemed a lot longer. Except for our lamps it was pitch black, there was mud on the floor, and Dad told me those pools of water partially covering the floor were sometimes even over my head. We were using electric lamps, but the club members were using carbide lamps and did they ever stink, even by my rather relaxed standards. Our cohorts went on ahead while Dad took some photos of me surrounded by one of the formation areas. The formations looked really neat - mainly flowstone and rimstone dams Dad says, but unlike anything I've ever seen before. I also found out where the musty smell comes from in my dad's outdoor clothes - the odor of cave muck, the smell of the unknown! No wonder Dad likes caving, it's such a tactile and olfactory activity. It was strange; when we got back near the entrance the smell of the outdoors made me hurry out, but part of me wanted to explore just a little more.

After visiting some more with our new-found friends, Dad and I hiked back to the Trading Post area. We then hiked down the trail behind the Trading Post into Cave Run Hollow. Along the way we stopped for lunch and ended up sharing in a large family picnic that was going on in a nearby shelter. They thought I was just-so-cute they couldn't resist asking us to join them. Boy, Dad sure seems to eat well on these trips; I guess it's on his backpacking trips that the meals consist of dehydrated food and gorp. We then explored a little cave nearby the shelter [HOT DOG CAVE — Ed.], and then headed up the valley through a huge natural arch. Awesome, just awesome - it towered far overhead and was so massive.

Dad tells me water wore it out; it really made me feel small. Then we left the main trail that headed up a stairway to follow a smaller trail along the valley. Now this is more like my kind of exploring, scampering along a narrow trail dragging my dad along behind. Then our goal loomed ahead - the gaping, huge black entrance of BAT CAVE. It has a tall fence around it to keep out visitors and protect the bats, so we stayed out. Dad says he just wanted to show me the entrance. I think he wanted to reminisce about past mapping trips into the cave. Dad's like that; sometimes he'll just stop, sit me on his lap and get all quiet and sentimental. It's OK for a few minutes, but then I'll get impatient to go explore some more.

After I had another lunch back at camp with our fellow cavers we set off on a long trail that circles the other part of the park just below the uppermost cliffs. There sure is a lot to see and smell around here. We even found some small karst openings that we poked around in. Unfortunately they didn't go anywhere. And then a mystery; while hiking a rather ordinary section of trail Dad noticed that the valleys on either side of the trail both sloped down away from the trail. He got all excited because he says the caving club didn't know about a sinkhole valley in this area, so off we went to explore the valley. The trail continued up the side of the valley so we followed it until we came to a dirt road. The road followed the top of the ridge so we walked up it and came to the golf course. Dad got real excited now; we tried walking down into the valley, but were stopped at the top of some super high cliffs. Then we contoured back down-valley and worked our way into the main streambed. Sure enough - it ran away from the golf course! This is a karst valley! Heading downstream we soon came upon the main sinkhole; it

cut through the rock and was taking a lot water. We could hear the water falling through the rock, but there was no enterable passage. RATS!

We then finished our hike up and down and around some really great cliffs and finally back to camp. Most of the club members had already left for Springfield. Some new members from Columbus were staying Saturday night so we decided to join them. The rest of Saturday was spent eating, talking and visiting around the campground. These cavers sure are friendly; not only do they love to hike and explore, but they also love to visit with each other. I'm definitely going with Dad on more of his trips: this is all great fun! Even though it rained Saturday night and Sunday morning, sending us home a little early, Dad and I were already making plans for our NEXT camping-hiking-caving trip. I'm sure looking forward to it!

[Afterword: If you are off hiking somewhere and run into a bearded man in his late thirties following a 7-pound Yorkshire Terrier, say "HI" to Winston and his Dad. The above article was loosely translated from the original Barkish by Winston's Dad - Bob Klaphor.]

(PRINTER'S NOTE: Is this publication going to the dogs?)



FAMILY'S GOLD SEARCH TO BE AIDED BY ARMY

(from Knight-Ridder News Service)

WASHINGTON — The Pentagon, long charged with plundering the national treasure, now has marching orders to find some - a legendary pile of gold bars stacked deep beneath the White Sands Missile Range in New Mexico. Congress, in its recently approved \$305 billion 1990 defense authorization report, has ordered the Army to help "conduct a search for [a] treasure trove in the Victoria Peak region" of the 3,200-square-mile missile range, a no-man's land of unexploded bombs and burned-out tanks and airplane hulks.

The searchers will be restricted to the heirs of the man who allegedly found the booty more than a half-century ago. And they will have to reimburse the government for its expenses, whether they find the treasure or not.

The Army will provide the California-based Ova Noss Family Partnership with "transportation, communications, safety and security, ordnance disposal services, housing and public affairs assistance" in connection with the treasure-seekers' efforts[,] the report said.

An aide to Rep. Joe Skeen, R-N.M., who wrote the provision mandating the Army's help, said the service wished to participate in the dig to maintain security and safety in the area.

Legend has it that Milton "Doc" Noss stumbled onto the loot in 1937 when he slipped into a cavern to escape a rainstorm while he hunted for deer near Alamogordo. He found the gold bars, stacked like firewood, surrounded by 27 human skeletons chained to wooden posts.

Local folklore says the fortune may have been an Apache Indian cache or the fruits [sic] of stagecoach robbers.

Noss's efforts to extract the treasure failed when he inadvertently sealed off the cavern's tunnel when he dynamited it in an effort to enlarge the entrance. The purported treasure remains buried 400 feet underground.

Later efforts to locate the treasure failed, and an irate investor shot and killed Noss in 1949. Hunts in 1963 and 1977, spearheaded by Noss's ex-wife, Ova, were also unsuccessful.

The latest quest is being led by a Noss grandson, helped by a professional treasure-seeking firm. The prospectors estimate their \$1.2 million search will require two weeks to survey the site, more than a month to dig and at least another month to haul the gold out.

Skeen said that's when the real fight will begin.

"Any treasure that is located will be analyzed by researchers to determine its age and possible origins," he said.

[EDITOR'S COMMENT: The statements by Rep. Skeen may give the reader a clue about which concern would rather find the gold bars first!]



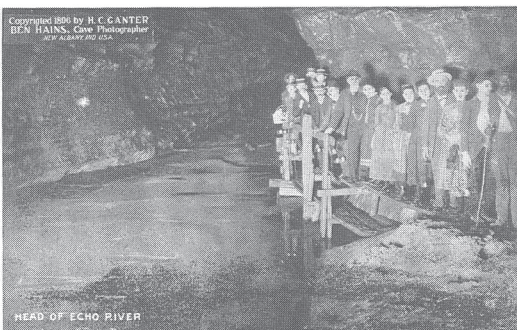
ADDENDA

The endnote numerals had been inadvertently omitted during the printing of W. P. Luther's "Some interesting Ohio caves in noncarbonate rocks," Part II, in *Pholeos* 9(2), 1989. While their exact location in the text may seem obvious after reading both the article and the endnotes, the author wishes to point out the omissions here.

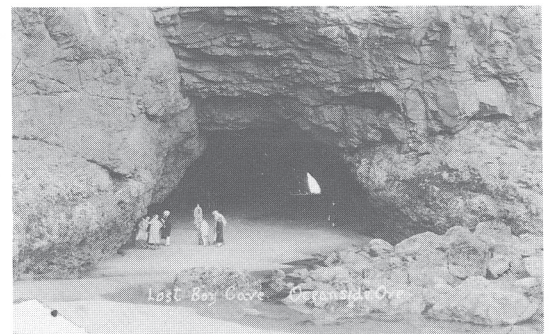
ENDNOTES

- 1: p. 2, column 1, introduction, after "Stout (1944)."
- 2: p. 2, column 2, top, after quote ending with "earthquake."
- 3: p. 2, column 2, Scioto County, paragraph 2, after "mapped it."
- 4: p. 3, column 1, line 6, after "passageway."

- 5: p. 3, column 2, after quote at top, ending with "ceiling..."
- 6: p. 3, column 2, end of first paragraph, after "mouth."
- 7: p. 4, column 1, near middle, after "blown away."
- 8: p. 4, column 2, at end of quote ending with "Rock House."
- 9: p. 5, column 1, at end of quote ending with "windows."
- 10: p. 6, column 2, near bottom, after "glaciation." The endnote itself needs to be corrected; the date of Smith's letter is Jan. 28, 1973, not Jan. 1.



Left: Head of Echo River, Mammoth Cave, KY.



Right: Lost Bay Cave, Oceanside, OR.

A CAVE IS MORE

A cave is more than just a hole,
with hallways winding to and fro.
A river stream, it gently flows,
the water cares not where it goes.

Some caves are deep and others long,
for beauty's still a hope.
A pit goes down, but still is found,
a caver with a rope.

The mud is deep, the passage wide,
the crawls will make you groan.
The carbide lantern lights the way,
to wonders made of stone.

Formations grow, ever so slow,
years and years it seems.
The water carries minerals down,
for sights most oft of dreams.

"Take nothing but pictures," the motto goes,
enjoy it as you can.
"Waste nothing but time," is what they say,
that message holds a plan.

A rimstone dam, though made of stone,
is fragile to the touch.
A misplaced foot, a jolt, a jar,
and damage, oh so much.

So next adventure, recall this,
it's an inkling that should grow.
A cave is more than just a hole,
with hallways winding to and fro.

— Dan Alsmeyer (1989)

