



No. 35 - December 1994

IKC Update

INDIANA KARST CONSERVANCY, INC.**PO Box 2401, Indianapolis, IN 46206-2401***Affiliated with the National Speleological Society.*

The Indiana Karst Conservancy, Inc. is a non-profit organization dedicated to the conservation and preservation of caves and karst features in Indiana and other areas of the world. The Conservancy encourages research and promotes education related to karst and its proper, environmentally compatible use.

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Cover - Grant Van Hemert in the main passage of Shiloh Cave,
 Lawrence County, Indiana. Photo taken by James Adams.



Publishing courtesy of **Myotis Press**, Editor and Publisher Keith Dunlap.

QUARTERLY MEETING REMINDER

SATURDAY, DECEMBER 3rd, 7:00 PM

BLOOMINGTON, INDIANA

IU GEOLOGY BUILDING, ROOM 143

(same room as BIG meeting)

The quarterly meetings are for members and other interested persons to have an open forum for talking about cave and karst conservation and related topics. Past, present, and future IKC projects are discussed to solicit comments and input from our members and the caving community as a whole. The meetings are informal, and everyone is encouraged to attend and participate.

Preliminary Agenda Items: brief recaps of last quarter's activities; Wayne's Cave restoration trip; Shiloh Cave activities; Suicide Cave activities; Jefferson Proving Grounds update; Spring Mill State Park - Bronson Cave project; Donnehue Cave problems; Research project grant solicitation; cave temperature monitoring project; Special Publications Committee report; NCMS activities; IDNR activities; HNF activities; and more....

Meeting directions: The IU Geology Building is located at 10th and Walnut Grove. Tenth Street runs east / west and is one of the major streets that cut across the IU Campus. Park behind the building, parking permits are not enforced at night. Enter the building from the rear at the west end. The room is halfway down the hall on the right.

EVENTS CALENDAR

- 03 DEC = IKC QUARTERLY MEETING, Bloomington (see above)
- 05 DEC = INDIANA CAVE SURVEY MEETING, Columbus (contact Dave Black)
- 11-12 DEC = MARENGO CAVE RESTORATION WEEKEND (see page 5)
- ?? FEB = IKC E-BOARD MEETING, Indianapolis (TBD)
- ?? MAR = IKC ANNUAL BUSINESS MEETING/ELECTIONS, Indianapolis (TBD)
- 22 APR = INDIANA CAVE SYMPOSIUM, Spring Mill (date and location tentative)
- 23 APR = UNDER-EARTH DAY VI, Sullivan Cave
- 25-28 OCT = NATIONAL CAVE MANAGEMENT SYMPOSIUM, Spring Mill Inn

Membership to the IKC is open to anyone interested in cave and karst conservation. Annual dues are \$15. Please see inside back cover for the membership application form or to make a donation.

The *IKC Update*, distributed for free, is published quarterly for members and other interested parties. The purpose of this newsletter is to keep the membership and caving community informed of IKC activities and other news related to cave/karst conservation. Submission of original or reprinted articles for publication is encouraged.

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RAMBLINGS FROM THE PRESIDENT...

This issue of the *IKC Update* is dedicated primarily to Shiloh Cave in Lawrence County, one of the caves for which the IKC holds a lease and manages. Although the Shiloh lease was renewed in 1992, it wasn't given much publicity since the existing gate on the leased entrance had been breached. It was felt necessary to replace it with a working gate before making its accessibility widely known. Thanks to the dedication of a number of people, this was accomplished -- and the cave is again available for recreational visits and scientific study.

Shiloh Cave is quite well-decorated and requires almost no effort to enter; despite this, it remains in remarkably good condition. It will be a challenge for the IKC to manage this cave resource in an appropriate fashion -- to monitor a kind of biota (blind crayfish) which we haven't dealt with in the past, and to make amendments to our management policies as occasion demands.

In addition, the Executive Board has recently approved a Management Plan for the recently-leased Suicide Cave (Washington County). Many of you may remember Suicide as one of the showpieces of the NSS Convention of 1992. Although Suicide does

not contain an extensive amount of sensitive biota, its easy access from the road and recent problems with vandals earmarked it as another karst feature in need of preservation. More about Suicide will be published in the March *Update*.

There has been much recent attention to the concept of the IKC becoming a landowner. However, due either to the reluctance of current landowners to subdivide their properties or sheer lack of funds, the IKC still needs to pursue other means of protecting the karst resources of Indiana. In all likelihood, leasing of lands to assist in management and relieve the landowner of liability concerns will probably remain the primary means by which the IKC is able to manage a significant number of properties. To this end, it is very important that the IKC maintain a high, positive profile in order to attract other landowners and their endangered resources into our stewardship. Each of us must do our part.

Personally, I'm very excited to be given the opportunity to assist in the protection of these two caves. Hopefully there will be many more to come.

- Bruce Bowman

The Suicide Cave cleanup crew with their spoils.

photo by Bruce Bowman



NEWS BRIEFS...

- ☐ After many months of effort by Bruce Bowman, the IKC and the owner of Suicide Cave (Washington County) have reached an agreement that should provide additional protection and stewardship for Suicide while also allowing limited visitation to the cave. Complete details will be covered in the March issue. Until then, if you would like more information, contact Bruce Bowman.
- ☐ As the first order of business related to Suicide Cave, The Central Indiana Grotto and the IKC sponsored a joint cleanup project in the cave on November 6th. Small amounts of graffiti and (mainly) arrows were mud-washed, and about fifty pounds of trash was removed. The remnants of an old wringer washing machine were also removed from the entrance room, the register was inspected, and an IKC sign was erected. Thanks to Bruce Bowman, Ronnie Burns, Kim Kohal, Dave Little, Roy Logan, Ray Rough, Betty Watson, and Steven Watson for their assistance in this effort (see photo on page 4).
- ☐ The IKC also held their annual cleanup trip to Coon Cave (Monroe County) back on August 28th. Efforts continued in removing/mud-washing graffiti in the lower levels. Participants included Craig Aeschliman, Dan Aeschliman, Heather Collie, Keith Dunlap, Dennis Gibson, Mike Hood, Roy Logan, Ken Redeker, James Schmedide, Jonathan Statmann, Bill Tozer, and Debbie Tozer.
- ☐ On the weekend of February 11th and 12th, the owners of Marengo Cave will be holding their annual restoration field camp. Participation will be limited to the first *thirty* cavers to register. The emphasis this year will be in the Old Town Spring section of the Marengo System. Old Town Spring is wet, so dress accordingly. The cave is in pretty good condition except for some graffiti. If you haven't been in this section of the cave, you will enjoy it. For more information, call Marengo Cave at (812) 365-2705.
- ☐ Start planning now for the 1995 Indiana Cave Symposium. Now in its third year, the symposium is an excellent opportunity to share with others your cave related projects, be it surveying, conservation, biologic, scientific, or whatever. While the location and date have not been confirmed, it will most likely be held at Spring Mill State Park on the Saturday evening before the Sullivan Under Earth Day cleanup. A pitch-in cookout prior to the presentation is anticipated. If you would like to make a presentation or would like more information, contact Dave Black at (812) 951-3886.
- ☐ Surveying and inventorying continues in the Jefferson Proving Ground with new caves being discovered on every trip. Since January, twenty-one caves have been surveyed and documented and several more located. Most of the caves are small, low, and wet, but always interesting and challenging. With ninety square miles of "unexplored" property to ridgewalk, there will be several more years of work ahead.
- ☐ The Indiana Department of Transportation (INDOT) conducted a public hearing in Mitchell on October 27th pertaining to the next section of SR 37 to be upgraded. This 2.8 mile, \$17,000,000 five-lane project will start at the southern end of the previous project and extend to just south of Mitchell. Keith Dunlap attended the hearing and prepared formal comments for the IKC which will become part of the formal design package. On the whole, the preliminary designs presented looked very favorable, with considerable attention given to highway runoff management related to water quality issues. The majority of water will be collected via gutter drains and directed toward several three-stage treatment systems. Each system will consist of a petroleum trap with siphon pipe, a large sediment pond, and a horizontal peat filter. The water discharging from these systems will be directed toward sinkholes that will not be extensively modified, unlike the sinkholes on the northern section of this project. While all may not be perfect with the design, kudos should be given to Bob Buskirk in INDOT's Environmental Section,

IDNR staff, and USFWS staff for working together to devise a practical, environmentally-appropriate highway drainage system.

- ☐ With three rescues from Donnehue Cave (Lawrence County) in October, the culvert entrance to this cave is becoming a real liability to the state of Indiana, local law enforcement agencies, cave rescue personnel, and the general perception of cavers by the public (see the newspaper reprint on page 24 for reactions after the second rescue). There have been numerous comments (dating as far back as 1973 when the culvert was first installed) to close this man-made entrance to reduce visitation, allowing access only via the lesser-known boat club entrance (note: Doghill's entrance should be considered closed). Opinions are mixed and the IKC may or may not take an official position. Please voice your comments on this matter.
- ☐ Spring Mill State Park has received funding from IPALCO's Golden Eagle Environmental Grant for the construction of a wood stairway and small platform for hikers to view the entrance to Bronson Cave. Erosion and soil compaction have expanded as people try to get closer to the cave opening. The cave system is home to the northern cavefish, which is on the state endangered species list. By constructing the stairway, the park hopes to limit access to the fish habitat, while still providing the opportunity for people to view the cave opening. For more information or comments (both positive and negative), contact Park Manager, Mark Young at (812) 849-4129.
- ☐ The USFWS has formally requested an investigation by the Indiana Department of Environmental Management over the swimming pool at Spring Mill State Park. Apparently the pool has been leaking up to 14,000 gallons a day since 1992. The concern is that the highly chlorinated water escaping constitutes an illegal/unpermitted point-source discharge of a toxic substance. Since the discharge is in karst topography known to be a habitat for the state endangered northern cavefish, the USFWS wanted IDEM to determine the leak's relationship to the known cave systems. The Indiana Department of Natural Resources has responded by stating "Our [park] manager indicated that IDEM has been down to investigate the situation and was not concerned about impact on the karst fauna in the Hamer and Twin Cave Systems. The pool is in fact leaking heavily, but it is apparently confined to surface flow. Additionally, the pool is not located within the drainage area of the cave system....We intend to rehab the pool with our next appropriation but that will mean we need to go one more year with the leak problem."
- ☐ The annual business meeting of the Hoosier Environmental Council, Indiana's largest environmental organization, was held on October 9th at Jameson Camp west of Indianapolis. Bruce Bowman represented the IKC at the meeting. Problems with funding and reallocation of existing funds have resulted in the resignation of two of their directors; in general, there was something of a shakeup going on. To HEC's credit, the organization maintains rather ambitious plans for environmental activism. As in the past, the IKC will likely interact with the Air and Transportation director, the Natural Resource director, and those associated with the Legal Defense Fund, as we work to protect the environmental interests that may be threatened by road-building in southern Indiana.
- ☐ To show that cavers are not necessarily one-dimensional, several cavers including Bill Baus, Keith Dunlap, Tem Hornaday, and Kristie Liebhaber helped with trail building on the Hoosier National Forest. The specific project was a two mile section of trail connecting the Hayes Road trailhead into an existing loop trail in the Deam Wilderness, east of Lake Monroe. Organizing the activity was caver/IKC Director Larry Mullins, who is also the Recreational Specialist for the HNF.
- ☐ Another project that is not directly cave related, but involves one of our Directors, Scott Johnson (IDNR non-game biologist), and will be of interest to most members, is the

planned reintroduction of the river otter (*Lutra canadensis*) into the Muscatatuck Wildlife Refuge this winter. Not seen naturally in Indiana for almost a century, the river otter project follows other successful reintroductions (bald eagles and peregrine falcons) to return some of the natural species lost due to unregulated hunting or other environmental reasons. If you would like more information, you may contact Scott at (812) 334-1137. You can also purchase a special river otter T-shirt by sending your size (S, M, L, XL) and \$14.45 to Otter T-shirt, c/o Richard McIlvaine, Route 16, Box 434AA, Bedford, IN 47421. \$4 from each shirt goes to the IDNR non-game fund to help fund this project.

- ☐ The annual collection of aluminum cans at Cave Capers ("*Cans for Karst*") along with aluminum printing plates from *Myotis Press* has netted the IKC \$14.61 in revenues. More importantly though, it has redirected 54 pounds of reusable material from the landfill, plus significantly reduced the energy requirements needed to make new cans.
- ☐ Although your IKC dues do not expire until the end of March, we would gladly accept pre-payment for next year or an extra cash donation for anyone looking for a 1994 tax deduction. The IKC is an IRS 501(c)(3) non-profit organization with all dues and donations fully deductible.

IKC/CIG WAYNE'S CLEANUP TRIP - DEC 11th

The IKC and the Central Indiana Grotto are once again co-sponsoring the annual cleanup trip into Wayne's Cave on Sunday, December 11th. Our intentions are to have a little fun while performing some much needed conservation/restoration work.

For those unfamiliar with Wayne's Cave, it is Monroe County's second longest with 4.25 miles of mapped passage. Wayne's is notorious for its 1250 foot crawlway connecting Old Wayne's and the rest of the cave. This cave is very demanding and is *not* for the first time caver, but if you are in good physical shape, have been caving enough to know what you are doing, and have the proper equipment (especially a good set of knee pads), this could be the cave for you.

The cleanup effort this year will concentrate on the crawlway and Old Wayne's, but some of the group will probably make a quick trip to Camp II. Haul bags will be provided by the IKC, but only minimal trash still exists because of our past efforts. There will be wire brushes available for graffiti removal, and we will continue to do some "mud-washing" where wire brushing is ineffective or impractical. We will also direct our efforts on spent carbide collection.

If you have not been in Wayne's since the IKC started this restoration project in 1987, you may be pleasantly surprised at the progress. The most encouraging part of expending effort in this cave is that it remains clean due to the regulated access policy the IKC has imposed.

NOTE: As with any IKC sponsored cave trip, you must have a helmet and three sources of reliable light. If you are new to caving or have not been to Wayne's before, *please* contact Dave Haun prior to the trip.

We will be meeting at the Bloomington westside Hardees (SR 37 & 48) and leaving by 9:15 AM. Because parking is limited at the cave we must carpool and will be leaving cars in the K-mart parking lot behind Bob Evans.

100 YEARS OF SHILOH CAVE DESCRIPTIONS

introduction by James Adams

In 1897, W.S. Blatchley, the well-known Indiana naturalist, described Shiloh Cave in some detail in the *Indiana Department Geology and Natural Resources, Annual Report #21*. His account, along with descriptions of nine other Indiana caves, was later compiled as a single chapter in *Gleanings From Nature*, published in 1899. [editor's note: this reference was reproduced by the Indiana Karst Conservancy as *Special Publication #4*.]

In his dramatic narrative, Blatchley tells of his near-fatal trip into what has become known as the Black Damp Passage. Blatchley's party encountered a section of "bad air" in the cave and was forced to retreat back to the main passage in total darkness after their lights suddenly went out. There have not been any other incidents of bad air in Shiloh Cave since.

The October 1958 issue of the *CIG Newsletter* carried the first modern map of Shiloh Cave (see below -- oddly, no description accompanied the map). Although it lacked the detail that we expect in modern surveys, the CIG effort shows many of the major features of the cave.

Unfortunately, Richard L. Powell again echoed Blatchley's warning of noxious gas in the Black Damp Passage in a short description of Shiloh Cave in his thesis on the caves of Indiana. *Caves of Indiana* was later re-published in 1961 by the Indiana Department of Conservation Geological Survey. This widely circulated book was probably read by several visitors to the cave. Some decided to add their own warnings in the form of the spray painted "DANGER" and "GO BACK" signs at the entrance to the side passage.

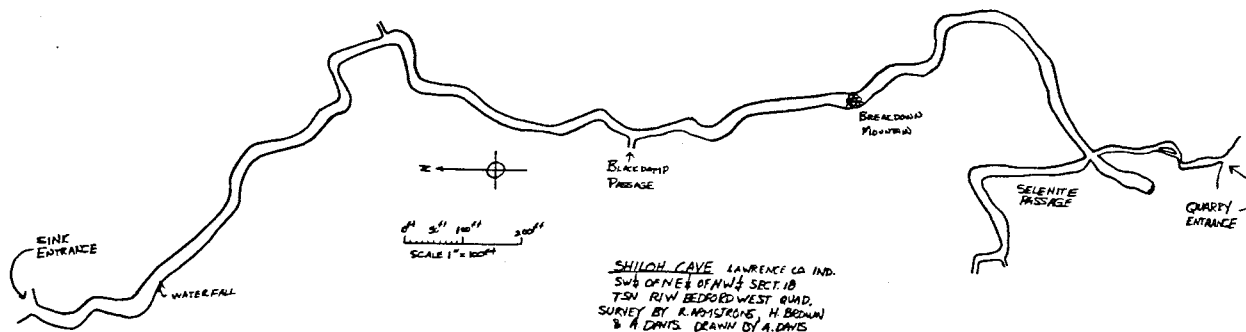
A more technical description, including the most detailed map currently available of Shiloh Cave was written by Kevin Komisarck in the August, 1978 issue of the *Bloomington Indiana Grotto Newsletter*. Komisarck's description wisely omits references to the Blatchley incident in the Black Damp Passage.

It is interesting to compare these descriptions that span almost 100 years. They provide some fine "arm chair caving."

Excerpted from W.S. Blatchley:

The entrance to this cave is at the bottom of a sinkhole a few rods north of Shiloh Church and about seven miles north-west of Bedford, Lawrence County. Except after a heavy rain, no water flows through the entrance, but a stream runs the entire length of the main cave, entering it from beneath a great mass of fallen rock which has partially closed the entrance, and meandering from side to side on the floor in its onward course. On entering, one descends rapidly for about twenty feet, and then reaches the general level of the main passage. This passage is from fifteen to twenty-five feet high and about the same width for 2,000 feet, which was as far as it was explored, the water becoming too deep to wade beyond that point. It far exceeded any of the previous caves visited in the number and size of its stalactites and stalagmites, many of which were of exceeding clearness. In the words of Prof. John Collett, who visited the cave in 1873: "The lofty sides are draped and festooned with stalactites, sometimes hanging in graceful folds, or ribbed with giant corrugations. Above, the roof and overhanging sides bristle with quill-like tubes, fragile as glass, each tipped with a drop of water which sparkles in the lamplight like a crystal jewel."

Three hundred feet from the entrance three



jets of water pour down from the right wall of the cave and add to the size of the stream along its floor. These falls vary in height from seven to ten feet, and together they produce a roaring sound which is echoed far along the main passage-way.

From this point onward the walls are dripping more or less and are fringed with small stalactites. About 900 feet from the entrance are two large stalagmites, one of which, named by Collett "The Image of the Manitou," has been broken. Originally it must have been six feet in height and eighteen inches in diameter.

In a pool of the stream in the main passage were secured two of the small aquatic insects known as "water boatmen." They belong to the order *Hemiptera*, and to the genus *Corisa*, and were the only "true bugs" taken in Indiana caves. They were probably accidental visitors, since their compound eyes were fairly well developed.

In the same pool were numerous specimens of the blind crayfish, *Cambarus pellucidus* (Toll-kampf). This curious crustacean was found in a number of other Indiana caves, and probably inhabits every one in which there is a permanent water supply. Careful examination of cave bed streams ought, also, to show its occasional occurrence outside of its subterranean homes. During heavy rain-falls the water rushes with great violence through the caves and doubtless often carries the crayfish out to the rivers. Here its light color, soft shell and defenseless condition would prove such a heavy handicap that in the struggle for existence its life would be of very short duration. It is usually found in shallow pools with muddy bottom rather than in rapidly flowing water. It moves slowly with its antennae spread out before it, and gently waving to and fro, feeling, as it were, every inch of its way. It is wholly non-sensitive to light, and seemingly so to sound, but when disturbed by any movement in the water it is extremely active; much more so than ordinary terrestrial forms, leaping upward and backward with quick, powerful, downward blows of its abdomen.

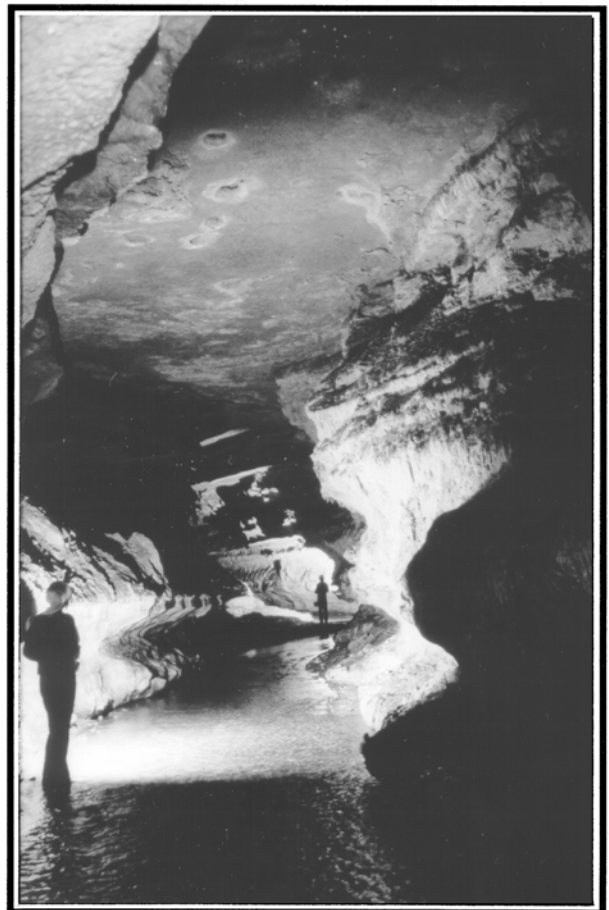
Several branches leave the main passage of Shiloh Cave, but all but one are short in length. The one exception turns to the right about 1,500 feet from the entrance and extends in a south-westerly direction. At first it is a high, narrow fissure with the jutting walls bearing many stalactites. A stream of water covers the entire floor and from far in the distance comes a murmuring sound caused by a succession of water-falls, four in number and in size small, which occur at short intervals along the passage. Wading through

pools, clinging to corners of jutting ledges, climbing over slippery, perpendicular banks we made our way until finally the passage began to rise, and the limestone gave way to a dark shale and this in time to a light colored clay. We were 900 feet from the fork and thought we were nearing the surface and would soon find our way above ground, when all at once our lights went out and we staggered backward through utter darkness, escaping, as if by miracle, the clutches of the deadly choke-damp which lurks for unwary explorers amidst the deepest recesses of this cave.

Beyond the point where the right branch leaves it, the main passage continues in a southerly direction and was explored until the back water from the dam at the mouth of the cave became too deep to wade. While preparing to leave the cave a heavy thunder shower came up and the water soon poured in torrents through the sink-hole and adding its volume to that of the enlarged stream within the cave, quickly covered the entire floor to a depth of nearly two feet.

Excerpted from *Caves of Indiana* by Richard L. Powell:

Shiloh Cave is entered through a sinkhole to the rear of Shiloh Church about 7 miles northwest of Bedford. A stream flows from beneath

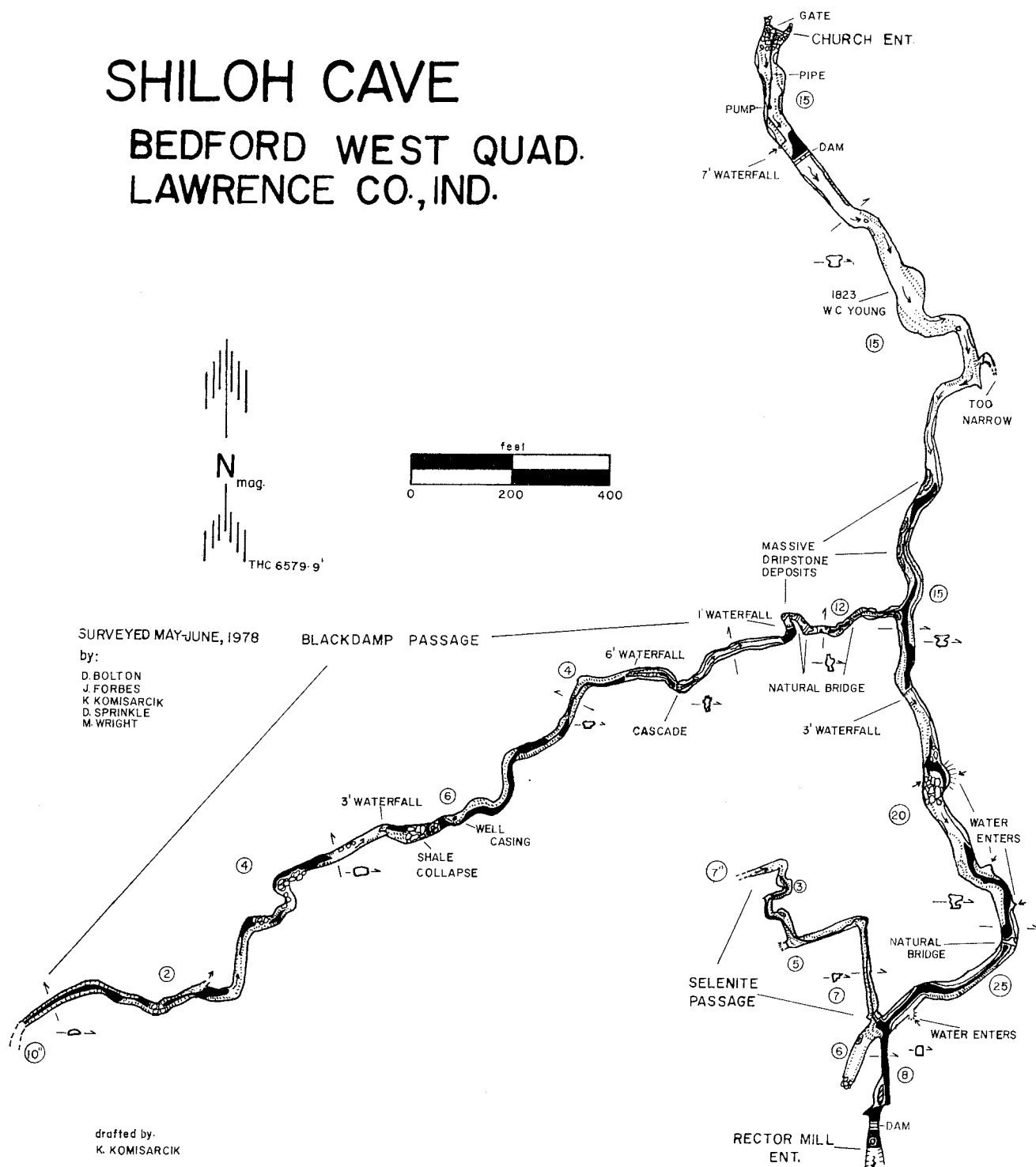


The main stream passage in Shiloh Cave.

photo by David Black, 1975.

SHILOH CAVE

BEDFORD WEST QUAD. LAWRENCE CO., IND.



breakdown at one entrance and out another entrance of the cave, where a mill was erected at one time.

The passage is from 15 to 25 feet high and about that same width for the approximate 2,000 feet of its length. The end of this passage contains water 3 feet deep but can serve as a means of egress.

One passage on the west side of the main passage contains several waterfalls and many speleothems. This side passage, known as the Black Damp Passage, has been reported to collect gas and thus may be dangerous (Blatchley, 1897, p. 137-138).

Description from the *BIG Newsletter* by Kevin Komisarck:

Shiloh is a long and well known cave near Eureka, Indiana. This cavern has been constantly visited since the early 19th Century. The oldest date and signature found is "1823 WC Young". In spite of this heavy traffic, most of the dripstone formations are still intact.

The cave is best entered by way of the Church Entrance. Here is an unlocked gate which once limited access to the cave. For the first 200 feet, galvanized pipe and a pump can be found. These are the remains of a water supply. A few feet further is a dam which was constructed by BIGers for the study of the hydrological aspects of the cave.

For the next 800 feet, a stream meanders along a passage 15 feet high and 25-30 feet wide. At the end of this, massive dripstone formations protrude from the wall. Two Hundred feet beyond is the entrance to the Blackdamp Passage. Continuing along the main gallery, one soon comes to a 3 foot waterfall. The pool at the base is waist deep. Another 200 feet beyond this and one comes

upon the only major collapse seen in the cave. Past this point, the water deepens to 2-2.5 feet deep and the passage attains a height of 25 feet in places. Water enters the cave from several enlarged joints in the walls. Approximately 700 feet from the breakdown one comes to a branch in the passage. To the right is the Selenite Passage, which is a small muddy stoopway/crawlway which eventually becomes too small but not soon enough. No formations or selenite were found.

Straight ahead at the junction is a tall, steep mudbank. At the top are a few nice formations. This passage quickly ends in breakdown which lies very near the edge of the gully. This was probably the ancient spring entrance which long ago collapsed and silted up. To the left of the junction is the newer stream exit. Here the water flows down a passage 8 feet high, 5 feet wide and which shows signs of phreatic development. Here the water averages waist deep with the deepest being 4.5 feet near the dam at the entrance. This part of the cave should only be attempted in dry weather since this section of passage is subject to flooding.

The only side passage of note is the Blackdamp for it is nearly as long as the main gallery and carries a good deal of water. It begins as a 12 foot high canyon. Here the walls are beautifully sculpted and there are two very fine displays of dripstone. Four hundred feet in, a prominent shale bed is seen 3 feet off the floor. On top of this grow small heligmites. Two hundred feet beyond, the floor rises to the height of the shale layer at a waterfall. The next 2000 feet are interesting only stratigraphically speaking. The passage height is strictly controlled by the shale layers found in this unit of limestone. The passage height slowly decreases due to silts and gravels accumulating as well as shale bed control. The crawlway becomes 10 inches high. It goes on but we didn't.

The church entrance of Shiloh Cave, now closed by the landowner.

photo by David Black, 1975.

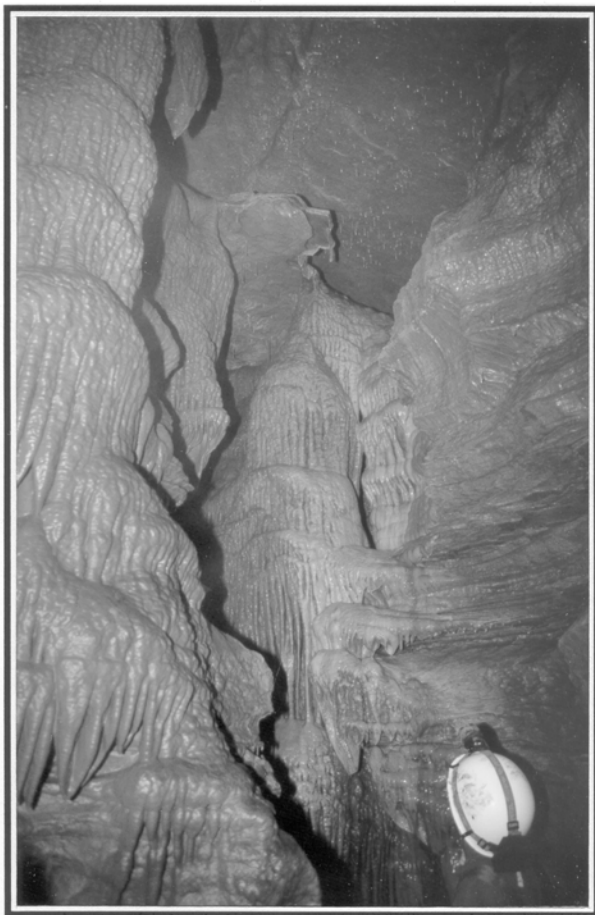


THE IKC AND SHILOH CAVE (1986)

by Marty Atherton

[Editor's note: This article originally appeared in the November 1986 IKC Update.]

In June, 1986, Marty Atherton, Rusty Riley, and Cindy Riley stopped to ask permission to enter the quarry entrance to Shiloh Cave in Lawrence County. Shiloh Cave has two entrances, the quarry (or lower) entrance and the church entrance. The owner of the church entrance seldom allowed access to his property. The old gate at that entrance was rusted open and the cave got a lot of traffic via that entrance in spite of the owner's wishes. The group knew that permission was sometimes given to enter through the quarry and had hoped to be allowed to use that entrance.



Joshua Abdulla in the Black Damp Passage of Shiloh Cave.

Photo by James Adams, 1994.

An employee of the company that owns the quarry entrance lives in a mobile home near the entrance to the quarry. The employee served as a security guard. Unfortunately for the group, the guard had been roughed up a couple of weeks previously by some undesirable types who had exited the quarry entrance of the cave. The security guard insisted that the owner would allow no more access to the quarry. The cavers explained their involvement with the Indiana Karst Conservancy and left a business card of the Central Indiana Grotto.

The following day, Marty wrote a letter to the quarry owner describing the IKC and explained what the organization had to offer cave owners. He asked for a meeting to discuss a possible agreement. In the meantime, the owner had contacted the Chairman of the CIG and expressed an interest in working with the IKC. In late June, Marty Atherton, Keith Dunlap, and IKC President Bill Wilson met with the quarry owner who was very positive about the situation. He was given a sample copy of a lease agreement to review. In late July, the IKC received a signed lease for quarry entrance to Shiloh Cave. The lease was for a period of five years and gave the IKC legal responsibility for and access to the entrance and all passages beneath the owner's property.

During the negotiations with the quarry owner, the IKC representatives did not attempt to contact the church entrance owner. This lack of action was intentional because it was felt that the IKC would have a much better bargaining position after completing an agreement with the quarry owner. Ironically, during this time period, another individual had also taken an interest in Shiloh Cave. A local, unaffiliated caver had contacted the church entrance owner and offered to secure the church entrance in return for personal access. The church entrance owner, concerned about liability as well as frustrated by continued trespassing on his property, accepted the individual's offer. It is reasonable to assume that he would have been just as willing to work with the IKC

had we contacted him first. As it was, the IKC lost the opportunity to properly manage and control both entrances.

In early July, the individual, assisted by other members of his family, spent several days rebuilding the old gate and concrete wall at the church entrance. He also took the initiative to build a barrier inside the quarry entrance -- without the church entrance owner's knowledge and without the permission of the quarry owner. This action was not discovered until after the lease had been signed.

Marty Atherton contacted the caretaker of the cave who seemed to have his own feelings of ownership. The caretaker was suspicious when first contacted. He asked to see a copy of the lease as well as printed information about the IKC, before he would entertain further discussion. When he received the information, he contacted Marty and apologized for his initial reaction. He explained his concern about damage to the cave -- a concern shared by the IKC. He agreed to meet with Marty and Keith Dunlap to show them the cave and discuss the possibility of a mutual working relationship.

In early September, Marty and Keith visited the cave and talked with the caretaker who seemed friendly and willing to cooperate on *his own terms*. His access proposal was inflexible. He would allow one trip a month, with the stipulation that he would lead the trip and that either Marty or Keith would be present. He also limited the party size to no more than five additional cavers. While Marty was the patron of Shiloh Cave, his duties would be limited to acting as the liaison between the caretaker and the organized caving community.

At this time [November 1986], it seems reasonable to cooperate on those terms. While it's disappointing that the IKC has no physical access to the quarry entrance, removing the barrier (no simple task) seems unnecessary. The objective of protecting Shiloh Cave has been met. The liability and trespassing concerns of both landowners have been diminished, and some access to the cave is available to the caving community.

[Follow-on note: As time went on, access through the church entrance became harder to arrange through the caretaker and he eventually moved out of state. Several attempts to negotiate an agreement with the church entrance owner were unsuccessful, so no access was possible despite our quarry entrance lease. On the plus side, at least the cave was secure and protected.]

Eric Higbie in the Black Damp Passage of Shiloh Cave.

Photo by Bruce Bowman, 1993.



THE IKC AND SHILOH CAVE (1994)

by James Adams

After several years of closure, Shiloh Cave received visitors again in December of 1991. I received a call one evening from IKC Director Jeff Cody. The previous weekend, he had stopped by the cave to check on the Quarry Entrance. The IKC held a lease on the entrance, but a permanent gate had never permitted access.

During this particular visit, Jeff discovered that the left-third of the gate at the inner dam was missing (see photo on page 18). It probably had been pulled down by vandals, although the design of the gate was such that tremendous hydraulic pressure could build up behind the gate during flooding which might have flushed the wall out "naturally". Shiloh Cave was again accessible to well-meaning cavers and, unfortunately, less conservation minded individuals as well. Because the cave is so heavily decorated with many formation areas, the IKC Directors were concerned that the cave would be at risk if word got out that the quarry entrance was now physically open.

In the process of reviewing options, the Directors discovered that the IKC lease with the cave owner had quietly expired the previous summer. On April 17, 1992, James Adams, Eric Higbie, and Bruce and Cissy Bowman visited the quarry owner to report on the deteriorated condition of the gate and to discuss a renewal of the lease agreement and potential protection options.

The owner was concerned about the situation and also agreeable to renewing the lease which was executed within a couple of weeks. The four representatives also secured permission to pay an official visit to the cave that afternoon. Although the Bowman's needed to return home, Eric and Jim made a quick trip into the cave and were pleased to discover that apparently, no graffiti or trash had been added to the cave during the last five years. Indeed, there was no evidence of any recent visitation.

Throughout the dry summer, several photo trips were arranged, a low, ninety-foot section near the quarry entrance was

surveyed and plans for a new, operable gate were made.

In order to work on replacing the gate, it was felt that the water level between the two dams needed to be lowered. So, one bright Saturday morning in September, a crew of approximately a dozen cavers from Indiana and Kentucky began the task to restore drainage through the 18-inch pipe under the outer dam. A trench was also dug through the accumulated silt between the two dams in an attempt to increase the water flow away from the inner dam.

The day's work was very successful, lowering the water level over a foot at the inner dam. It was discovered that this dam is a single piece of limestone four feet wide and at least seven feet high. Years ago, craftsmen had carefully cut it to fit snugly into the contour of the cave walls. It may be nearly 10 feet tall, but no one knows for sure how big the slab actually is. There are early accounts that the original passage, before the dams were built, was twelve feet high. This passage has now accumulated a deep layer of silt and the tallest section is only about five feet high.

While trenching in the silt, a boot, a carbide lamp, and a wallet were discovered. The wallet contained tiny fragments of money, credit cards, and several, still readable pieces of identification. Donald E. Smith had visited Shiloh Cave sometime in the late 70s. He was an IU student and was originally from Plainfield, Indiana. A check of the Indianapolis phone book revealed that his father still lived at the same address in Plainfield.

Tom Sollman also made plans to begin a crayfish study in the cave. After several years without human intrusion, it was thought to be appropriate to first gather some baseline population counts and then compare these with other observations after the cave was reopened for occasional visitation.

The coming of winter halted any further on-site work for the year. Keith Dunlap designed a strong, bat-friendly gate that would be secure, but would still allow easy access. The design was approved by the E-

Board and funding allocated for construction.

We knew that the water level could be lowered without too much effort during regular flow and we eagerly anticipated the arrival of warmer weather in the spring of 1993. However, very wet weather during the entire spring/summer/fall foiled our plans to install the new gate. On several scheduled work days, water gushed from the cave. Even after several days/weeks of "dry" weather, the water flow exceeded the capacity of the 18-inch drainage pipe under the outer dam, backing water up to the top of the dam. To further complicate the situation, it was determined that the drainage pipe had become partially blocked and would need to be unplugged. Although several attempts were made to remove the washed in rock and silt, the high water flow always prevented serious work at the site.

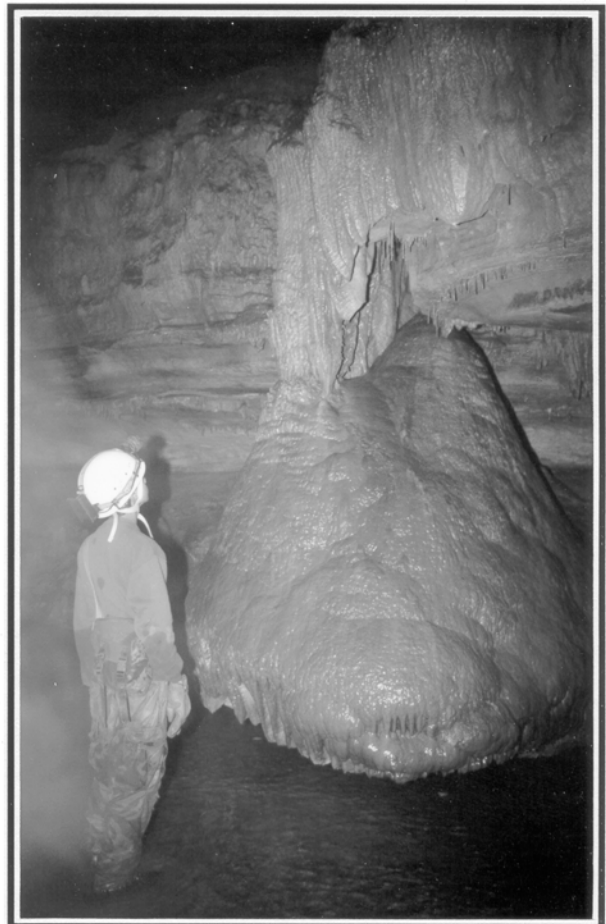
The spring of 1994 brought some drier weather and renewed enthusiasm to Shiloh Cave. Heavy-duty pumps were brought in to mechanically lower the water level between the dams which allowed volunteers to work on cleaning out the debris behind the outer dam and re-establishing at least partial flow through the drainage pipe. This allowed us to proceed with installation of the new gate which was finally in place and secured in August.

The main objectives of the IKC and the cave owner have been met. The cave is secured against unauthorized visitation which should prevent any vandalism, while allowing limited access by conservation-minded cavers. Other remaining tasks include exploring and surveying at least one more promising lead in the cave and selective (non-historic) graffiti removal. Tom Sollman continues his cave crayfish counts and photo documentation will continue. But most of all, a new generation of cavers will be able to enjoy Shiloh Cave.

Although the water flow under the dam has been increased, the drainage pipe still remains partially blocked. After moderate rains, the water still ponds between the two dams and the new gate will be partially submerged, lessening the useful lifespan of the gate. The situation will be monitored and additional work may be done to improve flow under the outer dam.

Joshua Abdulla in the main passage of Shiloh Cave.

Photo by James Adams, 1994.



PRELIMINARY OBSERVATIONS OF HUMAN IMPACT ON BIOTA OF SHILOH CAVE, LAWRENCE COUNTY, INDIANA

by Tom Sollman

Shiloh Cave has been visited for over 170 years and has a long history of scientific study of its native life. The owner of the quarry entrance is allowing the IKC to reopen the cave to limited recreational caving, after being closed for several years. With this comes an obligation to protect, and an opportunity to study one of the most documented cave ecosystems in Indiana.

Concern about increased traffic impact at Shiloh Cave, particularly on the two well studied crayfish populations consisting of *Orconectes inermis inermis* (a blind white troglobite) and *Cambarus laevis* (a pigmented and sighted troglophile), led to twenty visits during the past year to establish a baseline to gauge future impact with emphasis on the population of *O. inermis*.

Census trips were strictly low impact, minimal disturbance. No crayfish were captured, marked, or collected. Trips were solitary, averaging 7.5 hours and covered all stream passages up to the "bellycrawls".

Crayfish census results were wildly variable, casting doubts on its usefulness

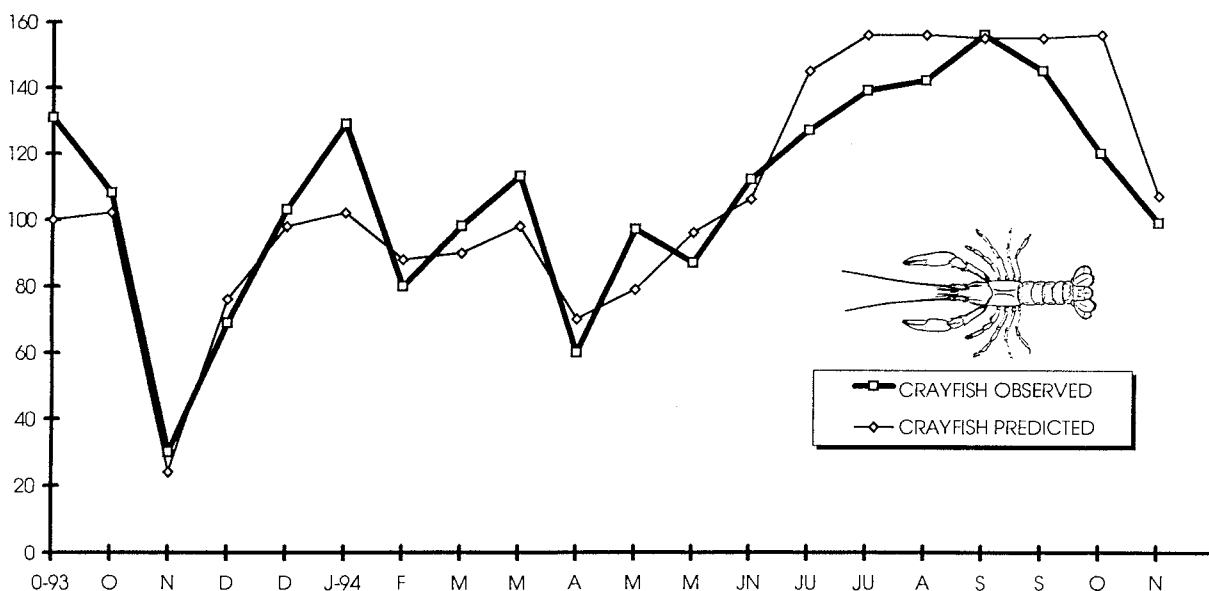
until a correlation was noted between water level measured at the inner dam of the quarry entrance and observed population. By employing a formula, still being refined, an accurate prediction can be made of the population *observed* in conditions varying from flood to drought (see Chart 1).

Additional information recorded included air and water temperatures at 32 different fixed locations and water levels at various points. Several other species were observed and documented (see Chart 2).

High water levels during the year delayed gate installation during which time the cave had increased traffic from a variety of sources, some clandestine, which precluded an accurate traffic count. However, from estimates and observations I will hazard some predictions of our impact on Shiloh's life at the planned 60 persons (6 trips at 10 persons/trip) per year visitation rate:

- ***O. inermis*** will be minimally effected. The observed 0.2% mortality rate appeared to be from natural causes.

CHART 1: CRAYFISH OBSERVED & PREDICTED BY WATER DEPTH VALUE



- *C. laevis* will suffer a significant impact. A mortality rate of over 17% was observed almost all due to a crushed carapace. This species tends to "freeze" when startled. This along with being more camouflaged and just a larger target, accounts for the disparity in impact between the two species. However, being a troglophile, input of the epigean population may maintain the in-cave population.
 - Other species, e.g. salamanders, frogs, bats, etc. should not be affected.
- Censusing will continue at a reduced visitation rate with a full report in the future.

CHART 2: OBSERVED BIOLOGY OF SHILOH CAVE

ANNELIDS (segmented worms): During low water levels extensive colonies will be found on mudflats exposed in the lower main passage. They can also be found in the upper portion of the Black Damp Passage, especially where human disturbance of the mud substrate occurs.

DECAPOD CRUSTACEANS (crayfishes): *Orconectes inermis inermis*, troglobite species found throughout the cave, densest population in the upper Black Damp Passage. Maximum observed population at low water levels was 156. Average number recorded per trip was 108. *Cambarus laevis*, troglomorphic species found throughout the cave and stream outside of the cave. Maximum observed population at low water levels was 13. Average number seen per trip was 6.

ARACHNIDS (spiders): Unidentified species common at church entrance.

MILLIPEDES: *Scytonotus granulatus* identified by Banta in 1907. During one 6-week period in 1993, hundreds were seen on the ceiling at the church entrance twilight zone. Commonly, less than a dozen were observed.

CRICKETS: Commonly seen at church entrance twilight zone.

DIPTERIA (flies and gnats): Encountered throughout the main passage.

AMPHIBIANS (salamanders and frogs): *Eurycea lucifuga* (common orange and black salamander), a troglomorphic encountered throughout the cave usually near either entrance or at the natural bridge. Maximum number observed was 10 although it showed some seasonal variation in population. *Rana pipiens* (leopard frog), a troglomorphic which is absent in summer. Enters the quarry entrance in late September to October for hibernation. As winter progresses, they penetrate deeper into the cave. Densest population area was from the inner dam to natural bridge, with none observed further than the Breakdown Mountain. Maximum number observed on one trip was 64. *Rana catesbiana* (bull frog), an accidental. Two were seen near the church entrance during the summer.

REPTILES (snakes): *Lampropeltis triangulum* (Milk Snake), an accidental. One snake was observed, first at the Half Dome tributary. Over three trips spanning nine weeks, the snake was tracked to the quarry entrance where it exited.

MAMMALS: *Pipistrellus subflavus* (pipistrelle bat), a troglomorphic absent in summer. Observed throughout the cave with the highest density from the Selenite Tributary Tee to the Black Damp Passage Tee. *Eptesicus fuscus* (big brown bat), one cluster seen between the dams at the quarry entrance in a ceiling crack. *Procyon lotor* (raccoon), frequents the quarry entrance between the dams. No tracks were ever observed past the inner dam.

BIRDS: *Sayornis phoebe* (eastern phoebe) and nest at the quarry entrance twilight zone between the dams. Several fledglings were observed in the nest in July.

THE SHILOH CAVE GATES

by Keith Dunlap

For anyone who has visited Shiloh Cave, you know it is one of the nicest caves in Indiana. While the cave shows signs of some minor vandalism, for the most part, it is in very good shape for a cave that has been known for almost as long as Indiana has been a state.

One of the primary factors that has kept recent vandalism low has been the lack of visitation during the past twenty-five years as a result of gates installed on both entrances in July of 1968 to facilitate the biological studies that were being conducted in the cave during the late 60s and early 70s. The ironic part of this is that the gate designs completely altered the biological profile of the cave, restricting food energy input and waterflow, but at the same time protected the geologic and aesthetics aspects of the cave which I'm sure was not a consideration at the time of construction.

By the mid-80s, the gates had fallen into disrepair until a local resident, with

the permission of the church entrance owner took it upon himself to repair the door on the church entrance gate and install an inoperable gate/wall at the quarry entrance. He eventually lost interest and then moved away, leaving the cave secure, but inaccessible.

In 1991, the quarry entrance gate was found vandalized at which time the IKC initiated a plan to replace the damaged gate with a new gate that would allow access to the cave.

The gate installed in 1986 on top of the inner dam at the quarry entrance (see figure 1) had several major flaws. First it was not meant to allow access, second it significantly restricted water and airflow, third its steel bars were anchored in and exposed to the water allowing accelerated corrosion, and finally its narrowly-spaced horizontal bars were not ideal for bats to fly through.

Thus the design criteria for the new gate included an easily operational door,



Quarry entrance gate installed in 1986. Left section of concrete block wall found missing in 1991. Arrows indicates original water level before lowering.

Photo by Bruce Bowman, 1992.

low maintenance and corrosion considerations, low/no restriction for water and airflow, and it had to be bat-friendly. It also needed to be "vandal-proof" and be relatively easy to install considering its location over water.

The new gate (shown in figure 2) is actually located about six inches in front of the inner dam and is anchored only to the walls. The door swings horizontally and is large enough for a rescue stretcher to easily pass through. The vertical and horizontal bars are spaced to provide maximum flight areas for bats, yet keep unauthorized visitors out. Water and airflow restrictions have been kept to a minimum. The hinge mechanisms were machined out of stainless steel and can be pressure greased to provide low maintenance and long life. All bars were $\frac{3}{16}$ " walled 2" square tube filled with concrete and $\frac{1}{2}$ " rebar. This composite construction makes the gate extremely difficult to breach without special equipment.

The majority of the gate was fabricated off-site to minimize working and welding in water. This also allows the gate to be fully painted in a low-humidity environ-

ment giving it better protection. During the actual installation, a temporary platform was constructed in front of the gate to keep the person who was arc welding dry and safely out of the water.

Due to much donated equipment, materials, and labor, the cost of the gate to the IKC was less than \$200 (the actual cost would have been in the thousands). Hundreds of hours of volunteer labor was used in the construction, installation, and site preparation work. In addition to Keith Dunlap's design and off-site fabrication, special thanks should go to IKC members Steve Collins for the hinge pin machining work and Kenney Carrigan for in-cave welding.



Quarry entrance gate installed in August, 1994. Inner dam visible below gate. Passage can flood to ceiling during high flow conditions.

Photo by Bill Tozer, 1994.

THE SHILOH CAVE MANAGEMENT PLAN

introduction by Keith Dunlap

As with the other caves managed by the IKC, the primary doctrine to be used in protecting and managing Shiloh Cave is its Management Plan. This written plan, approved by the Executive Board, provides the patron and others with specific guidelines and expectations for balancing our obligation to protect the cave and its owner, while at the same time providing access for scientific research and recreational enjoyment.

The main body of the plan (minus ap-

pendices) is reproduced below. For most cavers, the primary interest will be the section on Access Policy. The Executive Board has purposely set the number and size of recreational trips to be initially small. As time goes on, the access policy will be reviewed and adjusted as appropriate.

Any questions, comments, or suggestions pertaining to the Management Plan or Shiloh in general should be directed towards James Adams, the cave's patron.

CAVE MANAGEMENT PLAN SHILOH CAVE, LAWRENCE COUNTY, INDIANA

INTRODUCTION: The Indiana Karst Conservancy, Inc. has negotiated a management agreement with the owner of the Quarry Entrance of Shiloh Cave. The owner wishes to protect the cave and its natural resources and also understands the desire of cavers to visit this cave and is agreeable to providing limited access.

The Conservancy will manage Shiloh Cave so that it will be available for recreational caving and study by responsible cavers while at the same time protecting the cave from damage and protecting the landowner from liability and caver related problems. At the same time, the Conservancy will continually evaluate the resource and undertake a conservative restoration program where necessary.

HISTORY OF THE CAVE: Shiloh Cave has a long history dating back the early 1800s. Blatchley wrote a detailed and dramatic description of the cave in 1897¹. Powell included a brief description and map in *Caves of Indiana* (1961)² and Kevin Komisarck wrote of the cave and published an improved map in 1978³. The cave and its biota has been the subject of two theses⁴.

Shiloh has been a popular cave to visit over the last 150 years, and yet has not been heavily vandalized, probably due to its location outside of the main caving areas, and its sometimes functional gate on its better known up-stream entrance.

The Conservancy targeted the cave as needing protection and set out to negotiate with the owners of both entrances. In June of 1986, the Quarry Entrance owner was contacted and a lease agreement was signed July 15, 1986. A similar contact was made with the owner of the Church Entrance, but he was not interested in entering into any agreement. Instead, he authorized a nearby resident to watch over the cave and repair the gate at the Church Entrance. It is believed that this "caretaker" took it upon himself to also install an inoperable gate at the Quarry Entrance without permission from the owner or the Conservancy. Neither gates were optimum designs, but they did provide protection to the cave from vandalism. The caretaker was not overly cooperative, but did allow several trips the first couple of years. He became increasingly difficult to contact and then finally disappeared. The Church Entrance owner was again contacted in early 1992, but still declined our invitation since the cave was secure. About this same time, the Quarry Entrance gate was partially washed out (or vandalized). This initiated a plan to replace the partial gate with a fully operational gate that could provide legitimate access. This gate was installed in August 1994.

SUB-SURFACE RESOURCES: Shiloh Cave has over 6,580 feet of mapped passages. The cave primarily consists of two stream passages, the main passage that stretches from the Church Entrance downstream to the Quarry Entrance, and a major side passage known as the Black Damp Passage. The main passage is all walking, ten to twenty feet wide with ceiling heights from fifteen to twenty-five feet. During normal flow, the stream is mostly only a few inches deep except for the last 250 feet near the Quarry Entrance where the water is pooled several feet deep by two stone dams. The Black Damp Passage is much smaller in dimensions. It starts out walking, but soon decreases to a stoopway and finally becomes too tight to explore further.

Shiloh Cave contains extensive formations. Many of the cave formations are active and thus continue to grow. Vandalism has not been extensive, although past formation mining is in evidence and graffiti exists. Some of this graffiti may have historical significance. Near the Church Entrance there are some man-made structures and the remnants of an old pump system. A well casing can also be found penetrating the Black Damp Passage.

The biota in the cave is typical for the area. Multi-year studies, part of separate PhD theses, were conducted on two species of crayfish. No Northern cavefish (*Amblyopsis spelaea*) or Indiana bats (*Myotis sodalis*) are known to utilize the cave. Other bat species have been observed in small numbers.

ACCESS POLICY: Access via the Church Entrance is strictly prohibited. The gate is locked and the owner is not interested in providing access due to past experiences with inconsiderate visitors causing problems for nearby neighbors and the church (especially on Sunday during church service).

Access via the Quarry Entrance is limited and regulated. A gate was installed in August 1994 by the Conservancy to protect the cave and the landowner. The cave is open to organized cavers who are willing to apply for a permit in advance, sign a liability release covering the owner and the Conservancy, and agree to abide by the management rules established by the Conservancy. Unless the Board of Directors of the Conservancy closes the cave for a special project or the owner needs to close or restrict access, the cave will be open under the conditions of this management plan.

Because of the coordination required to arrange trips with the owner, a single contact person (the patron) has been appointed to grant permission and make the proper arrangements. In order to minimize impact on the owner, nearby businesses, and residents, the number of recreational trips will be limited to six (6) per year. Priority will be given to trips organized by NSS grottos. The group size for each trip will be between two (2) and ten (10) people. Other trips for legitimate scientific research, restoration, and survey work may be permitted at the discretion of the patron.

Prior to the trip, the trip leader will be mailed liability waiver/information forms, a sheet of visitation rules to be followed while on the property, and *Letter Of Permission* forms which will act as a parking permit and verification that the group has received permission to visit the property. Each vehicle is required to post a signed copy of this *Letter Of Permission* while on the property.

The trip leader will be responsible for having each participant read and sign a copy of the liability waiver/information form, then return the waivers to the patron before the trip. The trip leader will also inform all the participants of the visitation rules before entering the property. The rules will cover the maximum number of participants per trip, where to park, the maximum number of vehicles allowed, appropriate precautions while changing clothes before and after the trip, other rules to assure a low profile, the specific path to take from the parking spot to the cave, how to operate the gate, precautions related to the weather, and information pertaining to emergencies. In order to maintain access, proper landowner relations must be practiced at all times. Any improper behavior reported to the patron will result in those persons or the grotto being barred from future visits.

Monetary compensation of the trip leader or organizing entity (*cave-for-fee* or *cave-for-pay*) is strictly prohibited.

The release forms will be kept on file and will not be required each time the cave is visited. As a matter of convenience, cavers who anticipate a trip to Shiloh are encouraged to file release forms early to expedite future trips. The patron will maintain a log of trips and visitors to the cave to help assess visitation impact on the resource.

The Conservancy will vigorously prosecute anyone responsible for vandalism or any other violations of the Indiana Cave Protection law or any others responsible for vandalism on the property under the Indiana Cave Resource Protection Law, IC 35-43-1-3.

PUBLICITY POLICY: As previously stated, the Conservancy wishes to minimize the impact on the owner, and thus the owner's name, address, or phone number will not be publicized. For the same reason, the Conservancy will not widely publish the patron's name, address, or phone number (the name and phone number will be listed in the *IKC Update* and provided to the various grotto liaisons). To balance the desire for recreational caving with the necessity of protecting the cave, the Conservancy will neither promote nor discourage appropriate recreational trips into the cave.

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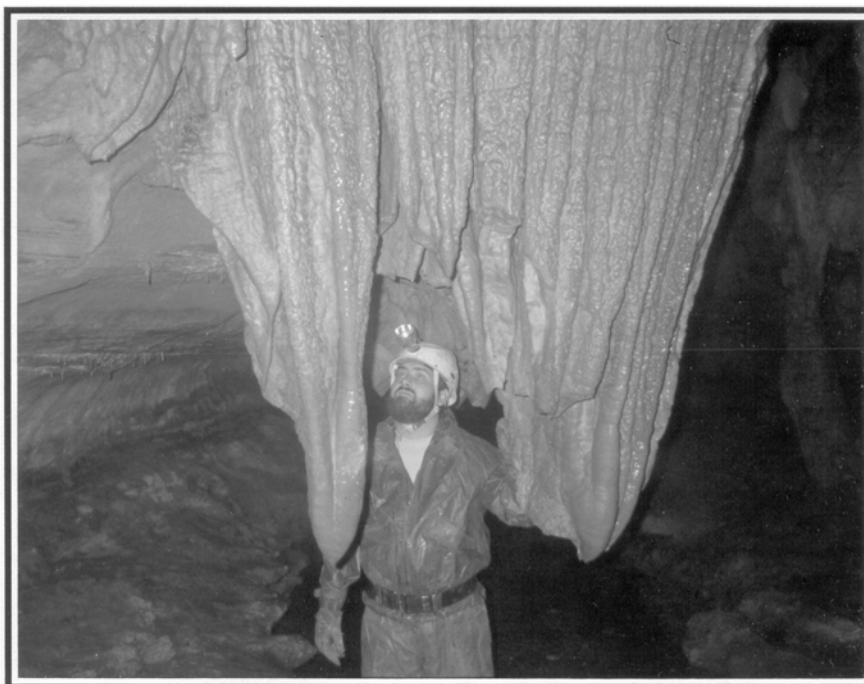
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Revised: October 31, 1994

Riley Klingerpeal in the main stream passage in Shiloh Cave.

Photo by Larry Bundy, 1993



THE FALL MEETING OF THE OHIO VALLEY REGION

by James Adams

About 25 people showed up at Cave Country Canoes in Milltown for an informal *Karst Encounters* on September 16, 17 and 18. No guidebook or structured programs were planned.

About a dozen people stayed for the Sunday morning business session. OVR Chairman Darleen Heist had a full agenda for us. Of prime importance was the adoption of a Constitution and Bylaws for the region. There were a few changes made in the draft that was published in the most recent Ohio Valley Caver newsletter. The members present then voted to accept the documents.

Next were several reports from the floor on the Sloan's Valley Conservation Task Force, Boone Karst Conservation Task Force, Great Saltpetre Preserve and my own report on activities of the Indiana Karst Conservancy.

The OVR is looking for a conservation project for 1995. The project should come from Ohio, however, some members felt that this might be difficult due to the lack of good karst areas in the Buckeye State.

The Golden Pond Grotto will host *Karst Encounters* next year. A major effort will be made to make this a well-attended and profitable event. Other locations are also being sought for 1996 and beyond.

The Winter OVR business meeting will be on January 21st at the home of Robert Duncan, Cave Rescue Liaison, in Georgetown, Kentucky.

After the meeting and lunch in the campground, we traveled to Marengo for a visit to Old Town Spring Cavern, a wet but interesting cave with several nice formation areas. We quit when the water got up to Darleen's armpits. Actually, the rest of us quit long before Darleen's armpits got wet.

We then drove up the road to the Milltown Quarries and poked around for awhile. There were also several "locals" somewhere in the cave. We could hear them, but never saw anyone. It should be noted that the property has recently changed hands and the access status is somewhat nebulous. Although this is a popular local attraction, we were advised that we might be asked to leave the property. A recent death at the site has also "soured" the owners on visitation. As it turned out, we didn't see anyone else while we were at the site.

On the way back to Indianapolis, a couple of us stopped at Big Springs Nature Preserve. Several IKC members participated in a work weekend in July as part of the 1994 OVR conservation project.

IKC EXECUTIVE BOARD NOMINATIONS

As the end of the year approaches, it is time to start thinking about the upcoming March elections. The three officer (President, Secretary, and Treasurer) and six of the twelve Director positions are up for grabs. All members are eligible, with the only requirements being the willingness to be involved and to attend the five meetings each year (the four Quarterly meetings plus the February Board meeting). Officer positions are single year terms while the Director terms are two years in duration. Contact Bruce Bowman for more information, to nominate yourself, or to suggest other IKC members who might be interested.

CLICK'S CAVE UPDATE

by Jeff Cody

Click's Cave, located in Washington County southwest of Salem, has long been known to locals in the area. Click's was commercialized in the early 1920s, a venture which lasted for about two years. Evidence of this venture is still obvious because you can still see what is left of several walk bridges along the main route. Not far from there are several signatures and dates. The water from the main stream exits at Beck's Mill.

During the past ten to fifteen years, the cave has not seen much activity. During August of 1992, after the NSS Convention, the Northern Indiana Grotto began the most recent survey of the cave. This survey was finished in November of this year, yielding about 1½ miles of cave. During the latter part of the survey, the landowner gave cavers an indication that she wanted the cave gated or physically closed. She had concerns with people in the woods near her home at night.

Several people assisted the Northern Indiana Grotto with the survey; Larry and Linda

Bundy were on some of those trips. Once informed of the landowner's wishes, Larry took it upon himself to build a gate. On October 30th, Larry and Linda Bundy, Carl Tanner, Matt Bundy, and Angie Scifres went to the cave to do measurements and prepare the area for the gate installation.

The gate was installed on November 6th, by Larry, Linda, Dave and Angie LeClerc, James and Mary Gregory, Carl Tanner, and Dave and Karen Schang. Also members of from the Mid-Hoosier and Eastern Indiana Grotto were present that day on a MHG grotto trip. The materials for the gate were funded by contributions from Dave and Penny Hibbard, the MHG and the EIG. Dave Schang allowed them to use his welding equipment, and Keith Dunlap loaned out his gas-powered hammer drill. Some materials (over 400 pounds of angle iron) were donated by Larry's employer, and they also allowed Larry to use their shop to construct the gate. Thanks go out to all involved.

Unpredictable water flows put spelunkers at risk

by Troy Guthrie

Donahue [sic] Cave on Bedford's south side near Ind. 37 Bypass is a popular spot for cavers from as far away as Michigan. Cavers say Donahue is becoming famous in the spelunking community because it's easily accessible, safe for prepared and knowledgeable cavers and has incredible acoustics.

But Bedford City Utilities Manager Jack Butterfield disagrees and said cavers might change their tune if they knew how much water rolls through the cave at times.

During and after heavy rains, the cave is a drainage site for much of the northern part of Edgewood, including the area near Edgewood Shopping Center down to about 30th Street. It also drains the area behind Cosner's and around Eastern and Western avenues and it's believed Broadview Addition's runoff might end up at the cave eventually.

If a heavy rain on the south side of Bedford coincides with the city filtration plant's filter flush-

ing, adventurers in the cave could have to deal with the rain runoff and several thousand gallons of water on top of it, Butterfield said. The water comes out of the cave near the Bedford Boat and Sportsman's Club on White River.

Butterfield said the filter flushing happens at various times and there's no way a caver could predict when it's going to be done. "We don't do it on a regular basis," he said. "Someone said we should do it about 3 in the morning but there are cavers in there sometimes at 3 in the morning."

The cave's drainage use is exactly why the cave can't be filled up and closed, Butterfield said. "It couldn't be filled up because there would just be a lake in that area. That's definitely where a lot of water goes to the river," he said Wednesday after inspecting an entrance to the cave.

"In fact, we were in there this morning (just inside the Indiana Department of Transportation -owned culvert entrance near Hubler Chevrolet), you could really hear water running."

The culvert opening to the

cave near Hubler's is maintained by INDOT's Paoli Subdistrict. INDOT's Maria Kulnbach said the department had pipes across the culvert opening but someone has apparently used a hacksaw to make an opening in the barrier big enough for someone to get in the culvert and go caving in Donahue.

"It's not going to be a simple task to repair it because we have to bring in a safety director from Vincennes (the INDOT district office responsible for this area) to check the air quality to make sure it's safe for our workers to go down into that and make repairs," she said.

"But we also have to make sure there's no one down there. We want to make sure we don't get anyone trapped in there. Then, we would have to get a welder down there to put the bars back in place."

Donahue Cave has at least three openings and Butterfield said his department has considered placing signs at the entrances to tell cavers to check with the filtration plant before entering.

INDIANA KARST CONSERVANCY TREASURY REPORT

Income Statement

From July 01, 1994 to September 30, 1994

INCOME:

Dues Apportionment and Residuals	631.25	
Donations	15.00	
Book sales	24.00	
Interest	39.14	
		\$709.39

EXPENSES:

IKC Update (Printing/Production/Mailing):	135.19	
Special Publication #5	44.15	
Other publication expenses	158.94	
Membership Correspondence/Expenses	68.44	
Misc Correspondence/Info Request/Conservation	47.74	
Property Management Expenses	42.41	
Shiloh gate	184.00	
IKC Annual Cookout	35.00	
		(\$715.87)

NET OPERATING EXCESS (DEFICIT) THIS PERIOD (\$6.48)

Balance Sheet September 30, 1994

ASSETS:

Prepaid Exp: 1995 Cave Management Symposium	750.40	
Cash in Bank	5349.94	
Total Assets		<u>\$6,100.34</u>

LIABILITIES & OPERATING EXCESS:

Hancock Property Maintenance Fund	215.73
DNR Non-Game Fund	270.00
Indiana Cave Symposium Fund	508.29
Deferred Dues Fund: 156 members - 1994 50%	1170.00
3 member - 1995 100%	45.00

Previous Operating Excess	3898.80
Net Excess (Deficit) This Period	-6.48
Balance Adjustment	-1.00

Current Operating Excess	3891.32	
Total Liabilities & Operating Excess		<u>\$6,100.34</u>

But it's not the utilities department's place to do that, he said.

"We're not sure it's our responsibility to put the signs up and I wanted to research his first," he said. "If it's not our responsibility we will probably send a letter to the property owners and tell them about some of the safety procedures they should maybe follow."

"We're willing to talk to the landowners but I'm afraid if we put up signs it could look like

we're saying we're responsible and we're not."

But Kalnbach said INDOT will place a sign at the opening to reveal the dangerous conditions in a cave to people interested in going in through the INDOT culvert. She added that INDOT hopes to get the work done early this week.

Three cavers, who had to be rescued from Donaldson Cave [???] last weekend after filtration plant filterwashing water blocked their mapped cave route, entered

the cave through that culvert opening. That was the fourth reported incident in the past year in Donahue Cave.

[Reprinted from *The Times Mail (Bedford)*, October 22, 1994. It is obvious from this article that most "officials" don't understand that Donnehue and Doghill caves has two separate drainage systems and that the filtration plant's flushing does not drain to Donnehue, but only affects Doghill.]

IKC QUARTERLY MEMBER'S MEETING MINUTES

Saturday, September 10th, 1994

Clayton, Indiana

BOARD MEMBERS PRESENT:

James Adams	Bruce Bowman
Larry Bundy	Bruce DeVore
Keith Dunlap	Dave Haun
Mike Hood	Hank Huffman
Tom Rea	Eric Schmidt
Tom Sollman	Bill Tozer

BOARD MEMBERS ABSENT:

Larry Mullins	Scott Johnson
Robert Sergesketter	

The September meeting was called to order at 6:17 PM at the home of IKC President Bruce Bowman. Introductions were made and the June 1994 meeting minutes were approved as published.

Treasurer Keith Dunlap reported that we have \$5,681.83 plus \$500 that the IKC is holding for the Indiana Cave Symposium.

The gate installation at Shiloh Cave is finally complete. Tom Sollman continues his crayfish count. He noted that we might have more of an impact on the brown crayfish than the cave crayfish. He finds another dead brown crayfish on each trip. There are lots in the quarry. Tom counts about 140 crayfish in the cave each time.

The management plan for Shiloh Cave was discussed. Tom Rea moved to approve the plan as distributed. Motion passed with the provision that it be reviewed in one year. It was noted that this is a "living document" and there may be modifications necessary as we learn more about the cave and as landowner relations change.

There is some more work to be done at the cave before Winter closes in. A rock moving "party" is planned for October 15th. [Note: This was later changed to October 22nd.]

Bruce reported that a lease agreement has been executed with the landowner of Suicide Cave in Washington County. Bruce may want to write something in the *IKC Update* to better explain the access situation.

Signage will need to be installed at the cave. Jim Adams moved that the signage be funded up to \$125. Motion passed.

The management plan for Suicide Cave was also discussed. It is similar to the plan for Shi-

loh Cave. Jim Adams moved to accept the plan as distributed. Motion passed.

Bruce Bowman brought everyone "up to speed" on the trash that is filtering through Endless Cave in Washington County. Bruce DeVore noted that diapers and flowers were spotted in the cave about two years ago. Bruce Bowman offered our services to the landowner a couple of weeks ago. He is trying to get the Department of Environmental Management and the Health Department involved. We may have to make a field trip to the site. Bruce Bowman will continue to investigate.

Keith spoke again about his cave temperature monitoring project. He will install the recording equipment on September 16th.

One proposal for the Jefferson Proving Ground would turn a large chunk of the land into a Federal Wildlife Refuge. There are other proposals, however. Keith Dunlap urged everyone to write letters in support of the wildlife refuge plan. More information is in the most recent *IKC Update*.

Orange County is having a tax sale and several plots of land may be available with caves on them. Hank Huffman advised that this happens frequently and that someone will need to go to the Orange County Courthouse to get more information.

The Land Acquisition Committee continues to look for cavers who have good landowner relationships.

Keith advised that the construction along State Road 37 that we have been concerned about is done, but the administrative appeal is still active. We will continue to monitor the condition of the sinkholes along the route. There will be a public hearing on October 27th in Mitchell concerning the next section of SR 37.

Bruce reported that there has been no new information on the Adopt-A-Highway program. INDOT doesn't seem interested in it anymore.

The Ohio Valley Region conservation project at Big Springs was a success. Hank Huffman was pleased with the work that was done. Seventeen people turned out.

The Coon Cave work day in Monroe County was also a success. It was noted that a cleanup of the

pool in the back of the cave might be a good goal.

One of the IKC's goals is to be an educational resource. To that end, Bruce Bowman recently did a presentation for the IU Spelunking Club.

Bob Armstrong's Lost River Tours continue.

The 1995 National Cave Management Symposium is on track. Keith and Larry Mullins recently met to coordinate activities. The Department of Natural Resources and US Fish & Wildlife have been invited to participate. The first mailing will go out at the end of October.

The access policy to caves in Spring Mill State Park appears to have changed. The park is giving the excuse that the permit system will be revoked in order to protect the cave fish. The park anticipates that the cave fish will be added to the federal endangered list next year.

Rumors have been heard that a company has requested permission for gas exploration in the Harrison-Crawford State Forest. Nothing can be confirmed.

Hank Huffman reported that he has been consulting on a problem at Indian Cave. There are sewer lines near this significant biological resource that might leak into the cave. Hank is trying to persuade the city to reuse existing sewer lines instead of installing new ones. He may request a more formal study.

Land has been "set-aside" for conservation through an USDA Reserve program that may be phased out. This means that there may be more land around sinks that will be farmed again. Cissy Bowman has suggested that the IKC come out in support of organic farm practices. Keith moved that Bruce write a letter of support. Bruce agreed. Motion passed.

"Kans For Karst" were again collected this year at Cave Capers. Keith is currently crushing.

The reprint *Hudelson Cavern* is out. Also, Keith reported that *Gleanings From Nature* is sold out. Keith may print additional copies if anyone wants them. The next IKC reprint will appear in the spring.

A cleanup of Wayne's Cave will be held on December 4th. [Note: this was later changed to the 11th.]

The next IKC meeting is scheduled for December 3rd in Bloomington.

Jim Adams will represent the IKC at the Ohio Valley Region meeting on September 14th.

Hank Huffman also reported that the Sycamore Land Trust may be given a conservation easement on 800 acres in Washington County. This is something that the IKC might be interested in.

Jim Adams reported that there does not appear to be any plans for a guidebook, program or door prizes at Karst Encounters this year. A T-Shirt was designated earlier this year as a donation for the event. The shirt will be held and donated to Cave Capers in exchange for an IKC ad in the guidebook.

Tom Rea has the brand new 1984 *SpeleoDigest* for sale.

Meeting adjourned at 7:50 PM, well after dark. Everyone was hungry. Food was served. Thanks to Bruce and Cissy Bowman for hosting the annual cookout.

Submitted by James Adams, Secretary

INDIANA KARST CONSERVANCY, PO BOX 2401, INDIANAPOLIS, IN 46206-2401

I would like to help the IKC protect Indiana's unique caves and other karst features. Enclosed is:

\$ _____ for IKC membership dues at \$15 per year (dues expire March 31st of each year, please pro-rate @ \$1.25/month).

\$ _____ donation to the general IKC fund.

\$ _____ donation restricted to a specific IKC project. Please specify: _____

_____ I know of an area worthy of protection. Please contact me.

_____ I would like to volunteer to help. Please contact me.

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

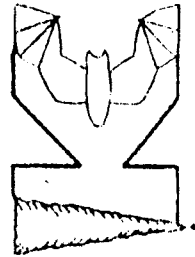
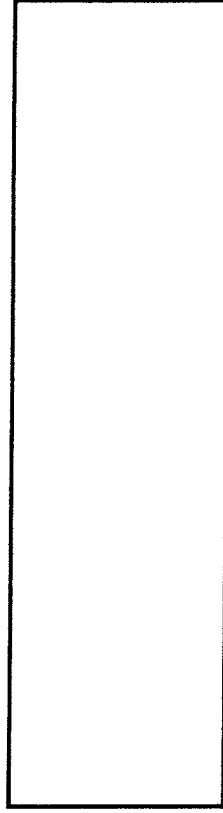
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Make checks payable to the Indiana Karst Conservancy, Inc. and mail to the IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapolis, IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations fully tax deductible.

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