

IKC Update

The background of the cover is a photograph of a cave interior. The walls are covered in numerous long, thin, yellowish-brown stalactites hanging from the ceiling. In the foreground, there are several large, pointed, yellowish-brown stalagmites. A person wearing a yellow helmet with a headlamp and a red and black plaid shirt is sitting on the ground, looking up at the stalactites.

No. 38 - September 1995

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 - Tim Balog in the Cave of Madonna, New Mexico
 Photo by Scott Fee

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



QUARTERLY MEETING REMINDER

SATURDAY, SEPTEMBER 23th, 5:00 PM

CLAYTON, INDIANA

Home of Cissy & Bruce Bowman, 8364 South SR 39

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; Coon Cave restoration summary; Wayne's Cave restoration trip; Shiloh Cave pipe problem; Shiloh Cave crayfish monitoring; Mayfield's Cave/Industrial Park status; Jefferson Proving Ground status; Cave temperature monitoring project; Special Publications Committee report; NCMS activities and status; IDNR Cave Management Plan status; IDNR activities; HNF activities; By-law changes discussion; and more....

Following the meeting (approximately 6:30), the IKC President will host a cookout. This will provide members and their families to become better acquainted with others who are interested in cave/karst conservation. The cookout will be held rain or shine; please bring lawn chairs. The IKC will supply the burgers, hot dogs, and brats/kielbasa. Please bring a covered dish, salad, or desserts to share. PLEASE RSVP by noon on Saturday (317-539-6935) so we will have ample supplies.

Meeting directions: see the inside back cover for directions and a map.

[Editor's note: As part of the after-meeting activities, there will be the third annual "best brownies" contest. New rules: the brownies must be "homemade" and contain chocolate.]

EVENTS CALENDAR

- 23 SEP = IKC QUARTERLY MEETING, Cayton (see above)
- 07 OCT = LOST RIVER TOUR, Orleans (see page 4)
- 25-28 OCT = NATIONAL CAVE MANAGEMENT SYMPOSIUM, Mitchell (see page 8)
- 09 DEC = IKC QUARTERLY MEETING, Bloomington (tentative)
- 10 DEC = IKC/CIG WAYNE'S CAVE RESTORATION TRIP (tentative)

Membership to the Indiana Karst Conservancy 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...

Words can't express how excited I am about the National Cave Management Symposium that is coming up next month. The 1995 symposium has been in the planning stages for over two years; we had to make arrangements at Spring Mill Inn that far in advance! Everything is progressing nicely, but I'm sure that the chairman of the organizing committee -- Keith Dunlap -- could use a few more volunteers.

I must admit I wasn't nearly this thrilled when I went to the one in Carlsbad in 1993. But it was much better than I ever thought it would be. Now that I've been to one, and have participated in putting this one together, I don't plan to miss another.

If you decide to come, I think you will agree.

Of course, there are many other activities ongoing within the IKC, as a glance at the News Briefs and other articles in this issue will demonstrate. These things need attention, too. As many of us devote more and more time to the symposium, we need others to step forward and take on some of these projects until things calm down again. If you have an interest in any of these activities, please do not hesitate to contact a Director or Officer and let them know. We sure could use some help -- and right now!

- Bruce Bowman

NEWS BRIEFS...

- ☐ At the September IKC meeting, new bylaw proposals will be discussed and voted upon. The bylaw changes will address procedures for allowing the designation of a proxy if a Executive Board member can not attend a meeting. Because our quorum is set at 2/3rd of the Board's size compared to the more typical one-half, there have been several times in the past when a meeting quorum was not met, thus requiring issues needing a decision to be postpone. Rules will also be proposed to replace Board members who repeatedly miss meetings. No other significant changes are anticipated, but some minor refreshing may occur since it has been almost five years since our bylaws have been reviewed (the current bylaws were published in the March 1991 *IKC Update*).
- ☐ October 7th is the last Lost River tour of the year hosted by Bob Armstrong. The all day tour is always a little different, hitting the most active features depending upon the water flow of the river. The tour is free and leaves the southeast corner of the square in Orleans at 8 AM. For more information, call Bob at (317) 926-4266.
- ☐ In July, Tom Sollman during one of his regular crayfish counts, discovered water draining into Shiloh Cave's main passage from a 4-inch PVC pipe. After further investigation, with assistance from IDEM, IDNR's Law Enforcement Division, and the Lawrence County Health Department, it has been determined that the pipe was installed this past spring by a landowner to drain a surface sinkhole in his front yard. The legality of this pipe is still in question, but of greater concern was the elevated E. Coli count (35,000) found in a water sample taken from the pipe inside the cave. This relatively high count could be an indication of a septic system leaching to the drill hole, or at a minimum, surface fecal material (from dogs, deer, cattle) getting washed into the sinkhole. Further investigation may include injecting dye into the landowner's septic system. We hope to work with the landowner to mitigate and resolve this situation.
- ☐ The Indiana Department of Natural Resources is still working on developing management policies pertaining to caves, cave resources, and cavers on state-owned properties. Three sub-committees have been working over the summer to make recommendations to the full committee for further considerations. Some of the topics being discussed are resource protection, scientific study, rescue planning, organized caver communication/cooperation, and practical permit systems. Tom Rea, Ronnie Burns, and Anmar Mirza are cavers participating on the recreation/rescue sub-committee.



- ☐ McCart's Pit (Lawrence Co) should be considered closed indefinitely. New landowners have placed a fence around the entrance with numerous "No Trespassing" signs. While the IKC has attempted to contact the owners by mail and Anmar Mirza has talked to them directly, it would appear that they are not interested in allowing access to this relatively well known pit.
- ☐ The Hoosier National Forest has published their Environmental Assessment (EA) of the proposed lands-for-mineral exchange with US Gypsum Company (USG). The proposal would give USG the right to tunnel mine gypsum from 1,162 acres of public land in exchange for 684 acres of high priority private land currently owned by USG. The public land in question would remain the property of the HNF and the only surface disturbance would be temporary core drilling (up to 58 holes) to assess the gypsum resources some 500 feet below the surface. The lands to be received are in five parcels with the most notable being a 189 acre tract containing Wesley Chapel Gulf and several caves in Orange County's Lost River basin.

The EA explains the benefits (economic, recreational, scientific, environmental) and addresses concerns raised during the public scoping process. Forty-three written comments were received (including comments from the IKC and several of its members) with the vast majority of the comments expressing support for the exchange. The EA offered three decision alternatives: A) complete the exchange as proposed, B) take no action (don't complete the exchange), and C) lease the mineral rights without the land exchange. Obviously the HNF's preferred alternative is A. Additional public comments will be accepted until approximately October 3rd with a final decision on the proposed exchange to be made soon after.

- ☐ The owners of Marengo Cave have begun offering two "wild" cave trips in addition to their previous commercial offerings. Their new first trip is a two hour adventure into Old Town Springs for group sizes of 4 to 15 and a minimum age of 10. No reservations are required for this trip. The second trip is into the "new discovery" area, entering through the Bat Crawl and exiting out a newly dug entrance. Group size is limited with a minimum age of 16. Participants on both tours are furnished with a true caving helmet, helmet-mounted Petzl light, and knee pads. Both trips stress cave conservation and safety. For pricing and more information, contact Marengo's staff at (812) 365-2705.
- ☐ The planned transfer of approximately 50,000 acres of the Jefferson Proving Ground from the US Army to the US Fish & Wildlife Service is on indefinite hold. The transfer was to have been completed by October 1st, but several months ago, the US Air Force decided to investigate leasing the property instead. The Air Force currently leases about 1,000 acres which is used by the National Guard for aerial target practice. While this new lease agreement is definitely not as good as a permanent transfer to the USFWS, it is a better situation than allowing landfills and chicken farms on this property which the local "re-use" commission was promoting.
- ☐ The August 26th restoration "close-up" trip to Coon Cave was well attended with the primary focus aimed at graffiti removal/cover-up in three rooms near the lower pits. The rest of the cave remains in good shape with no new graffiti or trash encountered, evidence that the IKC management activities are making a significant difference relative to other caves in the area without the same attention. Restoration participants this year include Josh Bear, Bruce Bowman, Jeremy Crismore, Tom Crismore, Keith Dunlap, Alex Farr, Jeff Farr, Josh Farr, Staci Farr, Keith Flammang, Glenn Kotnik, Nick Noe, Shawn Noe, William Noe, Bill Owens, Jan Pursley, and Phil Springer.
- ☐ Several IKC members spent the afternoon of June 24th working on the Hancock and adjacent properties near Bloomington. Tasks accomplished included fence repairs at Grotto, general trash pickup along the trails, gate preventive maintenance at Wayne's, and trash pickup along Spicer and Gardner roads. Participants included Bruce Bowman, Keith Dunlap, Don Ingle, Roy Logan, and Tom Solman.



- ☐ Work continues in opposition to the proposed Northwest Industrial Park near Mayfield's Cave. A final disposition of the zoning variance occurred August 17. Discussions with our attorney on this matter, Bill Baus, led to the decision that our \$200 appropriation would not be well-spent fighting this variance, since we could not cite any clear violations on the part of the developers and thereby make a case. There remain other opportunities to ensure that the development is done in a karst-friendly manner, which will be pursued as they arise.
- ☐ On a related note, a two-day bioinventory of Mayfield's Cave has been completed. Although previously billed as a "Banta Revisited" event, the study was not as extensive as the Banta's original one performed in 1907. Nonetheless, it should provide a new baseline from which to objectively measure degradation of the environment in this valuable historic and biological resource. Results of this work will be summarized in a future *Update*. A very special thanks to Dr. Julian Lewis for his efforts and interest and for Hank Huffman and Tom Sollman for their assistance.
- ☐ The IKC remains active regarding recent housing developments south of the Corydon which may leach septic water into Binkley's Cave. The city manager has indicated that extension of the existing city sewers is unlikely to receive funding in the foreseeable future. IKC members Dave Black has pursued the possibility of testing the cave water to obtain baseline levels so degradation can be monitored. Each water sample will cost \$10-15 for quantitative coliform bacteria counts, but would not include biological oxygen demand and other critical measures. The IKC will consult with other experts to determine our best course of action.
- ☐ Drilling permits continue to be issued to explore the commercial feasibility of oil and gas exploration in the New Albany shale. Some of these permits have been issued for karstlands, but due to confidentiality concerns the IKC was unable to arrange a review strategy for permits prior to IDNR issue. The IKC plans to place their name on the final permit mailing list so we can attempt to alert drilling crews of any obvious hazards to known caves.
- ☐ The Fall MVOR will be hosted by the Evansville Metro Grotto the last weekend of September at the Crawford County Fairgrounds in English, Indiana. IKC President, Bruce Bowman, will be the guest speaker, giving a presentation entitled "Ten Years of the Indiana Karst Conservancy," immediately after the banquet. This will be a more polished version of the presentation given at the Indiana Cave Symposium last April. Please come and get an idea of how far the IKC has progressed over the past decade.
- ☐ Bruce Bowman was fortunate to contact the landowners of Cave River Valley during Cave Capers this year, as their phone number is now unlisted. When asked about the situation with diapers washing out of Endless Cave, Mr Engler stated that he hadn't had much difficulty with it since last January when several IKC members visited the cave and removed all the diapers they could find. Although the sheriff didn't do the promised "fly-over" last spring to look for potential trash-filled sinkholes, Mr Engler indicated that he was still interested in doing so this fall after the leaves are off and might invite an IKC representative to participate at that time.
- ☐ The Indiana Field Office of The Nature Conservancy is forming frog and toad survey teams for data collection to begin in February, 1996. While this at first may seem to not have much to do with caving, there are a number of caves known to serve as winter hibernacula for frogs and may be useful information for the survey. For more information on this project, call Chris Maron at the TNC Indianapolis office (1-800-YES-LAND).
- ☐ The resource managers of the Lincoln National Forest (SE New Mexico) have published their Cave Ecosystem Management Direction, an eighty-plus page document. This guideline was developed because of their recognition of the need for appropriate man-

agement and protection of caves under the National Cave Resource Protection Act, and their acknowledgement that caves are unique, non-renewable natural features that are extremely fragile. Compounding the problem is the recent rise in popularity of caving and the realization that ignoring the situation was allowing significant impacts to occur. The IKC has a copy of this document, or you can request a copy from Catherine Luna at (505) 885-4181.

- ❑ The Indiana Historical Society has published their 1996 Publications Catalog. One of their Special Offer selections of interest to cavers is the 1990 Patrick and Cheryl Munson's softback book *The Prehistoric and Early Historic Wyandotte Cave and Other Caves in Southern Indiana*. In addition to Wyandotte, the 110 page book covers Buckner, Robinson's Ladder, and Coon caves. The book can be ordered through the IHS (317-232-1882) for the cost of shipping (\$2.75) or can be picked up for free from their downtown office (315 West Ohio Street, Indianapolis). The IHS offers considerable membership benefits along with their impressive catalog. Membership is \$30/year (\$20 before the end of September). To find out more, call for a membership brochure or their catalog.
- ❑ The IKC entered all four of its 1994 *Update* covers in the NSS Graphics Arts Salon with the June (No. 33 - photo by James Adams) winning an Honorable Mention ribbon. Two other cover, No. 32 (photo by Scott Fee) and No. 35 (photo by James Adams) were also Accepted For Display. If you have a photo or artwork you would like to see on the cover, please contact Keith Dunlap.
- ❑ Two new members have joined the IKC since June. Welcome Nick Noe and Ted Bice. A number past members however, did not renew in March so our current membership now stands at 140. Donations were received from Eleonora Florance, Glenn Kotnik, and Bob Armstrong. Thank for your added support.

Judge reviews suit filed four years ago charging toxins caused death of Hart County [Kentucky] man

A Louisville judge is reviewing a case filed in US Federal District Court in Bowling Green [Kentucky] four years ago which contends a Horse Cave man's death was caused by toxic chemicals being buried on his land after a 1966 train derailment.

Prior to setting a trial date, a federal judge is reviewing the case filed in 1991 by Cathy Wilkins, widow of the late Larry Wilkins. Wilkins died at the age of 41 in September 1991 of lymphoma, which the lawsuit contends was caused by chemicals spilled during the derailment. Wilkins is represented by Munfordville attorney Charles D Williams.

The \$15 million lawsuit against CSX Railroad asserts the

same chemical has left Cathy Wilkins ill.

The suit claims one of the chemicals was Agent Orange, a defoliant used in the Vietnam War.

Wilkins maintains cleanup of the derailment, which was widely reported, consisted of dumping cracked drums into a nearby sinkhole and burying similar containers of the toxic chemicals on the Wilkin's farms.

An article in the June 16, 1996 issue of *The Hart County News* reported "a massive derailment of a southbound, though freight train in which some 32 cars, almost all loaded with heavy cargoes including some structural steel, telescoped, buckled, and spilled out over the

right of way the length of about 12 cars, just north of the L & N Depot at Horse Cave."

Damages were "conservatively estimated at more than \$250,000" to the freight cars and cargoes.

No detailed information on the specific cargoes was reported in the newspaper article.

The derailment took place on Monday, June 13, shortly after midnight and the article indicates the tracks were reopened by 1 PM on Tuesday. However, officials said it would take nearly a week to clear the rights-of-way of all the wreckage.

[Reprinted from the June 6, 1995 *Hart County News Herald*. Submitted by John Benton.]

NATIONAL CAVE MANAGEMENT SYMPOSIUM UPDATE

by Bruce Bowman

It was July 15th -- our deadline for paper submissions -- and things were looking pretty grim. These are the times when you question whether you knew what you were getting into when you volunteered to be sessions co-chair for the National Cave Management Symposium. Our timeline, publicized in two mass-mailings and the *NSS News*, stated that we would no longer be accepting papers after this point, and here we were with only 16 abstracts in hand. Could it be that the 1995 symposium would be a bust? Do people just not think much of our locale? Hank Huffman and I were scratching our heads.

The NSS Convention was only a week away. Perhaps our timeline was just too ambitious. Maybe the federal agencies were waiting to see how their funding would survive the congressional appropriation hearings. There wasn't much we could do but extend the deadline and embark on a paper solicitation campaign. And so we did.

I was sent to the convention to represent the symposium's organizing committee and plead our case. The steering committee members were very helpful, and the timeline extension was published on both the Internet and in the convention newsletter, the *Daily Rag*. Several papers were solicited at the sessions of the Cave Conservation and Management Section. Meanwhile, an email and letter barrage was organized to contact presenters and others who had participated in the past. In four weeks, we had 55 papers and even had to turn away a few (or defer them in case we had a cancellation). A draft program was prepared and sent to all presenters. The 1995 symposium will be a success after all.

But another specter raised its head. We weren't getting any registrations to speak of, and the deadline for reduced-fee registration was approaching. Perhaps people were waiting to see if their papers would be accepted? This proved a little easier to overcome. We sent acceptance letters immediately, and the registrations started flowing in...although it is just as likely that people were simply putting off registration until just before the discount deadline and our letters had little to do with it. Spring Mill Inn is now completely booked for the event, and by the time the *Update* goes to press, we will have over 100 pre-registrations with six weeks to go.

There are a lot of other details, perhaps not as harrowing. The pieces have largely fallen into place for the field trips. The main problem now is being able to fit all the stops into the allotted time.

Two panel discussions need to be finalized. Mini-trips for Tuesday and Saturday afternoons need to be arranged. The pre-program needs to be finalized and mailed to the registrants, then the final program with abstracts has to be finished, printed, and put together. Audio-visual equipment, begged, borrowed, or rented. Banquet with speaker. Reception and coffee breaks arranged. Transportation. There is still a lot left to do, but it is under our control now. The worst appears to be over, and I've become very excited in anticipation of the event. This is a very ambitious thing for the IKC to do, and will increase our national prominence significantly.

We currently have presenters from as far away as Brazil and Australia, Alaska, Hawaii, and New Jersey. There will be presenters from colleges, the Forest Service, the Fish and Wildlife Service, the Park Service, Bureau of Land Management, private organizations, not-for-profits, everybody doing anything karst-related. We have papers on bats and invertebrates, permit systems and eco-tourism, industrial cave sterilization and recovery -- topics both tame and controversial. Education and the Internet, lava tubes and limestone, rescue pre-plans, laser mapping, formation repair and paleontology. I am very impressed with our list of papers -- if you come, there **WILL** be something that interests you. More than likely, a few things will also catch your attention that you didn't think much of at first.

Although the reduced-rate registration deadline has past (registration is now \$100), we still wish to encourage IKC members and others to attend this event. Included in the price of registration is the reception, banquet, field trip, field trip box lunch, and a copy of the *Proceedings* -- a publication that includes all the scholarly papers presented at the symposium (by itself almost worth the registration fee). The event will start on Wednesday morning (October 25th) and end at noon Saturday. If you can, come and participate, and maybe even pitch in a little. You will not regret it.

For more information, a list of presentations, or to register, contact Keith Dunlap.

Illinois Karst Map Project to Aid Groundwater Regulators

by Michael Gray

About 5% of Illinois is like a coffee pot without a filter.

When water sinks into the ground, a process similar to a dripping coffee pot, soil and other consolidated materials usually act as a filter.

But when porous, permeable limestone and dolomite -- carbonate rock -- occurs near the surface, the area is subjected to solution and cavity formation. Those processes can form open caverns, fissures, and sinkholes -- karst terrain.

Karst areas make it easy for storm runoff and streams to "sink" into the ground through sinkholes and fissures, and travel through subterranean passages. Sinkholes, caves, and large springs are typical features of karst terrain. Rapid drainage of surface water into fissures means that water is filtered very little, if at all, and contaminants, such as pesticides and animal and human wastes, get into aquifers. Because of the danger of aquifer contamination -- not to mention house-swallowing sinkholes -- two ISGS scientists have been mapping karst areas. Sam Panno and Pius Weibel head a 2-year project funded by the Illinois Groundwater Consortium, a group that includes the Illinois State Geologi-

cal Survey (ISGS), Illinois State Water Survey, Southern Illinois University, and the University of Illinois.

Karst terrain is mostly in Illinois' west, south, southwest and northwest areas. The south and southwest have the densest concentrations. Maps of the karst areas are expected to be printed later this year and will be available to state and local officials for planning groundwater standards. Water contamination is acute in the sinkhole plain, rural Monroe County south of St Louis metro-area, and portions of St Clair County. Because Monroe County isn't far from St Louis, housing developments are increasing and that means more people need water. A lot of the groundwater there is contaminated.

"People are building in those areas and some people are using sinkholes as septic systems," Panno said. "They run their septic effluent directly into sinkholes."

Once in the sinkhole, waste is well on its way to an aquifer -- and to people's wall. Deep wells are no guarantee water will be spared contamination.

"One woman we spoke to lived in a development surrounded by sinkholes and had a well 200 feet deep," Panno said. "She and two of her neighbors had cloudy water

when it rained and pieces of mud coming out of the kitchen sink. They can't drink their water."

Many people in that area drink bottled, Panno added, but some still drink from their wells.

"Over half the wells (in Monroe County) are contaminated with unacceptable levels of bacteria, and one of every 20 wells has high levels of nitrate," Panno said. "It's more subtle than having mud coming out of your plumbing, but you shouldn't drink the water."

The demand for water in the Monroe County area is expected to increase because road improvements have made driving to St Louis quicker, according to Panno. More people are expecting to work in St Louis area but live in new housing developments in Monroe and St Clair Counties.

"They're putting houses on ridges between sinkholes in a lot of areas," Panno said. "All the houses have wells and septic systems. So, they're contributing to the bacteria contamination in the shallow aquifers, and even in the deeper aquifers."

[Reprinted from the Summer 1994 ISGS *Geonews*. While the article was directed towards problems in Illinois, the same problems are occurring in Indiana and other states with urban development in karst areas.]

INDIANA BAT HIBERNACULA CLOSURES REMINDER

Cavers are reminded that caves designated by the Indiana Department of Natural Resources as significant habitats for the federally endangered Indiana bat (*Myotis sodalis*) are closed September 1st through April 30th. These hibernacula include: Twin Domes (Harrison), Ray's (Greene), Batwing (Crawford), Jug Hole (Harrison), Coon (Monroe), Grotto (Monroe), Parker's Pit (Harrison), Saltpeter (Crawford), Robinson Ladder (Crawford), Clyfta Cave (Greene), Saltpeter (Monroe), Leonard Springs (Monroe), and Wildcat (Crawford). Each of these caves has been posted with signs by the IDNR. Other small hibernacula that are not posted, but should be also avoided to protect the bats would include: Endless Cave (Washington), Panther Cave (Washington), Sexton Spring Cave (Greene), and King Blair (Monroe). Note that some of the mentioned caves are closed year round by their owners. Your cooperation is appreciated. Questions about the closures may be directed towards IDNR nongame biologist Scott Johnson at (812) 334-1137.

MAMMOTH CAVE RESTORATION FIELD CAMP

by Larry Reece

The 7th annual Mammoth Cave Restoration Field Camp was held August 7-11, 1995. This year's event was attended by 34 cavers from Michigan, Indiana, Illinois, Ohio, Wisconsin and Iowa. The IKC was well represented with many of its members in attendance. As in past years, the activities were targeted as conservation and restoration projects in the current and former commercial sections of Mammoth Cave.

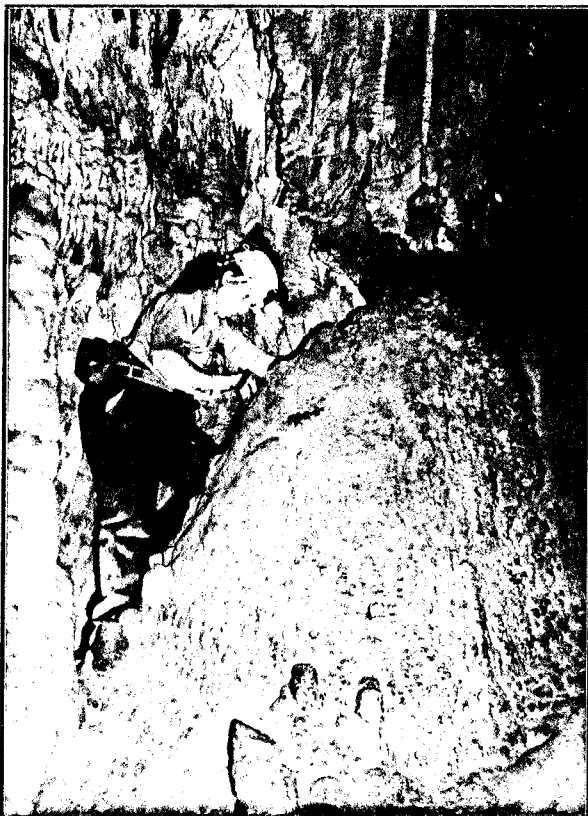
Frozen Niagara and the Echo River areas were the project targets for the Field Camp efforts. In the Frozen Niagara area, lint removal was the activity conducted. Two days were spent by a crew of six in the lint removal efforts. Lint, accumulated from the clothing of the millions of tourist that have passed through the cave over the years, was collected using small vacuum cleaners and paint brushes. First priority was removal from the formations near the stairs leading from the top of Frozen Ni-

agara to the Drapery Room. Additionally lint was also removed from the stairway. When these areas were completed, lint was collected from a portion of the trail going deeper into the cave. The stairs in the Narrows above Grand Central Station were the final area worked on this year.

Along the Echo River trail, removal of wood from the water was the intended project. Due to higher than expected water levels, the wood removal lasted only part of the first day. The high water and suspended silt made it difficult to locate the wood for removal. The alternative for this area was the removal of iron and aluminum handrails along the former tourist trail, stretching from the new boat docks back to the old boat dock area. The materials removed were first staged at the stairs at Mammoth Dome. Then the entire Field Camp crew formed a bucket brigade up the fire tower, passing the materials to the end of Little Bat Avenue. From Little Bat Avenue, the debris was hauled to the Historic Entrance and into a waiting park service truck.

Due to scheduling problems, this year's Field Camp was two days shorter than normal, but still a successful event. This left time to assist the ACCA (in Horse Cave, KY) in moving their business office from its old location down the street into the new offices above the Cave & Karst Museum. The Field Camp crew accomplished the move in less than four hours and saved the ACCA staff several weeks worth of effort. This will allow them at least two more weeks to continue their conservation and education activities that would have been lost had they had to complete the move without help.

Participants in the 1995 Field Camp were: Larry Matiz; Brian, Cheryl, and Brandy Braye; Debbie Miller, Larry and Linda Bundy; Larry and Matt Reece; Steve Petruniak; Christopher Bell; John Benton; Richard Bell; Norm, Carol, and Jared Rogers; David and Penny Hibbard; Mark Belding; John Marquart; David LeClerc; Mike Lorange; Bill, Lana, and April Aills; Julie Anger; Jim Jacobs; John and Jonelle Vargo; Beth Reinke; Joel and Jonathan Shoemaker; Lara Storm; and Nathan Pelosi.



Debbie Miller removing lint from formations in the Frozen Niagara area of Mammoth Cave.

photo by Larry Reece

In summary this years Field Camp accomplished its desired objectives of the continued conservation and restoration in Mammoth Cave. There remains an endless list of conservation and restoration work to be completed in the cave. Lint removal in the Main Cave area is a significant task yet to be started. There remains literally tons of wood along the Echo River trail to be removed when conditions permit. Removal of the tourist walkways and bridges along Echo River is a massive project that needs to be done soon. Many other areas of the cave also have projects that need volunteer efforts. It would appear that the week long Field Camp and the three weekend cleanup projects held each year will have no lack of work to do and will continue far into the future.

Conservation and restoration, so future generations can enjoy what we enjoy today.

Larry Matiz and Larry Bundy with debris removed from the Echo River area of Mammoth Cave.

photo by Larry Reece



1995 OHIO VALLEY REGION CONSERVATION PROJECT

by Bill Walden

The 1995 Ohio Valley Region conservation project was Dry Cave on the property of Larry and Nancy Henry near Rocky Fork Gorge. The cave was suggested by Horton Hobbs as a project cave and the project organized by John Cole. The Henrys' have formed the Highlands Nature Sanctuary with the intention of purchasing "lands comprising the highest quality ecosystem." A variety of cavers from Ohio, Kentucky, and Tennessee participated in the OVR project.

Participants attacked the plentiful graffiti in the entrance room with a variety of weapons including hydrochloric acid, phosphoric acid, vinegar, lots of water, wire brushes, tooth brushes, scrapers, and a propane torch. No acids were used in any area of the cave other than the entrance.

The spray paint was difficult to remove.

While most cavers worked on graffiti removal, others worked on picking up broken glass and other trash from the cave floor.

Working in Dry Cave was rather pleasant. The entrance has a large overhang and we were protected from the continuous rain outside. Don Conover brought his CD player and provided us a variety of music.

The project was successful in removing most of the graffiti from the cave. There is still a lot of broken glass in the cave and some graffiti to be removed. A follow up trip is being planned for October by the Central Ohio Grotto in.

[This article was excerpted from the August 1995 *COG Squeaks*.]

[Editor's note: The following article was reprinted with permission from the January 1964 issue of *Outdoor Indiana*. Some of our members were caving in the mid-60s and this will serve somewhat as *deja vu* for them. For the rest of us, the article will be a history lesson in that the concerns from thirty years ago are still with us today and the problems have only gotten worse. We have not learned by our mistakes, but then that was why the IKC was formed.]

VANDALISM goes underground

by Graham Le Sturgeon

Each weekend, winter and summer, a small army of spelunkers invades Southern Indiana to visit the hundreds of "wild" caves to be found in the area. At least 1,000 wild caves are known and more are being discovered and explored each week as the number of cave-exploring enthusiasts continues to expand, but as the number of cavers grow, so does the problem of cave conservation.

Many of Southern Indiana's wild caves are large and beautiful and cavers are also attracted by rare formations, the sheer thrill of exploration, and the possibility of discovering a virgin cave and its pristine beauty. "Wild caves" are so-called because

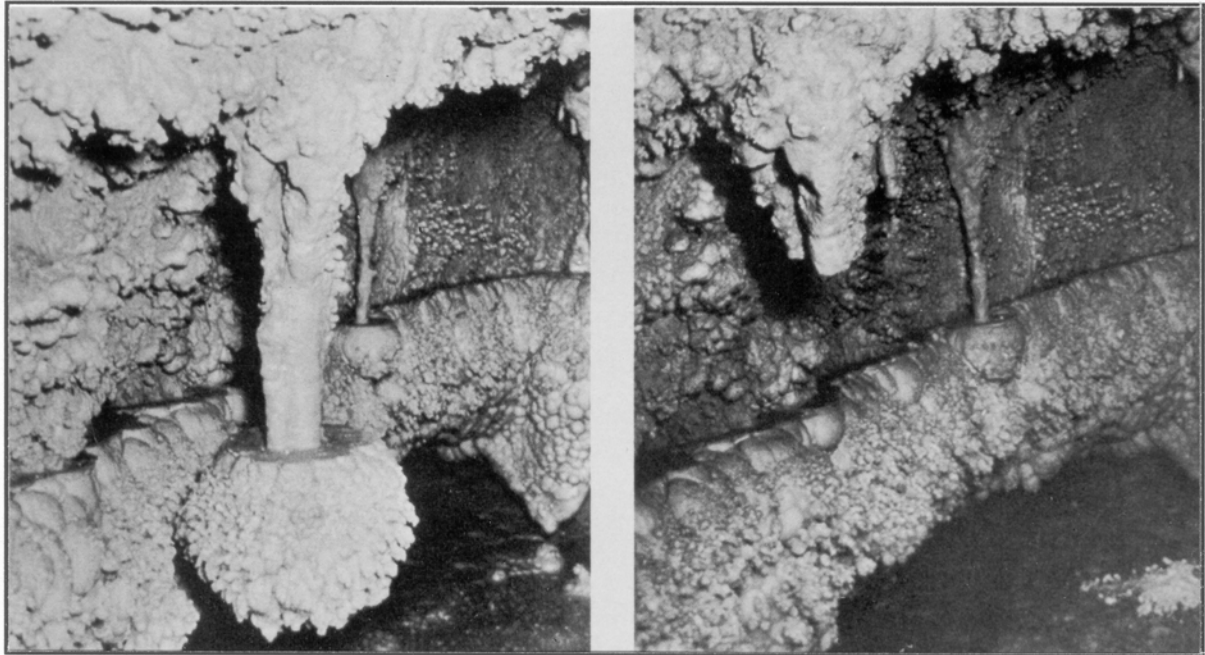
there are no paths, lights, or guides; spelunkers entering such caves must carry their own light, usually a carbide lamp attached to a hard-hat and must be prepared to crawl, climb, wade, or swim through the cave.

No matter how "wild" or remote a cave may seem, most offer evidence of previous human presence, and unfortunately, this is often in the form of vandalism. Many cave walls are marked by scratched-in names or smoked scribbling listing schools, fraternities, or sororities, dates, love matches, or the hometowns of the vandals. Flashbulbs, cigarette butts, candy wrappers, tin cans, beer bottles, and scattered used car



Farmer placed locked metal gate over entrance to Devil's Graveyard Cave in Harrison County to make sure visitors have to ask permission to enter caves. This is a safeguard against vandalism and undiscovered accidents.

photo by G Le Sturgeon

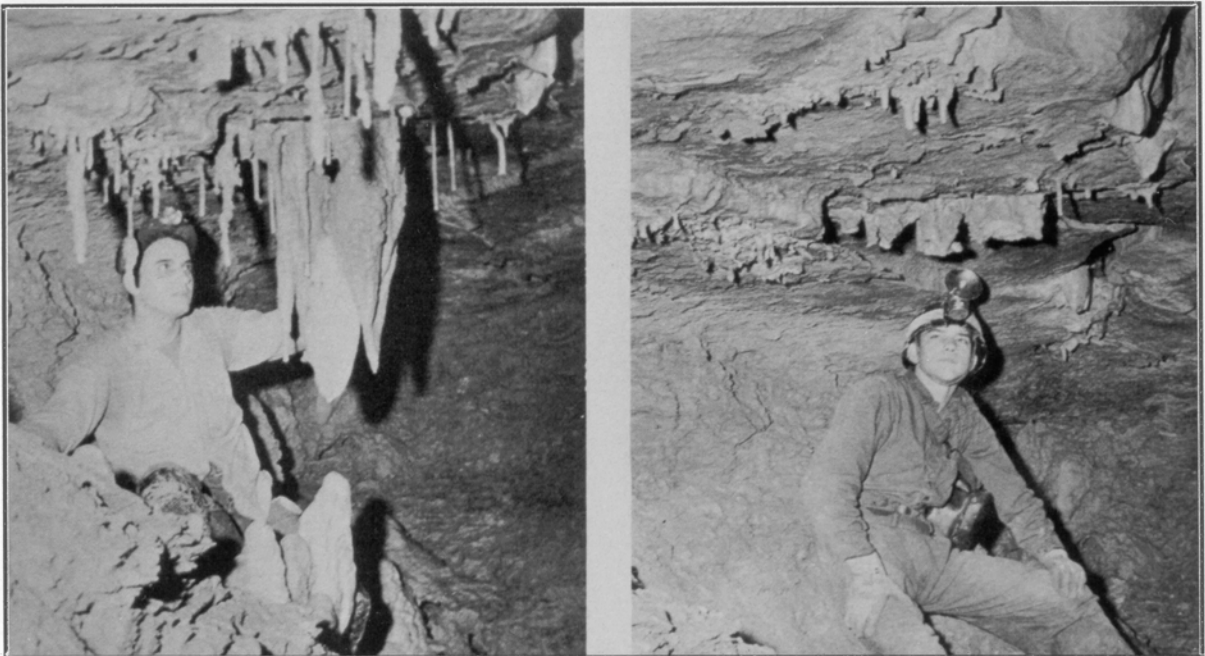


BEFORE

AFTER

photo by Pat Humphrey

The large, round formation at bottom left attracted vandals or possibly souvenir hunters enough to destroy it, despite the fact that it has probably taken thousands of years to form.



BEFORE

AFTER

photo by Pat Humphrey

Experienced spelunkers like these quite often photograph and survey caves. In this case, photographs were taken before and after vandals did their damage.

bide are all too often evident. The white residue of used carbide is not only unsightly, but it is also a killer of rare cave life such as blind fish and blind crawfish.

The most disheartening sight is broken formations. In some caves, stalactites, stalagmites, helictites, and other speleothems (rock formations in caves) have actually been mined to provide specimens for rockhounds or souvenirs for tourists. The formations lose their luster when taken from the damp cave atmosphere, but fortunately, there is no longer a commercial demand for the rocks. Although, of course, they cannot be replaced, the destruction continues, usually at the hands of inexperienced cavers.

Among groups attempting to do something about this problem are grottos, or chapters of the National Speleological Society in Indianapolis, Depauw, Evansville, Chicago, and Cincinnati. Their common motto is, "take nothing but pictures, leave nothing but footprints." Would-be litterbugs are reminded, "if you can carry it in, you can carry it out."

Some grottos have devoted entire expeditions to cleaning caves by steel brushing cave walls to remove smoked writings and by collecting and removing bottles, cans, paper, and other trash left by thoughtless cavers.

There are many individual cavers who do not belong to organizations and novices often do not realize the amount of traffic

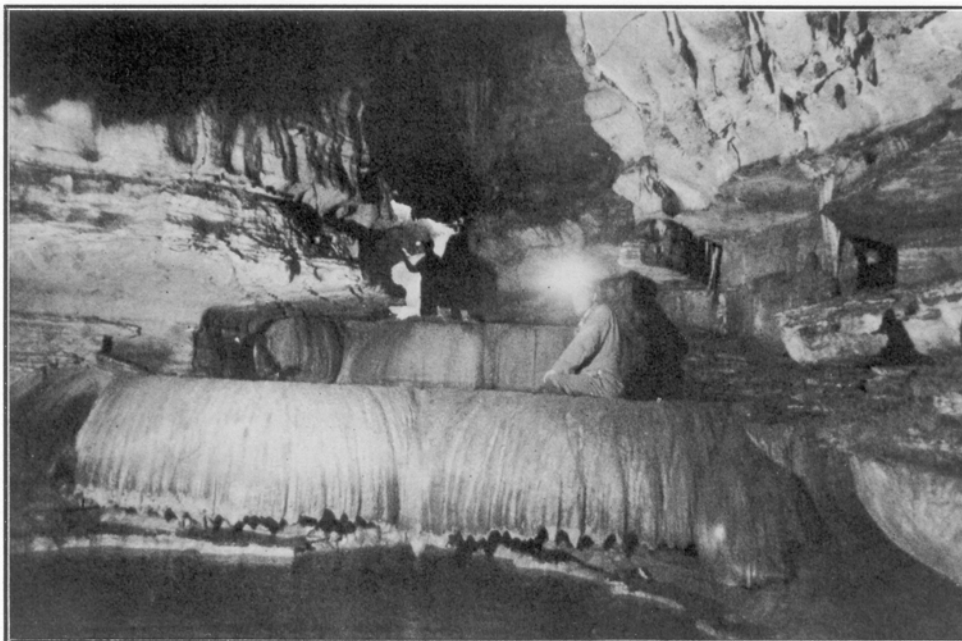
through Indiana caves. Registers left in caves reveal that some have over 100 visitors a month. Novices may feel that leaving a bit of trash will not be noticed, but they are wrong. "Every litter bit hurts."

Cave owners can do much to protect their own caves. Some owners are entirely indifferent and do not mind cavers being on their property and going into their caves without asking permission. On the other hand, some owners have installed locked, metal gates over cave entrances and require spelunkers to ask permission for entrance and to get a key to the lock. Even without locked metal gates over cave mouths, owners who demand that permission be asked find that when cavers are identified, vandalism ceases.

Many farmers and other cave owners do not realize the wonders that exist under their lands, because they have never been in their own caves. Some spelunkers are attempting to show landowners their caves, either by inviting them on expeditions or by sending back pictures taken within their cave.

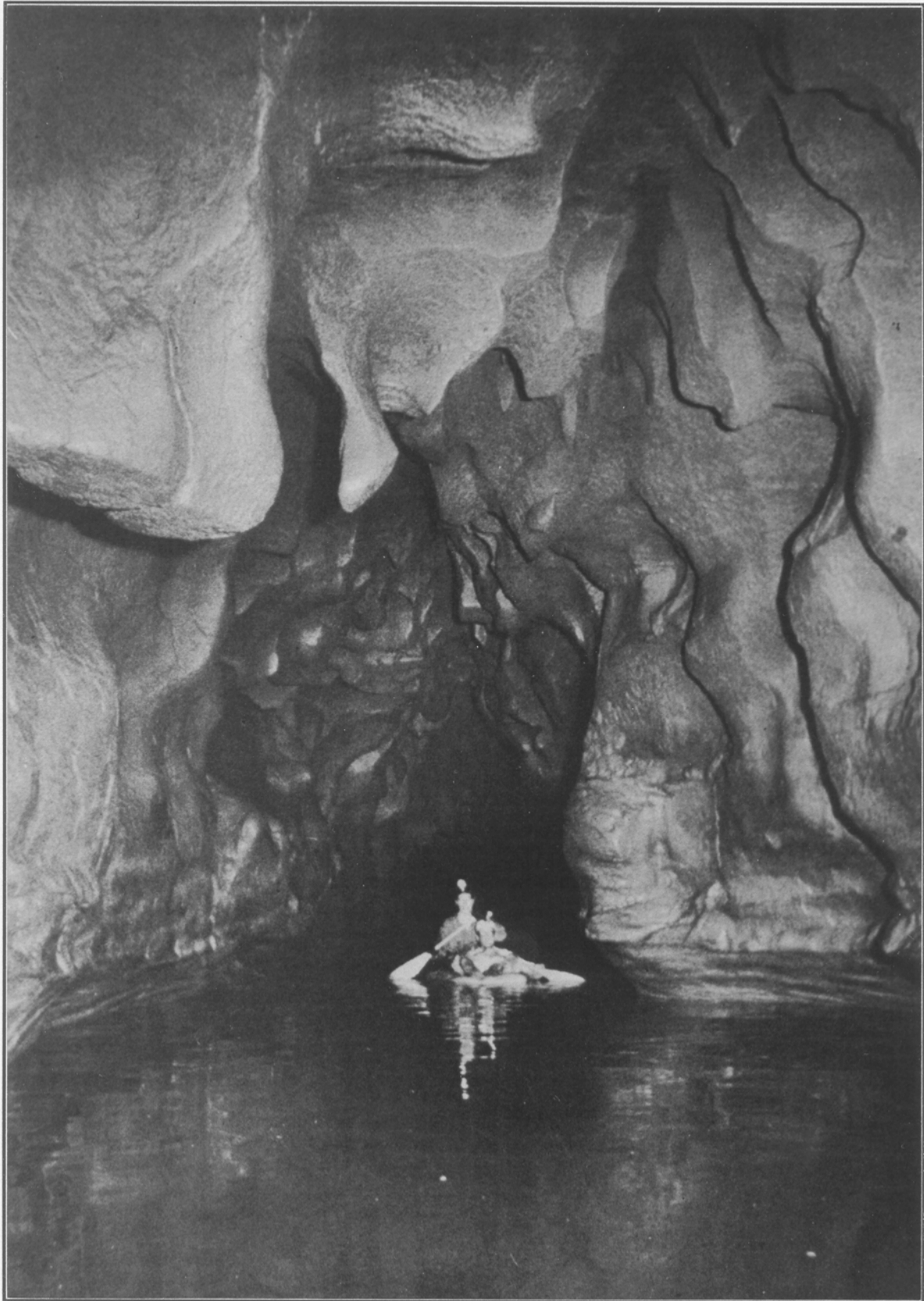
Some owners do much damage to their own caves, especially those with sink-hole entrances, which are often used as trash dumps, something clogging cave entrances. Even those sinks with no apparent entrance into a cave undoubtedly drain into underground channels and caves. Trash, garbage,

continued on page 18...



Looking like a sculptured waterfall, this formation is a rimstone dam in Boone's Mill Cave, Harrison County.

photo by G Le Sturgeon



These impressive formations are examples of the awesome beauty of Indiana's larger caves. Since flash floods often inundate the caverns, inexperienced cavers should not venture into caves without an experienced partner.

WINTER HIBERNACULA DISTURBANCES

by Keith Dunlap

In the June issue of the *Update*, a table was presented on page 6 showing the number of disturbances recorded in Ray's, Coon, and Grotto caves over the past five winters during the bat hibernacula closures. The disturbances were counted using electronic "spe-loggers" which are triggered by light and record the date and time of day of each disturbance.

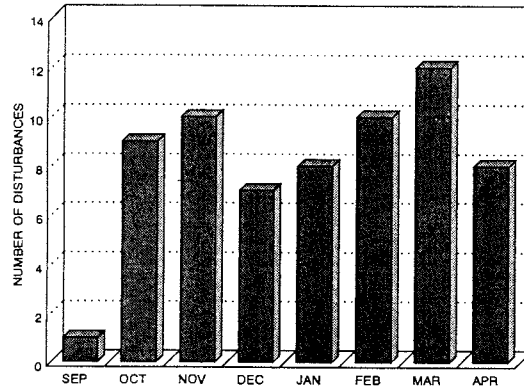
After some discussion of these numbers at the last IKC meeting, Tom Rea asked if the data suggested any patterns in the illicit visits that might improve the chance of catching the perpetrators.

Thus, I went back and examined the 65 disturbances and grouped the data by month, day of the week, and time of the day. The month bar chart showed that December and January were slightly less than October, November, February, and March, but probably not by a significant amount (September and April were partial months and thus aren't indicative of true monthly visitation).

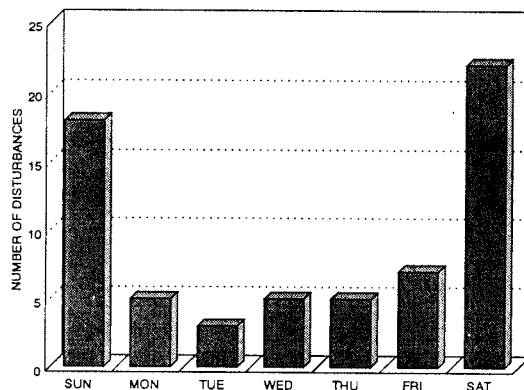
The day of the week chart shows visits on Saturday and Sunday being much greater compared to weekdays. This is what would be expected since most people work through the week and go caving on the weekends. The time of day grouping shows most of the visits are during the daylight hours with the greatest number of visits between noon and 8 PM.

In conclusion, the data would suggest that the majority of unauthorized visits are not middle of the night, middle of the week, "sneak" trips, but rather blatant weekend afternoon strolls. This information does increase our chances of apprehending violators, although the odds are still not all that great (you would have approximately a 1-in-21 chance of catching some one if you spent an 8 hour weekend afternoon at one of the cave entrances waiting for someone).

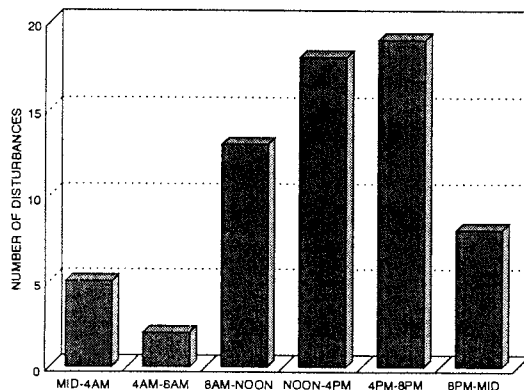
BAT CAVE DISTURBANCE - MONTH



BAT CAVE DISTURBANCE - DAY



BAT CAVE DISTURBANCE - TIME



THE "LOST" INDIANA BAT REPORT

by Keith Dunlap

While cleaning out an old closet in one of the Hoosier National Forest's offices last year, about a dozen copies of an old and little known report was rediscovered. The report, entitled *Distributional Studies of the Indiana Bat (*Myotis Sodalis*) on Three National Forests of the Eastern Region*, was published in the mid-1970s. The report is actually three separate papers bounded together:

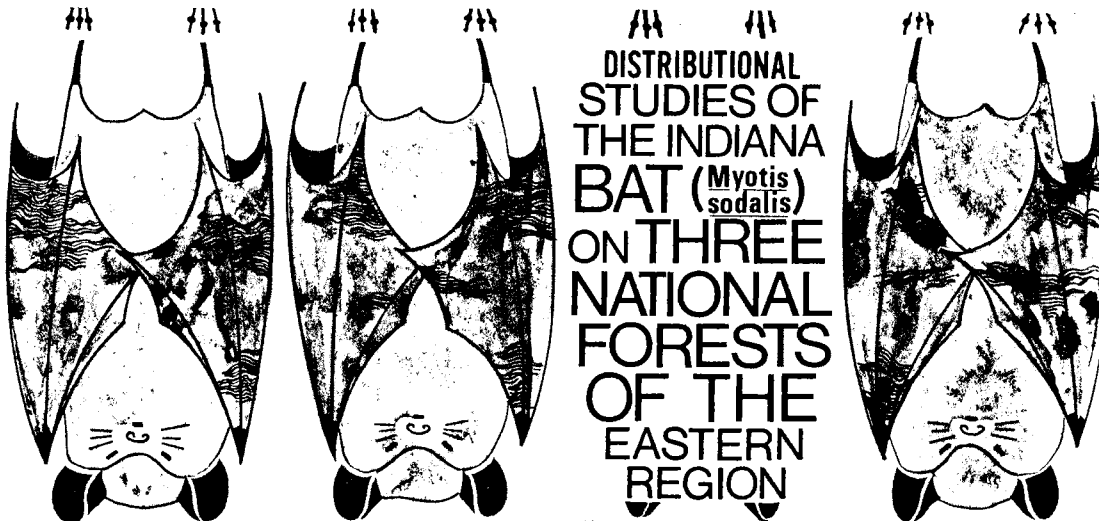
- 1) *The Status of the Indiana Bat and the Eastern Woodrat on the Wayne-Hoosier National Forest, Indiana* by Dr. Russel E. Mumford, Purdue University (IN). April 1974.
- 2) *Status of the Indiana Bat in the Monongahela National Forest, West Virginia* by Dr. John S. Hall, Albright College (PA). January 1975.
- 3) *Bats of the Caves and Mines of the Shawnee National Forest of the Southern Illinois with Particular Emphasis on the Indiana Bat* by Dr. John O. Whitaker, Indiana State University (IN). March 1975.

While all three reports were interesting, I will focus on Mumford's report since it is most pertinent to Indiana. While the topic of the report was supposed to be on bats and woodrats on HNF property, much of the report dealt with their habitats outside of the Forest boundaries. This was primarily because there were no caves or cliffs found to support hibernating bats or woodrats within the HNF. So other than some summer forest usage by Indiana bats, there was little found to document.

Because hind-sight is 20-20, it is interesting

to look back at some of the statements and conclusions made approximately twenty years ago. Mumford stated, "We feel that the major wintering populations of *Myotis Sodalis* are known. The largest numbers winter in Big Wyandotte (Crawford Co) and Ray's Cave (Greene Co)." This statement was made about a year before the two mega-hibernacula, Twin Domes and Batwing, were found. Subsequently, other caves such as Jughole and Parker's Pit were found to have significant populations. Mumford also concluded the total population of Indiana bats was relatively small. He stated, "As of February 1974, the largest known wintering populations of *M. Sodalis* in Indiana were in Ray's Cave, Big Wyandotte Cave, and Buckner's Cave. An estimated 4,700 *M. Sodalis* were in these sites on 10 February 1974, according to JB Cope." Compare this with the 176,000 bat counted last winter (see *Update* No. 37). Finally, Mumford stated there was "circumstantial evidence indicat[ing] that bat populations have been rather steadily declining in Indiana over the past 20 years. But it is encouraging to see that numbers present in Ray's Cave in 1974 are about equal to the recorded high numbers over the years for which we have records. Buckner's Cave also appears to be holding a rather steady population. The most dramatic change is in Big Wyandotte, where it is always been felt the future of *M. Sodalis* in Indiana would be decided. This population has fallen drastically, and only future counts there will indicate whether the decrease is of a permanent nature."

If you would like an original copy of this "historic" report, I have six left to give out on a first come basis.



INDIANA KARST CONSERVANCY TREASURY REPORT**Income Statement****From April 01, 1995 to June 30, 1995****INCOME:**

Dues Apportionment and Residuals	483.75	
Donations	90.00	
Interest	45.10	
		<u>\$618.85</u>

EXPENSES:

IKC Update (Printing/Production/Mailing):	187.82	
Membership Correspondence/Expenses	101.13	
Misc Correspondence/Info Request/Conservation	88.33	
Property Management Expenses	2.89	
Corporate Expenses	16.59	
Mayfield's Cave legal defense fund	200.00	
Hoosier Environmental Council dues	100.00	
Earth Day Indiana booth	30.00	
		<u>(\$726.76)</u>

NET OPERATING EXCESS (DEFICIT) THIS PERIOD (\$107.91)

Balance Sheet**June 30, 1995****ASSETS:**

Prepaid Exp: 1995 Cave Management Symposium	977.07	
Cash in Bank	5541.36	
Total Assets		<u>\$6,518.43</u>

LIABILITIES & OPERATING EXCESS:

Hancock Property Maintenance Fund	215.73
DNR Non-Game Fund	270.00
Indiana Cave Symposium Fund	330.82
Deferred Dues Fund: 129 members - 1995 75%	1451.25

Previous Operating Excess	4358.54
Net Excess (Deficit) This Period	<u>-107.91</u>

Current Operating Excess	4250.63	
Total Liabilities & Operating Excess		<u>\$6,518.43</u>

continued from page 14. . .

and dead animals dumped into the sinks will pollute cave waters and even the landowner's water supply!

As the state's population increases and puts more and more demand on Indiana's recreational facilities, the importance of

clean, unvandalized caves will increase. Since cavers spend large amounts of money for special clothing, equipment, food, transportation, and lodging, Indiana caves are valuable assets, both financially and aesthetically. Because they cannot be replaced, special care must be taken to preserve their wild and unspoiled beauty.

IKC QUARTERLY MEETING MINUTES

June 24, 1995
Bloomington, Indiana

BOARD MEMBERS PRESENT:

Joshua Abdulla	James Adams
Bruce Bowman	Keith Dunlap
Hank Huffman	Tom Rea
Eric Schmidt	Tom Sollman
Betty Watson	

BOARD MEMBERS ABSENT:

Larry Bundy	Bruce DeVore
Dave Haun	Larry Mullins
Bob Sergesketter	Bill Tozer

The meeting was called to order at 7:09 PM by IKC President, Bruce Bowman at the IU Geology Building. Introductions were made and the March 1995 meeting minutes were approved as published.

Treasurer Keith Dunlap reported a balance of \$6,475.48. At this time, Keith also mentioned that it might be beneficial to form an auditing committee to infrequently examine the Treasurer's records for correctness. There was some discussion, however not much interest. This action was recently recommended in an *NSS Administrative Memo*.

There was a discussion on proposing a bylaws change that would allow proxies. This is an attempt to try to insure that we have a quorum of Directors at each meeting. This policy would be similar to the practice at NSS Board of Governors meetings. Keith Dunlap agreed to draft proposed changes that would address several related issues.

Some key points are that the proxy must be a member but not a Director or Officer and that a person may only hold one proxy at each meeting. It is the responsibility of the absent Director to inform the President of his proxy prior to the meeting or to send a written authorization with the proxy to the meeting and present this authorization to the President.

There was also discussion concerning replacement of a Director who misses three consecutive meetings.

Jim Adams moved to renew our Hoosier Environmental Council membership at the \$100 level. Motion passed (The President contacted Director Dave Haun after the meeting to secure the tenth "yea" vote).

Bruce gave the membership an update on oil and gas drilling activities around the state. He has been in contact with Jim Slutz, IDNR, who is involved in issuing the drilling permits. Bruce had suggested that the IKC offer to monitor the permit location and report any permits that were close to known caves. Slutz and others seemed to feel that as long as the drilling was done properly and the wells were properly cased, that there should not be a problem. It was noted that the IKC could subscribe to a list of issued permits or perhaps make available a form to the drilling company whereby they could request a check for caves in the area. Keith noted that it would be expensive for a driller to hit a void and possibly lose a drill bit in a cave. It is to everyone's advantage to avoid the caves.

The IKC has held the trip leaders responsible for vandalism which has occurred in two IKC managed caves, Shiloh and Wayne's Caves. Bruce will send appropriate letters to the parties involved. Most Directors felt comfortable in seeking no further action in the Shiloh incident.

In the case of the Wayne's Cave problem, many of the Directors felt the party involved did not seem to feel any remorse at all from an environmental standpoint. He appeared to be more concerned with the legal ramifications of the incident. Most Directors wished for a more strongly worded letter in this case.

Keith Dunlap moved to restore complete access to the individual in the Shiloh incident. Motion passed, 9-0 (Dave Haun later added his "yea" vote).

Further discussion was tabled concerning restoring access to the Wayne's Cave individual with no clear consensus from the Directors.

Keith Dunlap reported on the ineffectiveness of Winter closures at Coon and Grotto Caves (this is also reported on page six of the June 1995 *IKC Update*). Keith lead a discussion on the appropriateness of installing bat gates on these two caves. The general consensus was to not pursue gating.

Bruce mentioned a possible need for workdays at Suicide and Endless Caves. It was felt that Suicide seems to be in good shape for now. Bruce will contact the landowners at Cave River Valley.



Development at Northwest Industrial Park may threaten Mayfield's Cave and the IKC has been monitoring this situation. A biology survey will probably get underway to determine if the cave is still healthy 90 years after it was first inventoried by Banta.

A housing development on septic systems may have a future impact on Binkley's Cave. Bruce has investigated getting base line water samples at \$15 per test. It might be nice to get a picture of the water quality now and then compare this with water quality after several years.

The McCart's Pit property has changed hands and is now posted. Should the IKC attempt a lease arrangement with the new landowner? The Directors felt that the IKC should provide the landowner with information but were opposed to any other action.

Concerning Hoosier National Forest issues, members are encouraged to send opinions on the Tincher Hollow Special Area to Larry Mullins by June 30th. Also, the HNF is pursuing a deal with US Gypsum which would transfer to the HNF Wesley Chapel Gulf and other significant karst property. The IKC is in favor of this arrangement, however there are some groups which have voiced opposition. This is not a "done deal".

Hank Huffman had nothing to report concerning IDNR activities.

Tom Rea is serving as a caver representative to the IDNR Cave Management Task Force. They have had one meeting at Spring Mill State Park. Several smaller committees have been formed but no further major meetings are currently scheduled.

The Nature Conservancy Blue River Project could make use of Indiana Cave Survey data. In order to release this data to The Nature Conservancy, a Memorandum Of Understand-

ing needs to be drafted in cooperation with the Indiana Cave Survey. Bruce will follow up on this one.

Concerning the upcoming National Cave Management Symposium, registration seems to be low but this is probably not a problem. All the major tasks are done and things are on schedule. There are still lots of little details to take care of.

The Indianapolis to Evansville Highway project is "on" again. A draft Environmental Impact Statement might be circulated. A meeting was recently canceled and has not been rescheduled.

The Adopt-A-Highway program, which has been in limbo for a year or more, may be started up again with all new groups. This would be good for the IKC.

Richard Newton is the new IKC Liaison with the Louisville Grotto.

Betty Watson reported that the West Baden Hotel may go to the Historical Society. A gambling organization was looking into acquiring the property.

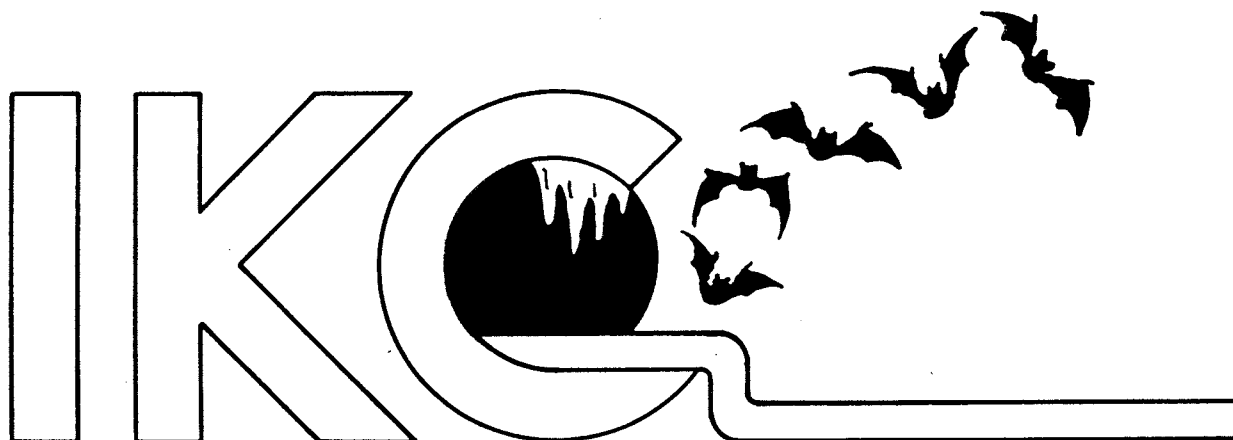
The IKC still might have a chance at getting a Golden Eagle Grant from IPALCO. This would allow the IKC to update our traveling display.

The Indiana Department of Tourism may be duplicating Doug Love's book on the caves of the Garrison Chapel Valley.

The next IKC meeting will be a cookout at the ranch of IKC President Bruce Bowman. The event is set for September 23, 1995 with a meeting starting at 5:00 PM.

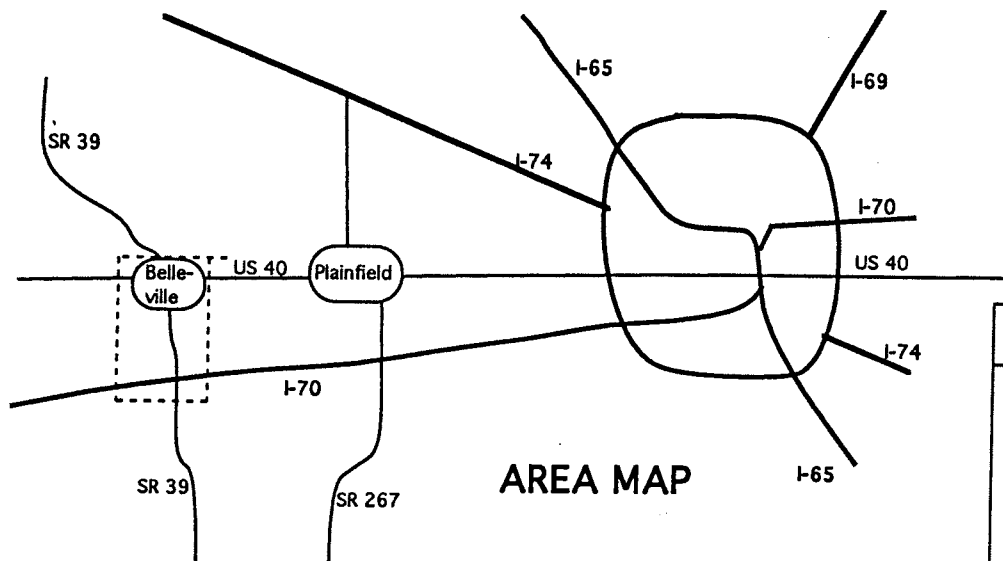
Meeting adjourned at 9:31 PM.

Submitted by James Adams, IKC Secretary

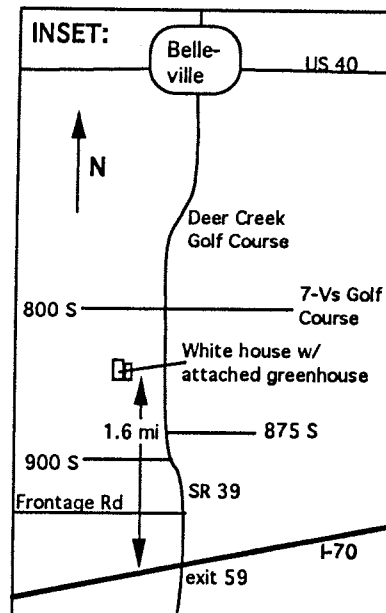


DIRECTIONS TO THE IKC QUARTERLY MEETING / COOKOUT

SATURDAY SEPTEMBER 23rd, 5:00 PM



Directions: Take I-70 west of Indianapolis to SR 39 (approx 14 miles, 2nd exit west of I-465). Turn north 1.3 miles to a white house on the west side of the road. The house has an attached greenhouse (the only one on the entire road). A sign will be placed on the road so you can't miss it.



Please RSVP. Bring your lawn chairs and a covered dish, salad or dessert.

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 _____

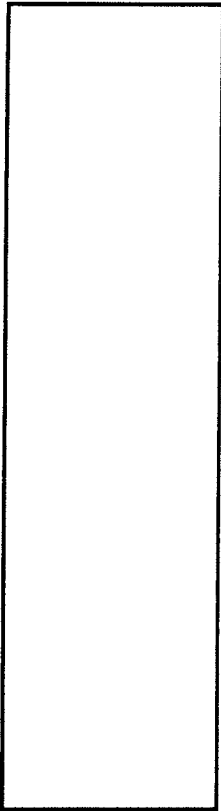
CITY/STATE/ZIP _____

PHONE # _____

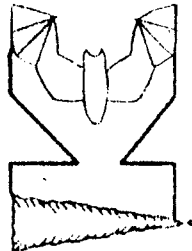
Make checks payable to the Indiana Karst Conservancy, Inc. and mail to the IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapolis, IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations fully tax deductible.

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