

# TRC Tpdate

### 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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President Keith Dunlap       (317) 242-2505(W)/(317) 882-         Secretary Bill Tozer       (317) 778-         Treasurer Jane Miller       (317) 784-	3259(H) 3724(H)
Director Jeff Cody	8433(H) 3724(H)
Director Tom Rea	4115(H) 6739(H)
Cave Management & Landowner Relations/ Keith Dunlap (317) 8	
Research & Science/ (vacant)       (317) 8         Education/ Noel Sloan       (317) 8         Membership/ Jane Miller       (317) 7         Publications/ Keith Dunlap       (317) 8	84-3724 82-5420
Environmental Concerns, HEC Liaison/ Lynn Miller	39-2394
Coon Cave/ Keith Dunlap (317) 88	82-5420
Grotto Cave/ Keith Dunlap       (317) 83         Shaft Cave/ Keith Dunlap       (317) 83         Shiloh Cave/ Keith Dunlap       (317) 83	82-5420
Wayne's Cave/ Serena Smith	33-4971
* * * * * * * * * * * * * * * GROTTO LIAISONS * * * * * * * * * * * * * * * * * * *	* * * *
Bloomington Indiana Grotto/ Anmar Mirza	82-5420 52-7619 77-7043 82-1414

Cover artwork by Linda Heslop of Norman Flux surveying in Rats Nest Cave (Canada) from a photo by Dave Thomson.

Myotis Press

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### ANNUAL BUSINESS MEETING REMINDER

### SATURDAY, MARCH 21st, 10:00 AM

# INDIANAPOLIS, INDIANA AMERICAN UNITED LIFE BUILDING AUL MAIN AUDITORIUM

The Annual Business Meeting is for the explicit purpose of electing Officers and Directors to the Executive Board. It is also 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: elections; summary of last quarter's activities; Hoosier National Forest Announcements, HNF inventorying & planned ridgewalk; Earth Day; Under-Earth Day; Lost River Protection discussion; '92 Convention activities; Cave status.

Meeting directions: The AUL Building is downtown Indianapolis bounded by Capital, Ohio, Illinois, and New York (it is the second tallest building downtown, two blocks west and south of the War Memorial). Parking should be available on the street or in the lot north of the building. Enter for the north entrance and follow the signs to the main auditorium (ground floor). Thanks to Jim Adams for the meeting arrangements.

### **EVENTS CALENDAR-**

21 MAR = IKC ANNUAL BUSINESS MEETING, Indianapolis (see above)

22 MAR = IKC / HNF KARST INVENTORY RIDGEWALK, Orange Co (see page 4)

05 APR = CIG / HNF KARST INVENTORY RIDGEWALK. Orange Co (see page 4)

14-15 APR = HNF CAVE MANAGEMENT WORKSHOP, Spring Mill (see page 4)

18 APR = HNF KARST INVENTORY RIDGEWALK, Bedford (see page 4)

25 APR = HNF KARST INVENTORY RIDGEWALK, Bedford (see page 4)

25 APR = EARTH DAY '92, Indianapolis (see page 6)

26 APR = UNDER EARTH DAY III, Sullivan's Cave (see page 7)

15-17MAY = SURVEYING & CARTOGRAPHY WORKSHOP, Bedford (see page 4)

?? JUN = HANCOCK PROPERTY WORKDAY, Bloomington (prior to meeting)

?? JUN = IKC QUARTERLY MEETING, Bloomington (date to be determined)

03-07 AUG = 1992 NSS CONVENTION, Salem

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 informed, and to document past, report on current, and announce future IKC activities and business. Submission of articles for publication pertaining to the IKC or any other related conservation subjects are encouraged. Forward material to the *IKC Update*, PO Box 2401, Indianapolis, IN 46206.



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### RAMBLINGS FROM THE PRESIDENT...

In the last issue of the *Update* in this column I made several references to excerpts from the Donohue feasibility study related to the three proposed highway routes being considered for construction across the karst areas of southern Indiana. Since that time, I have requested and obtained a complete copy of this study (the "Southwest Indiana Highway Feasibility Study"). The contents of this report were interesting and enlightening to say the least. The report clearly concludes that none of the proposed highway routes are economically justifiable. Even under their most optimistic scenario, the cost-to-benefit ratios fall far short from ever rationally considering any one of these roads, little lone building all three as INDOT and Governor Bayh are trying to do. Quoting from the report, "It should be noted that the funding required for this project [meaning one of the three proposals] would be of much greater magnitude than for any roadway project attempted in the state since development of the interstate system. Significant broad-based political support and a unified regional coalition would also be required to make any of these funding strategies successful. These conditions, while not impossible, would be a very difficult challenge for the region and the state." The decision to not build these roads seem like a "no-brainer" to me, but obviously our state leadership is more concerned with furthering their political ambitions than with their fiscal responsibilities.

On another matter, but partially as a result of the proposed Mitchell-to-French Lick highway, there is renewed interest in seeking some type of federal and/or state protection for the Lost River area (Orange Co). This action, whether it be a National Monument or some other designation, has been the vision of Bob Armstrong and the Lost River Conservation Association for the past twenty years. For the first time though, it might proceed beyond just a dream. The Hoosier National Forest (championed by Brownstown District Ranger Bruce Slover) in its new pro-active environmental "mission" has expressed an interest in assisting by what ever means is appropriate to protect this karst treasure. To date, there have been two informal meeting with interested environmental organizations (LRCA, IKC, POW, HEC, Audubon) to discuss possible protection solutions. The most plausible proposal would be to protect the resources by voluntary private agreements and some willing-seller purchases of the more notable features, then establish an interpretive trail system connecting the points of interest. The eventual goal would be to provide an economic incentive to protect the resource by developing and promoting ecotourism. Eco-tourism is already big business and is projected to become even more so. It is compatible with natural resource protection and generally attracts the "cream" of the tourist trade (educated, affluent, conservation minded, appreciative of natural resources). While the draw would be the Lost River, area businesses (hotels, restaurants, commercial caves, historic buildings in French Lick) would all prosper. However, none of this can come about if inappropriate projects destroy the featured attraction (aka the goose who lays golden eggs).

The next step in developing this long term protection is to determine local interest, fore none of this can happen without their undivided support. Some pro-highway/pro-development politician may view this as a ploy to defeat the Mitchell-to French Lick highway deemed necessary in their eyes to promote French Lick. Unfortunately, French Lick has little to offer even if a new highway makes it easier to get there. However, the Lost River could become a significant tourist draw if developed and promoted correctly, and the whole region would benefit. Furthermore, increased tourism would provide actual justification for an improved highway infrastructure (assuming one is designed to minimize environmental impact).

Only time will tell if the Lost River will be successfully protected or allowed to be further degraded and destroyed by improper development. One only has to look as for as Kentucky to see what will happen to our classic karst if action is not taken.

### HNF CAVE/KARST ACTIVITIES

transcribed from Larry Mullins to Keith Dunlap

The Hoosier National Forest is planning many activities over the next several months that will be of interest to cavers. Most will provide unique opportunities for individuals and/or groups to participate, contribute, or to obtain a better understanding of caves and karst. At the same time, our public lands will benefit as a result of better management practices implemented from the knowledge gained from these activities.

The first activity is the continuation of the karst inventorying to locate cave and karst features on the forest. The Hoosier is committed to managing karst resources, but they must know where they are before they can manage them properly. The inventorying can only realistically be performed during the winter months when visibility is optimal. Larry Mullins is coordinating this activity, but the work is being done by volunteers. The Hoosier is an excellent place to ridgewalk and new caves are being found. The ridgewalks are a perfect opportunity for novice and experienced cavers alike to contribute to this conservation activity. Scheduled dates include Sunday March 22nd (IKC sponsored trip, see below), Sunday April 5th (Central Indiana Grotto sponsored trip), Saturday April 18th, and Saturday April 25th.

The second activity of interest to cavers is a HNF sponsored Cave Management Workshop to be held at Spring Mill State Park on April 14th and 15th. This is a slightly abbreviated version of the three day workshop held two years ago, stressing appropriate karst management practices. The primary purposes for the workshop are to sensitize new forest service employees on karst and caves, and to reinforce practices learned by those who attended the last class. Tuesday morning's session will cover general karst hydrology and geology, followed by a cave trip in the afternoon (tentatively scheduled for Salt's Cave). Wednesday's sessions will continue with the sciences (biology, archeology, paleontology), then conclude with cave/karst management techniques and philosophies used on the Hoosier and elsewhere. While the audience will be primarily FS personnel, cavers are strongly encouraged to attend, participate, and interact at this workshop. Attendance is free.

On May 16th and 17th (Saturday and Sunday), the HNF is sponsoring a Cave Surveying and Cartography Workshop. The instructor will be Pam Saberton from the Missouri Speleological Survey. Saturday's sessions (at the HNF office in Bedford) include various techniques and rationales for cave surveys, topo map reading (longitude/latitude, UTM), cave report forms, the various types of equipment that can be used for surveying, care for surveying equipment, two cave videos on surveying, and organizing and interpreting survey data. Sunday's instructions will be in a cave actually surveying, returning to the class room later in the day to draft the map. This two day class is free and is being presented specific for cavers in hopes of encouraging more cavers to survey and document Indiana's karst resources. If you are interested in surveying and cartography, this class is for you. Novices will learn the skills to start surveying, while experienced Indiana mappers will get a slightly different perspective on the subject. Enrollment is limited to thirty students, so please pre-register.

On the evening of May 16th, Larry Mullins will host a pitch-in cookout for the participants of the cartography workshop, and to recognize those who have helped with the karst inventorying this year. This will be a social campfire event, so bring lawn chairs and musical instruments.

Contact Larry (812-275-5987) for more information on any of these activities.

### IKC/HNF RIDGEWALK - MARCH 22

The IKC will once again sponsor a ridgewalk on the Hoosier National Forest as part of the karst inventorying project. We plan to meet at the west side Bloomington McDonalds at 9 AM and car pool south to Orange County. Our plans are to work near Tucker Lake. Previous trips into this area have found the forest to be easy and quite enjoyable, so plan to get a jump on spring and attend. For more info, call Keith Dunlap.

### **NEWS BRIEFS...**

(	Over the past six months there have been numerous changes/problems with access to some popular caves frequented by affiliated and unaffiliated cavers. As reported in the last issue, Freeman's Pit (Monroe Co) should be avoided for awhile until the landowner situation is fully understood. The owner is unhappy with all the traffic, especially after dark (it seems that midnight bops are popular at this cave). Several tentative meeting have been scheduled with him, but none have worked out. Until then, please do not complicate the problem.
(	Wells Cave (Orange Co) is another cave that is endangered of being closed to cavers. Mrs. Wells, who has been hospitable to cavers for the past twenty-five years, has had numerous recent problems with visitors going to her cave without permission, and people damaging her fence which could let her livestock get loose. There have also been reports of trash (beer cans) and graffiti in the cave which upsets her greatly. Bill Tozer and Larry Reece of the IKC have met with her, and have volunteered to fix her fence, build a stile, and work with her on any other problems. The cave is still open, but <i>everyone</i> must get permission from her before going to the cave.
(	During the past three years, the landowner relationship at Sullivan's Cave (Lawrence Co) has improved, mainly because of active involvement by cavers working with Janet Stewart, the owner. Janet's main complaint was unauthorized caver sneaking into the cave. This was stopped with the installation of a gate, but then she was disturbed at all hours of the day and night, and bombarded with phone calls asking for permission. Because of chronic health problems with her daughter, she would now prefer not to be bothered. But rather than close the cave completely to cavers, she has turned over the keys to Bob Vandeventer (of the CIG) to serve as her liaison. Those wishing to obtain permission to visit Sullivan's should contact Bob at 317-882-4501.
C	The IKC has been in recent communication with the owner of the Church Entrance to Shiloh Cave (Lawrence Co) to see if we could provide any assistance in protecting/managing the cave. While he is very concerned about protecting the cave, he did not see it necessary to have a second party involved because the current gate is providing protection. Negotiated access is not likely because of problems he has encountered in the past (cavers disrupting church services, cavers indiscreetly changing clothes in the parking lot, or in one instance, "cavers" breaking into the church to change clothes, leaving a muddy mess on the pews). The spring entrance is also gated.
C	Fredericksburg Cave (Washington Co) is up for sell. Long time owners Mr. & Mrs. Jeffries are hoping to sell the property and house to a caver or at least someone who will protect the cave the way that they have in the past. Time will tell if the new owners will allow visitation.
	The property containing Wayne's Cave (Monroe Co) has been sold. The land's availability was not publicized and the property was sold after being listed for only one day. The new owner does not currently plan to build on the property. The IKC has been in communication with the him, and we have a verbal agreement to continue managing the cave.
	The IKC has had several conversations with the owner of Salamander Cave (Monroe Co) pertaining to protecting that resource and possibly working out a means of providing legal access for cavers. While the owner seems receptive, he is very concerned with liability. The main road block is not having a place to park. The owner does not want cars parked on his property, and Mr. Hancock does not want people parking on Spicer Lane, nor crossing his property to visit Salamander. So for the indefinite future, Salamander should still be considered closed.
	Several of the Indiana Bat hibernacula caves will re-open for the summer starting May 1st. These include IKC managed Coon and Grotto caves (Monroe Co), state owned Jug Hole and Saltpeter caves (Harrison/Crawford Co), and private owned Parker's Pit.

Steve Collins of the Spring Mill Project reports that the Whistling Cave's survey now stands at 36,034 feet. Surveying is continuing and volunteers that like wetsuit caving are needed Steve has also been busy cataloging the Project's proprietary information (survey notes maps, photographs, etc) that will be made available to appropriate Spring Mill personnel to aid then in cave resource management and protection. This information will also help them in the event of a rescue.
Some concerns have been raised over rare and endangered plants being damaged by climbers/rappellers at Hemlock Cliffs. The Hoosier National Forest has the responsibility to protect these plants and thus are studying management alternatives. This may include prohibiting vertical work at some or all of the cliffs. One proposal is to train cavers/rappellers to identify the plant species, then have them perform inventories at each of the major rig sites. Appropriate protection actions will then be formulated. Contact Larry Mullins for more information.
Several of our members have noticed that the IDNR is proposing an Administrative Rule pertaining to the protection of the Indiana bat. The IKC was consulted prior to proposing the rule and obtained our concurrence. The original intent of the rule was to make it unlawful to <i>enter</i> specific bat hibernacula during the closure period (September 1st thru May 1st). The rule was suppose to simplify enforcement, as the current law protecting the Indiana bat require the prosecutor to prove that the offenders entering a hibernacula "harassed" the bats before being found guilty. However, because the rule affected private landowners, the DNR legal staff reworded the rule to not provide any further protection. It is anticipated that the rule will be withdrawn after the public hearings, since the original intent of the rule was not met. The other questioned raised by some during the rule review process was its conspicuous exclusion of Wyandotte Cave on the list of hibernacula.
The IKC's poster distribution to our members was completed in December (contact Keith Dunlap if you did not receive your) and the response has been very favorable. More than a few have ended up at schools being used for instructional aids. Additional copies of the Virginia Cave Board poster (In karstlandswhat goes down, must come up) may be obtained from various speleo-vendors (for \$2-\$5). The IDNR cave habitat poster may be obtained by contacting Debbie Farhurst, Non-game Information Specialist, Atterbury Fish & Wildlife Area, Edenburg, IN 46124, or 812-526-2051.
The IDNR Non-game Fund tax check-off survived another year without the legislature approving a competing recipient. A bill allowing for an alternate check-off passed the House and a similar bill with an attached amendment passed the Senate on the last day, but the Conference Committee failed to agree upon the amendment, so the bill died. This check-off is important to the Non-game Program as it is the primary source of income to fund the various non-game projects including most of the bat related research being done within Indiana.
Earth Day Indiana (not to be confused with Under-Earth Day) will be held on April 25th at the Indianapolis Art League (820 East 67th Street in Broad Ripple) from 11:00 AM to 6:30 PM. This year's theme is "BE EARTH PROUD", and will feature an interesting and informative lineup of speakers, exhibits, and activities. In addition to learning ways to "be earth proud" and how to solve environmental problems, festival-goers will enjoy a super array of live music and food. Admission is free. For more information phone 317-831-7470.
The Indiana Department of Transportation is soliciting for a consultant to assist with the primary engineering study for the road from Mitchell to French Lick across the Lost River Drainage Basin. The task requirements include: researching public and private sources for karst related features, locating and delineating features on INDOT working maps, work with the INDOT staff, prepare public presentations and attend public meetings to act as an expert in the area of karst features, explore caves to determine there three dimensional extent, propose methods to mitigate impacted karst features; and aid in formulating/executing tests associated with karst features. While the IKC must commend INDOT for this step in the right direction, it also indicates that they are very serious about proceeding with their original plans.

### UNDER-EARTH DAY III, APRIL 26th

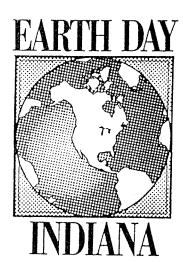
### by Keith Dunlap

Earth Day is a special day each year to raise our consciousness about the environment. Its main focus is at the grass roots level, providing a forum for individuals and small organizations to emphasize their particular concern about the environment. Earth Day also symbolizes and recognizes the fact that many of our current environmental problems can be solved if individuals and families would only "think green" every day. This does not require much effort, but it does demand a continuing commitment to consume wisely and dispose ecologically.

To celebrate Earth Day, individuals and organizations are encouraged to do something good for the environment. For cavers, this translate into doing something good for caves. The IKC would like to invite grottos and cavers to participate in UNDER-EARTH DAY III at Sullivan's Cave near Bedford, IN on Sunday, April 26th. Each of the past two years we have had approximately ninety cavers representing no less than nine grottos share in this *en masse* restoration.

For those that are unfamiliar with Sullivan's Cave, it is Indiana's third longest cave with over nine miles of passages. It is also known to be one of Indiana's most heavily used non-commercial caves. Because of past neglect and lack of protection, it has suffered its fair share of abuse and vandalism; but in 1990, a gate was installed on the entrance by the Central Indiana Grotto to regulate access and stop further destruction. Restoration work the past two years has made a considerable difference, but there is much more to do. Some trash still remains and graffiti is still plentiful. Haul bags and other necessary equipment will be provided, but feel free to bring your own restoration "tools".

Sullivan's is a caver's cave, offering something for everyone. The entrance is a short series of climb downs opening into an interesting dome complex. This leads immediately to the infamous "Backbreaker", a long but relatively easy stoopway. This passage eventually turns into pleasant walking passage with several side leads. One lead is a very short crawl that opens into the impressive Mountain Room. The trip to the Mountain Room is a good destination for those that wish to stay relatively dry and there is plenty of restoration work that can be done between this point and the entrance. To continue, one must choose to travel upstream or downstream, either which will require getting wet. Upstream leads to several miles of passage and numerous large rooms. Downstream leads to the Spiral Room and the Spring Hollow Entrance which makes for a good thru-trip if the water is low enough and the outside temperature is warm enough (you will get completely soaked the last 100' and it is a long walk back to the parking area). For the more adventurous, there are several lesser know areas that could use some attention (see the following article by Bob Sergesketter).



Sullivan's is appropriate for beginners and older children, but it can provide challenges for those that wish to push to the farther extensions. *All that we ask is that everyone have a helmet and adequate light sources*. A liability waiver must also be signed at the request of the owner.

For those coming from the north, we plan to car pool from the west side McDonalds in Bloomington, leaving at 9:15 AM. We plan to regroup at the cave's parking area by ten o'clock for a short orientation and safety meeting. Someone will be on the surface at all times, so you may show up later and still participate. Plans are to be out of the cave by 4 PM. To obtain further information on the project or directions, contact Keith Dunlap (317-242-2505/882-5420) or Bob Vandeventer (317-888-4501).

### **UNDER-EARTH DAY 1991**

### by Bob Sergesketter

On April 21, 1991, 86 cavers returned to Sullivan's Cave for the second annual "Under Earth" Day clean-up trip. The EMG was well represented again this year. 1990 was the first year for the Indiana Karst Conservancy sponsored clean-up and since the cave is gated now, there can be some real improvement. Clean-up trips in Sullivan's had always been a losing battle before the gate was installed because the cave is one of the most popular caves in the state and attracts a lot of misguided and uninformed groups.

Last year, Steve Weinzapfel and I saw that everyone headed down the backbreaker towards the Mountain Room, so we decided to be different and seek our trash and graffiti in the opposite direction. We went to the right when we got up into the Backbreaker passage and found fertile ground. We didn't have to get more than five minutes from the entrance to spend the day gathering trash and cleaning paint off the walls.

This year, as I was waiting to get up into the Backbreaker, I decided once again not to follow the crowd. There was no one behind me to tell me I was going the wrong way, and the people in front were up in the passage back breaking their way towards the Mountain Room, so before anyone else came up behind me, I stayed low and quickly crawled around the corner and out of sight. I could hear the next group coming in and climbing up into the passage over my head but down below in the lower level I knew that I had my work cut out for me.

I immediately noticed that here was a passage that hadn't received much clean-up attention for a long time. My quickly formulated plan was to gather together a pile of trash and stash it near the beginning of the lower level passage. Then I would continue down the passage towards the connection with the "side crawl." This would lead me to the Bat Room, then through the crevice crawl and finally out the Connection Spring which would put me in the lower trunk passage near the North Y. From there I would go down the Flood Route to the Mountain Room and then back towards the entrance by way of the Backbreaker. I was going to wire brush what little graffiti I expected to find as I went, and then at the climb down from the Backbreaker I would go around the corner, pick up my trash from before, and head out.

Well, it didn't work that way. The farther I went, the more trash I found. There was a lot more junk written on the walls too. Big red arrows sprayed in places where no one could possibly go the wrong way. Names, dates, more arrows pointing every which way and in every color. I cleaned them all off. The only marks I left were survey stations. There seemed to be no end to the trash and I soon realized that I would not have the time or carrying capacity to do my planned circle route so I just started pulling all of the bottles, cans, broken flashlights, discarded clothing, and other junk to the middle of the passage. I cleaned the walls on the way in and figured I'd gather the trash on the way back out.

Instead of going all the way to the side crawl junction, I turned left down the Waterfall Crevice. Trash and graffiti thinned out in this passage and I was soon in the Waterfall Room eating my peanut butter & jelly sandwich while the stream plunged through the hole in the floor. I didn't climb down to the bottom of the waterfall because I didn't feel like getting wet. I've been down there before and I knew it would be a slow trip out and I would rather be dry. There wasn't much trash back this way, just a Mountain Dew bottle in the Waterfall Room, but there was a lot of writing on the walls and a lot of spent carbide.

Part of the passage to the Waterfall Room is a narrow canyon 8 to 10 feet tall with a stream at the bottom. The bottom is too narrow in most places for a caver to fit so most traffic stays at the top. As I was heading out, moving along on the ledges and handholds at the top of the canyon, I happened to look down and I saw a vague shape in the water below. It was covered in silt but it was something cylindrical like a flashlight or a piece of tubing. Well it was trash and the canyon looked wide enough for me to get down to it. As I climbed down I could see the circular

outline of a switch and I knew it was a flashlight. I managed to get close enough so that by reaching down behind myself, I could feel around and grab it. It was a D-cell Everyready Halogen flashlight and it wasn't broken. I said to myself (who else?) "This is a waterproof flashlight and it appears to be intact. Push the button and see what happens." I wasn't too surprised when it clicked but didn't come on. After all, it may have been on when it was dropped and hard telling how long it had been down there. The batteries were probably leaking and water had seeped in and the whole inside was a mess.

Still, it was trash and I was going to remove it, but as I started to climb back up the canyon, I looked down and the light was on! Shining bright through the mud covered lens! I turned it off and on a few times and it worked perfectly. It was as bright as a new one. I guess the contacts just didn't quite connect until it was bumped around a little.

As I reached the more well traveled passages, I pulled out my trash bag and started filling it. By the time I got back to the low crawlway, I had a very heavy bag and since it was just a trash bag (not a haul bag) I had to be very careful so as not to rip it open. I was still carrying my wire brush in one hand because it was too muddy to put in my pack and I didn't want to have to search for it in the trash bag. As I came around the corner in the lower level, someone was climbing down from the Backbreaker and he was kind enough to take my wire brush along out. I wrestled the bag of trash up the climb and out. I don't know what the rest of the cave looks like now, but the few hundred feet that I was in looks a lot better.

Next year I'm going to return to the lower level and I'm going to take a stick or something to reach back under some of those ledges and pull out the trash that I could see but couldn't reach. This passage carries a lot of water sometimes and a lot of trash gets swept into inaccessible places.

As long as the IKC keeps sponsoring clean-ups in Sullivan's Cave, I'll keep coming back. Sullivan's was the first place I ever went caving on my own (back in 1963) and although I've lost count of the number of trips since then, I always enjoy returning. See you in the side crawl next year!

[Reprinted from the *Petroglyph*, Volume 27, Number 1]

### **Boosting Bats**

People are getting a bit better about bats.

Ball State University biologist Anne Cartwright finds this to be true. So does Wild Birds Unlimited, an Indianapolis business that sells bat houses. Once feared because of their lore in folk tales, bats are being more accurately portrayed as beneficial.

"Bats are real good at keeping insects under control," said Sonie Finchum of Wild Birds. "More people are interested (in bat houses) every spring."

The bat house is a simple device, much like a birdhouse without a hole. Instead, the bat house has an open bottom and a series of walls an inch or so apart. Bats can fly up into the house and cling to the sides of the walls.

Bats don't need much room.

Experts estimate that up to 300 of the Indiana bat species can roost in a square foot of space.

Not that attracting bats to your yard is easy.

"Bats are very loyal to roost sites," said Cartwright. "The only way you'll attract them to your yard is if their roost site is destroyed or the colony is growing.

"We suggest leaving a bat house up two years. If you don't get bats by then, move it. We've had cases where bat houses were on different sides of the same yard and bats roosted on one side and not on the other."

Some of Cartwright's research involves an infrared video camera developed by James Kirkwood, a Ball State industry and technology professor.

Kirkwood told Cartwright he could find bats with his camera without disturbing them by light. When he located bats out of sight in a pocket behind 2 inches of wood with his cameras, Cartwright became interested.

They are awaiting grant money for further bat study with infrared.

"We can now observe the bats without a light source to disturb them," said Kirkwood. Heretofore, the cameras, which record heat, were used mainly to detect heat loss in buildings.

Meanwhile, increased housing for bats suggests survival. Some species of bats found in Indiana are endangered, with populations decreasing as much as 50 percent annually. Housing may help them.

And, while they stick around, Cartwright said, they'll keep the insect population in check: Each bat eats about 3,000 insects a night.

[Reprinted from the *The Indianapolis* Star, 6/23/91]

### HEC UNPLUGS EFFORT TO STOP UP SINKHOLES AND CAVES

### by Doug Mason

The USDA Soil Conservation Service (SCS) was proposing to "stabilize" sinkholes in the Mosquito Creek watershed near Leipsie (Lawrence Co) by using an interim standard developed in Pennsylvania that cleared sinkholes out then filled them with rock. In July, HEC staff met with top official at the SCS state office to discuss the Mill Creek Karst Demonstration Project, funded by monies channeled through the US Environmental Protection Agency (EPA). It became clear at this meeting that SCS didn't share HEC's concerns about impact on our world class karst ecosystem, which includes populations of endangered and threatened species like the northern blind cavefish and the Indiana bat, aside from a host of other rare and unusual creatures.

The EPA transfers nonpoint source control program funding to the Indiana Department of Environmental Management (IDEM), which carries out state programs by distributing the money to the appropriate agencies like SCS. The Mill Creek project was aimed at stopping sedimentation of the 28-acre Spring Mill State Park lake, which is fed by water that flows through Upper Twin, Lower Twin, Bronson, then Donaldson Cave. Using engineering definitions, this lake is a sediment basin based on the ratio of lake surface to watershed area. In fact, one proposal has suggested putting another dam further downstream and using the current lake as a sediment trap. Since the lake was built in 1938, it has been dredged for years in a vain attempt to keep it from filling up with silt and clay.

Unfortunately, the biological costs weren't accounted for in the sinkhole stabilization scheme. HEC met with SCS staff again in August at the Bedford field office to argue the case of the cavefish. Horton H. Hobbs III, an Ohio professor who did Ph.D. work on crayfish species in the affected caves, said that if the Pennsylvania practices were successfully installed in Indiana, "I can't think of a more deliberate shot at having a negative impact on cave biota." Organic matter, which provides energy for inhabitants of the karst system, would have been filtered out by plugging sinkholes. Ultimately, the whole food web would collapse, even if only a few aquatic invertebrates were deprived of their energy source of detritus nutrients, resulting in a gross reduction in cave biodiversity.

Agrichemical, implicated in the "broken back syndrome" from which cavefish populations only recently recovered, would not have been slowed by sinkhole stabilization (and usage could in fact have been accelerated by such a practice). This aside from concerns about such substances in the limestone corridor's groundwater which is used for human consumption.

William B. White, a karst expert with Penn State's Department of Geosciences, reviewed the interim standard at HEC's request. He pointed out that this proposed stabilization solution would only apply to one kind of sinkhole. And that Indiana's large circular basins, dissolved in bedrock, couldn't be bridged by tossing in piles of course rock (even if caged in wire as rip-rap).

The upshot of the August discussion was that there is no way that sinkholes can be engineered to keep them stable. A tour of the Mosquito Creek watershed in Lawrence and Orange counties provided ample evidence. At one stop, aggregate had been used to build a dam to force more water to go into a sinkhole to keep a gully from cutting across a cornfield. The forces of nature overwhelmed the manmade structure and cavitation was quite evident in the dam. At another site, a riser had been installed in a sinkhole which had been filled with rock and soil. A tractor had run over the riser, causing piping in the fill material as water sought to drain down the natural cavity. Clearly, you can't plug a sinkhole without providing an alternate drainage way, or force an unnatural flow down a sinkhole either. By the end of the day, SCS agreed with HEC's position, and abandoned the Pennsylvania standard as a possible best management plan.

[Reprinted from the HEC's In-vironment Underground, Winter 1992]

### MARENGO CAVE CLEANUP

### by Dave Haun

Marengo Cave was the site of an energetic NSS cave cleanup the weekend of January 11th and 12th, 1992. Approximately 50 cavers and non-cavers showed up. Most of the cavers were NSS members from the NIG, CIG, MHG, MIG, HCG, FKG, and LG. About 20 were from Indiana, 10 from Kentucky, 4 from Michigan, and one from Missouri. TV and newspaper crews were in the cave all day Saturday. The cave and the NSS received excellent publicity. One of the more famous newspaper pictures featured Jerry Litaker (Indiana) acting like he was working. The other picture showed Glen Driskil (Kentucky) doing what he does best, walking out of the cave for lunch!

Over 70 trips with wheelbarrows filled with very sticky mud and rock were dumped outside of the cave. Old broken formations, foot prints to the side of the trail, and old broken glass were some of the items cleaned up along the tourist trails. Some of the dirt was removed from formations with a shop vacuum cleaner. A part of the mud and rock that was removed uncovered 12 and 14 inch tall rimstone dams and flowstone. We accomplished so much on Saturday that Gary Roberson, the cave co-owner and manager, let us leave early on Saturday evening and let us go at noon on Sunday!

We were fed a filling lunch on Saturday and were each given a very nice restoration T-shirt along with some Marengo Cave novelty items. Most of the cavers stayed at the "Bunkhouse" in Milltown and a few of us stayed in a nearby motel.

After dinner Saturday night, Gary took us on an informal tour of the cave highlighting a lot of the lesser known facts about the cave. We were able to see the three remaining and blowing leads in that exists in the cave. One of the leads, a muddy crawlway, was worked on. One of the more interesting facts of the cave was the "Great Cave Robbery." It seems a guide that used to work at the cave hid in a crevice. When a tour got near him, he jumped out with a mask on and a shotgun and demanded everyone's money. Most people laughed, thinking it was part of the tour, like Meramac Caverns. He proceeded to shoot the cave ceiling before everybody realized it was for real. After collecting everyone's purse and wallet, he ran down the cave passage and turned off all the lights. He was caught a few days later. He had left his car near the cave!

For those cavers who have not been to Marengo Cave, it is highly recommended. The cave has a lot of formations and most of the passages are extremely huge for Indiana - 50 feet wide and over 25 feet high. The cleanup trip was a success and the Marengo Cave owners and staff were very friendly hosts.

[Reprinted from the CIG Newsletter, February 1992]

## Children Discover Marengo Cave

Marengo Cave was discovered by two schoolchildren on September 6, 1883. Blanche Hiestand, a 15-year-old girl, was working as a cook at the local boarding school and overheard students discussing a hole they had found about half a mile east of the academy at the base of a deep sinkhole depression. The boys were planning a trip to see whether it was just a pocket.

Blanche decided to get there before the boys. After work, she raced to her home about a quarter of a mile away, recruited her brother Orris, who was 11, and grabbed some candles. They went to the place the boys described and saw a small opening in the rocks on the southeast side. Although they had to crawl into the narrow passageway, eventually they were able to stand.

After briefly exploring the cave, the dirty yet excited siblings went back home but didn't mention their discovery until the following Sunday. When Samual M. Stewart, who owned the land, heard of their discovery, he gathered a group of men and boys from town and led them into the cave.

The news of the discovery spread quickly, and Stewart opened the cave to the public.

Until 1910, curious visitors used only the natural entrance that the two children found. After that, they were able to use the Crystal Palace entrance also.

As time passed and family members willed their interest in the cave and land to others, the cave changed hands numerous times during the next 100 years. Now, it is owned by a group of spelunkers.

[reprinted from the Hoosier Farmer]

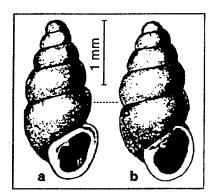
### KILLER CAVE SNAIL ALERT

Well maybe not a killer snail, but at least it got your attention and hopefully you will read on. A request has been received from David A. Smith for Indiana cavers to report any observation of a particular species of cave snail he is interested in studying. Dr. Smith is a faculty member at Wabash College in the Biology Department. Since coming to Indiana two years ago, he has focused his attention on the survey of Indiana's terrestrial snails. One snail in particular is *Carychium stygium*, found so far only in a few caves in Tennessee and Kentucky. He speculates that its distribution could include Indiana and is asking our help to keep our eyes open while caving.

The snail is described as having a shell that is translucent and shiny to opaque white, quite elongated and relatively large, measuring up to 2.6 mm (1/10 inch) in length. It has a tapering spire and 5 to 6 whorls. The outer shell surface lacks striae, having only faint growth lines. The snail has been found in Mammoth Cave among fungal filaments on old bridge timbers. It has also been observed feeding on guano of cave crickets.

Please report any suspected observations to:

Dr. David A. Smith Assistant Professor of Biology Wabash College PO Box 352 Crawfordsville, IN 47933-0352



Carychium stygium Mammoth Cave

### WAYNE'S CAVE CLEANUP TRIP REPORT

by Keith Dunlap

It has become one of my annual pilgrimages. Luckily, the crawlway seems to get shorter and easier with every trip. This time I am accompanied with twenty-six of my peers, together our mission is to continue with the restoration of Wayne's.

This year's trip, the sixth annual for the IKC and CIG to co-sponsor, focused on the Camp II area, specifically cleaning up the spent carbide that had accumulated from decades of thoughtless visitors. The WCG folks literally cleaned up in this area, using spoons and small trowels to collect the carbide in stuff sacks. Mud painting and wire brushing were performed in other places. On the trip out, I always take my time in the crawlway collecting old batteries, broken glass, gum wrappers, and other old bits of trash that always seem to surface no matter how many times in the past it has been scoured.

Next year's plans have already been discussed, with the WCG committed to spending the entire time working on removing carbide and graffiti from the crawlway. Mark it on your calender, December 6th.

Participants this year included David Anderson, Chris Cahill, Steve Cahill, Chris Carpenter, Jeff Cody, Allen Courtney, Bob Decker, Matt Decker, Phil Dittamore, Keith Dunlap, Brent Fountain, Stefan Gutslick, Jon Harold, Ted Hartman, Louie Kitcoff, Jonathan Knott, Tom Michelic, Susan O'Shields, Ray Rough, Rick Ryan, Robb Ryan, Ryan Ryan, Jay Savage, David Smith, Jeff Snow, Mark Sorenson, and Dan Wiseman.

### INDIANA KARST CONSERVANCY, INC.

Statement of Receipts, Expenditures, and Changes in Fund Balance for the Year Ending 12/31/91

RECEIPTS

DUES	1416.00
DONATIONS	178.21
INTEREST	94.45
PHRITCATION SALES	129.00

TOTAL RECEIPTS 1817.66

EXPENDITURES

UPDATE	553.87
HEC CONGRESS	45.00
HEC DUES	23.75
EARTH DAY	25.00
CHICAGO FIELD MUSEUM	200.00
CAVE MGMT SYMPOSIUM	200.00
BLATCHLEY	178.37
SPRING MILL GRANT	100.00
POSTERS	110.00
PRINTING/COPYING	57.90
POSTAGE, GENERAL	161.63
KEYS	11.39
CAPERS' DOORPRIZES	13.99
SLIDE DUPLICATION	99.60
SULLIVAN'S	81.83
WAYNE'S	36.80
WOODARD LEASE	1.00
GRAPHICS ARTS SALON	3.00
SEC STATE FILING FEE	10.00
MTG ROOM RENTAL	35.00
P.O. BOX RENTAL	49.00
OFFICE SUPPLIES	95.58

TOTAL EXPENDITURES 2092.71

EXCESS TO FUND BALANCE -275.05

FUND BALANCE 12/31/90 2382.76 FUND BALANCE 12/31/91 2107.71

HANCOCK PROPERTY

RECEIPTS 0.00

TOTAL RECEIPTS 0.00

**EXPENDITURES** 

HANCOCK LEASE 1.00

TOTAL EXPENDITURES 1.00

EXCESS TO FUND BALANCE -1.00

FUND BALANCE 12/31/90 336.52 FUND BALANCE 12/31/91 335.52

TOTAL BALANCE - ALL FUNDS 12/31/91 \$ 2443.23

### IKC QUARTERLY MEETING MINUTES

Saturday, December 7, 1991 Bloomington, Indiana

### **BOARD MEMBERS PRESENT:**

**BOARD MEMBERS ABSENT:** 

Jeff Cody Jane Miller Keith Dunlap

Tom Rea

Ernie Payne Bill Tozer Glenn Lemasters Mike Miessen Lynn Miller

Eric Schmidt

The meeting was called to order at 7:05 by Keith Dunlap. Introductions were made. Fifteen members and one visitor were present.

The IKC is governed by a Board of Directors elected at the Spring meeting. The membership size allows for ten directors this year. The six board members present do not make a two-thirds required quorum. Mike Miessen, an elected director, did not pay his dues this year and has not attended meetings. Subsequent to the meeting, Keith Dunlap contacted Mike regarding the situation. It was mutually agreed that Mike would no longer be a Director. His position will be filled at the Spring quarterly meeting with the regular election process.

Two motions were presented for consideration:

1) The IKC will own the data developed by the Spring Mill Project. The State of Indiana can use this information. Steve Collins will be our liaison with the State with regard to the Spring Mill State Park caves.

Vote 6 for, 0 Against. The absent directors were polled by telephone after the meeting. Final result 9 for: 0 against. MOTION PASSED.

2) Whistling Gate Maintenance Agreement. The State of Indiana wishes the IKC to maintain the gate for a reasonable time (probably 5 years). Keith Dunlap and Steve Collins have agreed to do the maintenance.

"The IKC will support the maintenance of the Whistling Gate."

Vote 6 For: 0 Against, The absent directors were polled by telephone after the meeting. Final vote 9 For: 0 Against. MOTION PASSED.

**The Cave Management Symposium** - See IKC Update, December 91 for a summary. Keith was impressed with the program. The proceedings of the symposium will be published by the ACCA. The 1993 symposium will be in Carlsbad, New Mexico.

The IKC will promote recycling at the 1992 NSS Convention. Volunteers will be needed. The purpose of the project is to promote recycling. The project is not meant as a money maker.

**Bat Census 1991**. The census is up about 18% overall. The population in Grotto cave continues to decline. No one thinks the fence is the problem, however the reasons for the decline are not clear. See the IKC Update, December 1991 for a summary.

**IKC members will get the Endangered Cave Species poster** plus two additional posters. These posters will be forth coming soon.

**Lost River and the Highway**. No decision as of now on the route. Keith has information for letters urging the protection of the Lost River system. Plans are for four lanes to be constructed to Mitchell by 1993. The possibility of getting Lost River classified as a "Scenic River" is very difficult. The proposal would need to go through the US Congress and would require strong local support.

**Freeman Pit.** Keith Dunlap and Kevin Strunk are trying to talk to Mr. Abrams regarding access to the pit. At present it is best to stay away from the cave. Any access information will be published. Some signs would need to be made and posted if Mr. Abrams agrees. Any volunteers for sign construction?

**Salamander Cave**. Keith wrote a letter to the owner trying to set up a meeting. The purpose to regulate visitation and do some restoration work. The owner is apparently worried about liability. The tenant on the Hancock property is putting pressure on people crossing the Hancock property to visit Salamander. He spends some time in the woods and has been talking to people. There is no problem for people with valid permission slips to visit caves on the Hancock property. Be sure to follow proper procedures when visiting the caves.

**Shiloh.** The IKC will talk to the owner in an effort to secure the main entrance to the cave. Bill Tozer will work with Lynn Miller to contact the owner. There was some discussion of the project to study crayfish from years ago. Does anyone know of the project and who were involved?

**Ray's Cave**. Scott Johnson has talked to the new owner who lives in Michigan. She is aware of the Priority I rating of the cave for the Indiana Bat and wishes to continue the protection.

**Christmas Cards**. Several comments were made of cave owners who appreciated the Christmas Cards received through the CIG program. One cave owner from Tennessee rushed to show the card to the Indiana cavers who were asking permission to cave. The project is very positive. The consensus was to support this project.

FCRPA implementation workshop for the 1992 NSS Convention. Volunteers are needed to help. Contact Larry Mullins...

**Hoosier National Forest karst inventorying project**. Meet on Saturday December 28 at the Forest Office. The plan is to look at Tucker Lake, Lost River, and the Tincher Area.

The Annual Wayne Cave IKC trip. This trip is in conjunction with the CIG grotto meeting. Meet at McDonalds at 9:00 tomorrow. The plan is to visit camp two. The cave is in good shape due to the hard work over the past years.

**Election**. A slate of candidates for officers and directors will be prepared some time in February. Anyone interested in serving contact Keith Dunlap or any Director. Responsibilities are to attend four quarterly meeting and two other director's meetings per year.

Rose Cave. The IKC (or CIG) should consider a cleanup project.

The Spring IKC meeting will be held on Saturday 21, 1992 at the AUL Auditorium. Confirmation and details will follow in the *Update*.

The IKC slide show on caves and karst was given after the meeting. The audience critiqued the script. Everyone enjoyed the program offering positive comments. This program should be polished and available by the coming spring. Contact Keith Dunlap if you wish to borrow the program.

Meeting adjourned 9:45.

Submitted,

William Tozer, Secretary

### IKC EXECUTIVE BOARD MEETING MINUTES

Friday, February 7, 1991 Indianapolis, Indiana

**BOARD MEMBERS PRESENT:** 

**BOARD MEMBERS ABSENT:** 

Jeff Cody Jane Miller Tom Rea Keith Dunlap Lynn Miller Eric Schmidt Glenn Lemasters Ernie Payne

Bill Tozer

The meeting was called to order at 7:05 by Keith Dunlap. Seven directors were present plus Larry Mullins and Mark Laing.

The first item on the agenda was the nomination of officers and directors for next year. The terms of directors Jeff Cody, Tom Rea, and Ernie Payne expire this year. With the expected membership, the board could consist of ten board members. This would allow for the election of three officers and four directors in March.

The following are on the slate:

President:

Keith Dunlap

Secretary: Treasurer: James Adams Jane Miller

Directors:

Jeff Cody, Larry Mullins, Ernie Payne, Tom Rea, and Bill Tozer.

Additional candidates for director will be solicited before the ballot is mailed.

A major topic of discussion was the Federal Cave Resource Protection Act and the USDA and Department of Interior regulations. Larry Mullins and Mark Laing discussed the current interpretations of the Act and the regulations. There are many point to ponder. Keith asked Larry and Mark to come up with a list of ten to fifteen points of concern. Keith will condense their comments into two pages for mailing to members. The membership will then be able to comment on the points to the appropriate agencies. It is important that comments be made at this time to insure the implementation of the act as intended.

There was some discussion of the Lost River Protection/ SR 37 project. It was felt that the IKC should prepare a presentation which could be used to explain the significance of the Lost River system.

MOTION: The IKC will expend up to \$250 on the educational presentation on the Lost River.

PASSED: 7 For, 0 Against.

Tom Rea and Keith reported on the contact with the owner of Salamander Cave. They have obtained verbal approval to undertake restoration efforts and have limited access to the cave. However, we do not have permission to use the Hancock Property for access. Thus parking will be a problem. There was some discussion as to whether to try to restore the cave without some form of access control. The cave could fill up with trash as fast as we haul it out.

MOTION: The IKC will offer to post no trespassing signs as a good will gesture.

PASSED: 7 For, 0 Against.

The owner of Well's Cave is concerned about damage to the fence along the road at the cave. She permits entry to the cave but wishes people to ask. Bill Tozer agreed to contact the owner to discuss repair of the fence and possible building of a frame for climbing over the fence.

MOTION: The IKC will financially support the fence repair and construction of the climbing frame at Well's Cave.

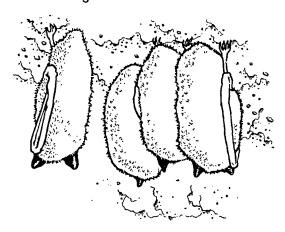
PASSED 7 For, 0 Against.

The Wayne cave property was sold recently. Keith Dunlap will contact the owner about continuing the IKC program at the cave.

Meeting Adjourned at 9:35

Respectfully submitted,

William Tozer, Secretary



### \* \* \* IKC MEMBERSHIP LIST \* \* \*

Albert E. Abel 2917 North Star Road

Columbus, OH 43221

David Anderson 15 Sixth Avenue La Grange, IL 60525-2402

James Adams 5311 N. Crittenden Avenue Indianapolis, IN 46220

John Ahlberg 19054 Sherman Street Lansing, IL 60438

Tom Ahlers 3019 North 400 West West Lafayette, IN 47906

Bruce Barnes 2712 Torrey Avenue Ann Arbor, MI 48104

John Benton 2006 Leland Drive Huntingburg, IN 47542

Steve Bisch PO Box 8083 Evansville, IN 47716

David Black RR 3 Box 545 Georgetown, IN 47122-9335

Bruce Bowman RR 2 Box 182 Clayton, IN 46118

Jeff Bray 945 Ellenberger Pkwy E. Drive Indianapolis, IN 46219

Jerry Brickley 2301 Cicero Road Noblesville, IN 46060

George W. Brutchen 306 W South Street Winchester, IN 47394

Larry R. Bundy 499 Young Street Franklin, IN 46131

Linda C. Bundy 499 Young Street Franklin, IN 46131

Kenneth E. Byrd 3253 Brisbane Road Indianapolis, IN 46208 Stephen T. Cahill 2631 W. 61st Street Indianapolis, IN 46208-1108

Keith Calkins 610 N. Main Street Berrien Springs, MI 49103

Paul Cannaley 4253 Senour Road Indianapolis, IN 46239

Christopher L. Carpenter 3221 Georgetown Road Indianapolis, IN 46224

George Cesnik 1064 Clifford Road Brownsburg, IN 46112

Marcella Larch Chastain RR 1 Box 110 Coatesville, IN 46121

Allen Clawson 805 W. 54th Street Indianapolis, IN 46208

Jeff Cody 7818 Venetian Way Indianapolis, IN 46217 Stephen J. Collins RR 1 Box 155 Daleville, IN 47334 Richard Horn 7156 E. Payne Road Indianapolis, IN 46239 Daniel C. Lucas 11234 Lantern Road Fishers, IN 46038

Rane Curl 2805 Gladstone Ann Arbor, MI 48104 Tem Hornaday 706 E. Dodds Street Bloomington, IN 47403 David Luckins 3683 Oakleaf West Bloomfield, MI 48324

Deborah DeVore 15001 Mill Road #32 Fort Wayne, IN 46816 Hank Huffman 3177 N. Russell Road Bloomington, IN 47408 Steve McKenzie PO Box 11101 Ft. Wayne, IN 46855-1101

David M. Doolin 927 Cerritos Way #F Louisville, TN 37777 Jeff Jackson 5548 US 27 North Richmond, IN 47374

Tim McLain 1721 N. Gerrard Drive Speedway, IN 46224-5637

Gary J. Doyle 864 Poplar Lane Bolingbrook, IL 60439 Scott Johnson, IDNR 300 W. First Street Bloomington, IN 47403 Angie Manon 3228 Washington Street Columbus, IN 47203

Timothy A. Dunfee 733 S. O'Brien Lot 214 Seymour, IN 47274 Ronald H. Jones 2851 A Victor Street Street Louis, MO 63104 Jane Miller 4020 South Rural Street Indianapolis, IN 46227

Keith Dunlap 32 Troon Court Greenwood, IN 46143

Jonathan E. Knott 1440 N. Woodburn Apt 40 Bloomington, IN 47404 Lynn Miller 4020 South Rural Street Indianapolis, IN 46227

Scott Fee 5471 N. Femore Road Indianapolis, IN 46208-2036 Kevin Komisarcik 302 E. 17th Street Bloomington, IN 47401 Lawrence H. Mullins, Jr. 2885 E. Carowinds Court Bloomington, IN 47401

Allen J. Goodcase 8940 Shields Brookfield, IL 60513

Mark Laing PO Box 19758 Indianapolis, IN 46219-0758 George R. Mundy, Jr. 837 South 13th Street Vincennes, IN 47591

David E. Haun PO Box 47961 Indianapolis, IN 46247 Carol J. Latowski Box 397, 231 Baldwin Street Sharon, WI 53585 Richard L. Newton RR 1 Box 131 Marengo, IN 47140

Timothy Heppner 6248 W. 21st Street Berwyn, IL 60402 Brian Leavell 1627 South M Street Elwood, IN 46036 Susan O'Shields 15 Sixth Avenue La Grange, IL 60525-2402

Penny Hibbard 7903 - 15 1/2 Mile Road Marshall, MI 49068 Glenn Lemasters 508 Rahkewood Drive Indianapolis, IN 46217 Ernest B. Payne, Jr. 6131 Holly Berry Drive Evansville, IN 47715-1655

Vance Hodges 503 N. Ann Street Lebanon, IN 46052 Michael G. Lorance RR 1 Box 72H Nineveh, IN 46164 Gene A. Pelter 720 Poplar Street Fort Wayne, IN 46802 Donald L. Peters 508 Jefferson Avenue LaPorte, IN 46350 Noel Sloan 8715 Garden Rock Court Indianapolis, IN 46256 Douglas M. Winburn 189 Harrison Street #4 Cicero, IN 46034

Steve Ragsdale 5460 Shawkoto Trail Belmont, MI 49306 Gordon L. Smith 9850 N. Skyline Drive Floyds Knobs, IN 47119 American Cave Cons. Ass'n c/o Dave Foster PO Box 409 Horse Cave, KY 42749

Kevin Rasmus 203 South State Street Bloomington, IL 61701 Thomas P. Sollman RR 2 Box 23a Fort Branch, IN 47648

Central Indiana Grotto PO Box 153 Indianapolis, IN 46206

Tom Rea 32 Ginseng Trail Danville, IN 46122 Jeffrey M. Snow 3519 Westminster Way Bloomington, IN 47401

Evansville Metro Grotto c/o Ernie Payne 6131 Holly Berry Drive Evansville, IN 47715

Larry Reece 2929 E. Southport Road Southport, IN 46227 Kevin Strunk 6068 Riverview Drive Indianapolis, IN 46208

Great Lakes Adventure Club c/o Mark Reisch 6029 Twilingate Lane Kalamazoo, MI 49009

Ronald L. Richards 8141 Pickford Drive Indianapolis, IN 46227 Susan K. Sweeney 1701 East 58th Street Indianapolis, IN 46220

> Harrison-Crawford Grotto c/o Paul Barker 2313 Grantline Road #71 New Albany, IN 47150-4068

Cindy Riley 650 N. Alton Avenue Indianapolis, IN 46222 Bill Tozer 9698 S 150W Pendleton, IN 46064

> Mid-Hoosier Grotto PO Box 632 Franklin, IN 46131-0632

Raymond Rough RR 1 Box 221 Whitestown, IN 46075 Gary O. Trilling PO Box 133 Taylorsville, IN 47280

> Northern Indiana Grotto PO Box 10297 Ft. Wayne, IN 46851-0297

Eric C. Schmidt 101 S. Tennessee Street Danville, IN 46122 Charles Tubbs 1418 W. Lexington Avenue Elkhart, IN 46514

> Windy City Grotto c/o Ralph Earlandson 516 Harrison Street #C Oak Park, IL 60304-1446

Robert Sergesketter 1090 Hopf Avenue Jasper, IN 47546 Nancy Tubbs 1418 W. Lexington Avenue Elkhart, IN 46514

Vernon S. Sharp John George Vargo, Jr. 1122 Meridian Street 1144 Masterpiece Drive Shelbyville, IN 46176 Ocean Side, CA 92057

\* COMPLIMENTARY \*

Ray Sheldon 16175 East 300 South

Elizabethtown, IN 47232

Richard Vernier RR 2 Lake Road Princeton, IN 47670 Bat Conservation International PO Box 162603 Austin, TX 78716

Don Shofstall 5004 Bassett Avenue Evansville, IN 47715 Mark Webb PO Box 194 Franklin, IN 46131 Bloomington Indiana Grotto c/o Sam Frushour 513 W Dixie Street Bloomington, IN 47403

Cave Conservationist c/o Jay Jorden, Editor 1518 Devon Circle Dallas, TX 75217	Bruce Slover Hoosier National Forest Brownstown, IN 47220	Ray Hardcastle 706 Vale View Drive Vista, CA 92083
Central Ohio Grotto c/o William Walden 1672 Galena Road Galena, OH 43201	Louisville Grotto c/o Alex Hicks 4806 Lacarem Drive Louisville, KY 40356	Duke Hopper (OVR) 848 Malibu Drive #5 Lexington, KY 40502
Detroit Urban Grotto c/o Daniel Crowl 1170 Torrey Road Grosse Pointe, MI 48236-2339	Miami Valley Grotto c/o Hilary Lambert Renwick 7701 Stillwell Beckett Road Oxford, OH 45056	Denise Baker (HEC) 1002 E. Washington Street Indianapolis, IN 46202
Eastern Indiana Grotto c/o Brian Leavell 1627 South M Street	Michigan Interlakes Grotto Box 218	Dan Opel 114 Cave Street Horse Cave, KY 42749
Elwood, IN 46036  Fish & Wildlife Service	Union Lake, MI 48089  Michigan Karst Conservancy	Anmar Mirza 1600 East Third Bloomington, IN 47401
Federal Building, Fort Snelling Attn. Ron Ressnider, AE/OES Twin Cities, MN 55111	2805 Gladstone Avenue Ann Arbor, MI 48104	Serena Smith
Fort Knox Grotto c/o Steve Gray	NSS Library Cave Avenue Huntsville, AL 35810	Bloomington, IN 47403
263 Forest Trace Radcliff, KY 40160	Wittenburg Univ Speleo. Society c/o HH Hobbs	Janet Thorne 473 Crescent Blvd Extension Coraopolis, PA 15108
Greater Cincinnati Grotto c/o John Wisher 7427 Thompson Cincinnati, OH 45239	Biology Department Wittenburg University PO Box 720 Springfield, OH 45501	John Tichenor PO Box 8234 Richmond, VA 23226
Larry Mullins Hoosier National Forest 811 Constitution Avenue Bedford, IN 47421	Jack Countryman PO Box 171 Greensburg, IN 47240-0171	Lester L. Zimmer 115 Bel Aire Drive New Whiteland, IN 46184

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 res	stricted to a specific IKC project. Please specify:	
I know of a	area worthy of protection. Please contact me.	
I would like	to volunteer to help. Please contact me.	
NAME		
ADDRESS	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	
CITY/STATE/ZIP	organization with membership dues and donations fully tax deductible. A	
PHONE #(s)	canceled check is considered an acceptable receipt, but if you wish a separate receipt, please check here	

Indiana Karst Conservancy PO Box 2401 Indianapolis, IN 46206-2401

FORWARD & ADDRESS CORRECTION

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# PROTECTING CAVES THROUGH ACTIVE CONSERVATION