
IKC Update

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INDIANA KARST CONSERVANCY

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 - Hidden Paradise in Woodard Cave, Tennessee.



Publishing by *Myotis Press*, Editor and Publisher Keith Dunlap.

ANNUAL BUSINESS MEETING REMINDER

SATURDAY, MARCH 8th, 10:00 AM

GREENWOOD, INDIANA

GREENWOOD COMMUNITY CENTER

The annual business meeting is for the explicit purpose of elections. 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 meeting is informal, and everyone is encouraged to attend and participate.

Preliminary Agenda Items: Final nominations and elections; Brief recaps of last quarter's activities; Suicide lease and gate status; Oil & Gas Division permit requirements; Dry Cave (Ohio) protection project; Land Acquisition Committee progress; Bat census update; Other IDNR activities; HNF inventorying project; HNF/IKC committee status; Wesley Chapel Gulf discussion; other HNF activities; Shirt and hat promotion status; Reprint #9 status; and more....

Meeting directions: see page 21 (the inside back cover) for directions and map.

EVENTS CALENDAR

- 08 MAR = IKC ANNUAL BUSINESS MEETING/ELECTION, Greenwood (see above)
- 10 MAR = INDIANA CAVE SURVEY MEETING, Columbus (contact Dave Black)
- 29 MAR = WYANDOTTE RESTORATION WORKDAY (see page 4)
- 05 APR = LOST RIVER TOUR, Orleans (see page 4)
- 19 APR = INDIANA CAVE SYMPOSIUM, Milltown (see page 7)
- 20 APR = INDIANA UNDER-EARTH DAY VIII, Sullivan Cave (see page 7)
- 24 MAY = LOST RIVER TOUR, Orleans (see page 4)
- ?? JUN = HANCOCK PROPERTY WORKDAY, Bloomington (same day as meeting)
- ?? JUN = IKC QUARTERLY MEETING, Bloomington (date/location TBD)
- 12 JUL = LOST RIVER TOUR, Orleans (see page 4)

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...

At this time of year I traditionally encourage our members to vote in the upcoming elections and/or come to the Annual Business Meeting (see page 3) to meet the new Executive Board. I'm not going to do that this year. Suffice it to say that I'm pleased that we have such a full slate of candidates, any one of which is quite deserving of their respective position.

I also considered saying something about my vision of where the IKC should be focusing our efforts in the next ten years or so. I *do* have a vision of this nature -- really I do! However, with the elections coming up, this could be construed as a political advantage against those write-in candidates who are running against me. So I won't do that, either.

Frankly, there are times when I wonder if anyone reads this column at all. Although I'd like to think that I always have something important to say, some gem of wisdom worthy of having the membership hang on every

word, all too often that isn't even close to the truth. Occasionally I consider dropping this column from the *Update* altogether. I'm struggling with this, ladies and gentlemen. I had a very relevant and interesting topic for the last issue of the *Update*, but that's not going to happen this time.

Have you bothered to read this far? If so, why?

Rather than further embarrass myself, I'm gonna turn the tables. I'd like *every one* of you to jot down your own gems of wisdom and mail them to the IKC. Let us know what we do well, what we do poorly. What we move fast on, what we're sluggish on...What you would do differently if *you* were running this show. Your feedback is very important, and we get precious little of it. So have at it, and don't hold back.

Or just send drivel, if you want. I promise I'll read it anyway. It's only fair.

- Bruce Bowman

NEWS BRIEFS...

- The annual restoration workday at Wyandotte Cave is scheduled for March 29th. Caving volunteers in past years have tackled numerous projects throughout the cave including photo-documentation, non-historic signature removal, formation repair, mud-ball removal, trail reconstruction, rock moving, and debris clean-up. If you would like to volunteer for this workday, please call Roger Gleitz (812-738-2782) at the cave.
- Bob Armstrong will once again be conducting his guided tours of the Lost River area, starting from the east at its head waters in Washington County, through Orange County to its disappearance near Orleans, and on to its rise near Orangeville. The spring dates include April 5th, May 24th, and July 12th. The tour will leave the southeast corner of the square in Orleans at 8 AM sharp on each of those days. The tour is free, but a small donation is requested for the optional printed handouts. For more information, contact Bob at (317) 926-4266.
- The IKC is responsible for maintaining an active interface committee with the Hoosier National Forest to encourage caver participation in HNF activities, support karst values inventory work, and provide input into management plans for karst resources. This standing committee was established under a Memorandum of Understanding signed in 1990 (see *IKC Update* #18), but activities have waned in recent years. The IKC is currently in process of re-seating this committee in hopes of regaining some lost momentum with an infusion of "new blood." The chairmen of local grottos and the Indiana Cave Survey are reminded to appoint someone to represent your interests and act as an HNF interface for your organization. Special thanks to the following people for accepting positions on the committee: Jeff and Pam Frazier (EIG), Kriste Lindberg (BIG), Nick Noe (CIG), Steve Petruniak (WCG), Clyde Simerman (NIG), and Dick Vernier (EMG).

- ❑ The IKC continues in its involvement to address increased gas drilling in the karst areas of southern Indiana. The Division of Oil and Gas within the Indiana Department of Natural Resources is responsible for issuing drilling permits in these areas, and has been very helpful and responsive to our concerns. As a direct result of IKC activism, the IDNR is convening a work group of eight people to help revise their draft permit requirements for drilling in karst areas. This work group will have two representatives from the environmental community and will meet for 2-3 hours in downtown Indianapolis on two occasions. Those who are interested in participating and/or have some background in geology and feel they can assist, please contact Bruce Bowman at (317) 539-6935.
- ❑ The IKC has manned a booth at Earth Day Indiana in downtown Indianapolis for several consecutive years, and 1997 is no exception. The event starts at 11 AM on Saturday, April 19th at the American Legion Mall (two blocks north of the War Memorial in Indianapolis). Featuring live bands, food, and a great number of organizations, this occasion is an excellent opportunity for networking with groups that have environment agendas similar to that of the IKC. Members are encouraged to come by, enjoy the show, and help man the booth for short periods. There's no need to contact anyone ahead of time -- just stop by. The more people who help, the less any individual will have to do.
- ❑ In late January and early February, the biennial Indiana bat (*Myotis sodalis*) census was conducted. This Indiana DNR sponsored project is coordinated by Scott Johnson and conducted by Dr. Virgil Brack with the assistance of several cavers including IKC members Keith Dunlap, Steve Collins, Tom Sollman, and Bambi Erwin. This year, twenty-four caves were visited, most being known hibernacula. Three new caves were suggested (by Dave Black) and visited, with two of the three (Binkley and Sweeny) found to have small clusters.

The data has not been completely processed, but the perception is that the populations are lower compared to past years, possibly due to the late spring last year. The bats were also found in larger clusters and located further into the caves than normal, consistent with the colder than normal winter this year. A complete summary of the census will be published in the June *IKC Update* and presented at the Indiana Cave Symposium (see page 7).

- ❑ Related to the above bat census, several telling observations about the Buckner areas are worth sharing. While visiting the Blair System, it was found that one of the large (12 inch diameter by 30 inch tall) landmark stalagmites in the main passage of Brinegar had been smashed into multiple pieces since the census. It was obvious from the hammer marks that it took significant effort to do this blatant vandalism. It appeared that none of the pieces had been taken, so it may be possible to partially repair some of the damage.

Over in Buckner proper, there are always a dozen or so Indiana bats found in one crack in the entrance room. This crack is located near the crawlway to the rest of the cave, but is rather obscure such that the hibernating bats remain undisturbed and unmolested, or at least until this year. This time, rather than finding the bats, all that was found was a rag that had been stuffed in the crack and then set on fire. Removing the charred rag revealed numerous dead bats.

The final observation was the general mentality of those visiting Buckner. On the morning of our visit, there was a fresh four-inch blanket of snow from the night before. We arrived relatively early, yet there were already McDonald's trash/sacks dumped in the parking lot and numerous candy bar and chewing gum wrappers tossed along the trail to the cave. Inside the cave, it seemed that the trash and garbage had accumulated more than usual. Perhaps even the Boy Scouts have abandoned the clean-up efforts until a different management philosophy is enacted. Buckner deserves better. Hopefully someday it will receive the proper attention and care.

- ❑ After four intensive years of continuous effort to protect the Sloan Valley Cave System, the Sloan Valley Conservation Task Force was handed a major setback late last year when Pulaski Grading Inc was granted an expansion permit for the Pulaski County Landfill. Despite

having environmental regulations, citizens support, extensive data, and expert knowledge on their side, the SVCTF couldn't overcome the economic "benefits" that the expansion has been promised to bring. As with so many grass roots initiatives, being right does not guarantee success, nor can one depend upon local, state, and federal agencies to enforce their own rules and regulations. While the war is not over, it is clear that big money was eventually enough to get the expansion granted despite the mountain of past violations accumulated on the original landfill. As for 1997, Hilary Lambert Hopper says, "We're going to read the literature, reorganize, and reenergize. We might even go caving."

- ❑ The Annual Report of the Indiana DNR's Nongame and Endangered Wildlife Program is now available. This report highlights the Section's progress over the past year in protecting Indiana's 550 nongame species including the Indiana bat, the Allegheny woodrat, and numerous cave invertebrates. Copies of the report are available upon request from Kathy Quimbach (317-232-4080).
- ❑ The final chapter for the 1995 National Cave Management symposium has finally closed with the finances rapped up. The Spring Mill Symposium ended up with an excess of \$6086.60 which has been returned to the NCMS Steering Committee. The excess was primarily due to better than anticipated attendance, lower than budgeted food service and facilities expenses, financial cost-sharing assistance from the Hoosier National Forest for indirect materials, much lower than anticipated costs for the *Proceedings* printing, and aggressive sales promotion of the *Proceedings* to dispose of the remaining inventory. One final thanks to all the IKC members who volunteered to make the conference a successful and educational event.
- ❑ Due to several other projects and reports, the Special Publications committee missed it's goal of having Reprint #9 completed for mailing with the March *IKC Update*. Preliminary work has begun on re-publishing Clyde Malott's excellent paper *The Swallow-holes of the Lost River*, but we are also evaluating another paper (Banta's work at Mayfield Cave) as the next reprint. Regardless, we hope to have one of these ready by the June mailing. Also note that both of these papers are relatively lengthy, so one or more "sponsors" to offset the publication costs would be appreciated. Contact Keith Dunlap for details.
- ❑ The IKC promotional polo shirts and hats should be available at the March 8th business meeting. For those who included postage, the items will be mailed by March 12th. All other items will be distributed at the earliest opportunity through the various E-Board members.
- ❑ Starting on page 18 is the current IKC's membership and exchange mailing list. Recently, we discovered that some of the "member since" dates (next to the last column) were incorrect and these have now been updated. Also, please verify your home phone number (especially those in the new area codes) and send in any corrections. Finally, we are now capturing e-mail addresses in our database, so please send your e-mail address to JKAdams@aol.com.
- ❑ With the tradition we started last year on our tenth anniversary, we would like to honor our ten-year members: Dave Black, Paul Cannaley, Rane Curl, Tem Hornaday, Hank Huffman, Angie May, Jane Miller, Nick Noe, Don Peters, Kevin Rasmus, Bob Sergesketter, Susie Strickland, Bruce Trotter, John Vargo, Dick Vernier, and the Windy City Grotto.
- ❑ There has been a number of new members joining the IKC in the last quarter including Carl Brown, Jeff Cobb, Bambi Erwin, Hilary Lambert Hopper, Patrick Jarboe, Eric Jaroch, Everett Pullman, Jim Rexus, and Wyandotte Cave SRA. Welcome to all and the IKC appreciates your support. The membership now stands at 155.

DON'T FORGET TO RENEW YOUR DUES

1997 INDIANA CAVE SYMPOSIUM

by Dave Black

The fifth annual Indiana Cave Symposium will be held on Saturday, April 19 at the Blue River Canoe Rental's Group Meeting Hall in Milltown, Indiana. A hot-dog roast will be held at 5:00 and talks will begin promptly at 6:30. The hot-dogs and fixings will be provided, but *please bring a cover dish to share*. Camping will be available at the adjacent campground. This year's event is being sponsored by the Indiana Karst Conservancy, the Indiana Cave Survey, and Marengo Cave.

The purpose of the Symposium is to get all the active caving groups together to discuss their projects, and for cavers to meet with cave researchers. Presently, speakers for the symposium are being solicited from caving groups within Indiana and neighboring states. The talks should be about what the caving groups have been doing. The emphasis will be on exploration, surveying, and conservation projects. It is preferred that the talks be on activities within Indiana, but if the caving group's most significant project is outside the state, exceptions will be made. The talks should be from 15 to 30 minutes in length. There will be a slide projector and an overhead projector available. This will be an excellent way of highlight your grotto's recent projects.

Thus far there are seven speakers. David Black, President of the Indiana Cave Survey will begin the symposium with a welcoming and a brief explanation of the goals of the ICS. Larry Mullins will give a brief talk on how cavers can work with the Hoosier National Forest to help protect the caves and karst within the National Forest. Keith Dunlap will present results of the 1997 Indiana bat (*Myotis sodalis*) census and discuss the long term trends and implications. Ray Sheldon and Bruce Trotter will be giving a talk on their continuing inventorying and surveying of the caves in the Jefferson Proving Grounds in southeast Indiana. Gary Roberson will be giving a talk on the ongoing conservation efforts at Marengo Cave. Jerry Lewis will give a talk on his various cave biological inventorying throughout the state. Allan Purcell will be giving a talk on The Nature Conservancy's efforts to protect the karst in the Blue River drainage basin.

Additional speakers are needed. Please discuss with the active members of your caving group about a presentation. It is hoped that every grotto that is active in the state will give a presentation. For more information, or to schedule a talk, contact Dave Black at (812) 951-3886 or e-mail dlblack.karst@juno.com.

UNDER EARTH DAY VIII, APRIL 20th

by Keith Dunlap

The Indiana Karst Conservancy will once again be sponsoring a cleanup in Sullivan Cave (Lawrence County) to celebrate Earth Day. This year's date is Sunday, April 20th, starting at 10 AM.

For cavers who are not familiar with Sullivan Cave, it is Indiana's third longest, with over nine miles of passage. The cave is privately owned, and has seen its share of abuse over the last thirty years. In 1989, the Central Indiana Grotto installed a gate on the entrance at the request of the owner. Since that time, numerous restoration trips have been completed, improving the aesthetics of the cave significantly. However, there is still much to be done and your participa-

tion is needed.

Sullivan is a caver's cave, offering something for everyone. If you are a novice caver, an easy trip to the Mountain Room and back will wet your appetite for this cave. There is plenty of wire brushing and mud-washing that can be done in the Backbreaker area and beyond. For the experienced caver, you may wish to venture up or downstream in Sullivan River (assuming the water is not too high) removing graffiti and collecting trash in the lesser traveled area. Haul bags, plastic bags, wire brushes, and other equipment will be provided, but feel free to bring your own.

...continued on page 20

TEMPERATURE MONITORING IN BAT CAVES

by Keith Dunlap

Editor's note: This article is an abridgement of a much larger report being prepared for the Indiana Department of Natural Resources. Partial funding for this research was provided by the Nongame Section Special Projects Program.

ABSTRACT: During the past three winters, electronic temperature recording devices have been installed in Jim Ray's, Coon, and Grotto caves as part of long term temperature monitoring project. This is the second progress report for this project (the first report was published in issue #33 of the *IKC Update*).

BACKGROUND: For the past sixteen years, systematic population counts of Indiana bats (*Myotis sodalis*) have been conducted in Indiana caves known to serve as hibernacula for this species. This information has been periodically summarized and published in the *Update* (see issue #37 for the most recent summary -- the 1997 results will be published in issue #45) and generally shows that most of the hibernacula populations are stable or increasing. Over the population investigation period, the most dramatic increase has been documented in Jim Ray's Cave in Greene County. From 1981 to 1995, the population has more than tripled to over 40,000 bats. Two other caves of interest to the Indiana Karst Conservancy are Coon and Grotto caves since the IKC has management responsibility for these caves. In the recent past, Coon's bat population has increased from approximately 800 to over 4400 (1985 to 1995) while Grotto's population has decreased from 4200 to 1600 (1985 to 1993), although it rebounded somewhat in 1995 with 2000 bats. While there are many factors which can be causing these populations changes, one factor is obviously the suitability of each cave to serve as a winter hibernacula, with temperatures in the caves being the primary factor for this species.

As a rule, *M. sodalis* select caves that can maintain winter air temperatures between 4 and 8°C (39 and 46°F) which allows them to hibernate more efficiently. Since the usual static air temperature for Indiana caves is 13°C (55°F), the caves serving as Indiana bat hibernacula must exhibit special climatic characteristics. Most of the

hibernacula tend to have a pit or downward sloping entrance that allow heavier cold air to flow in and be "trapped" in lower areas. Examples include Twin Domes, Wyandotte, Jughole, Batwing, Coon, Grotto, Parker's Pit, Robinson Ladder, Saltpeter (Monroe), Leonard Springs, Binkley, Sweeny, Wildcat, Bentz, Nichols, and Buckner. The other possible scenario is to have a cave with two or more entrances at different elevations such that a chimney effect is created where rising warm air escapes from an upper entrance, drawing cold air into the lower entrance and through the cave between the entrances. Ray's is a classic example of this second type of cooling mechanism (Saltpeter, Endless, River, Panther and Clyfty caves may also exhibit chimney effects to a lesser degree).

While significant discrete temperature data has been sporadically recorded by many researchers over the years, little continuous data is available to accurately investigate seasonal trends and year-to-year trends. Developing these long term temperature trends in multiple caves could allow correlation of population fluctuation (Why are some caves increasing in populations while others are decreasing?) and serve as baselines for future research and management activities (e.g., installing entrance gates which might restrict airflow).

Finally, Monitoring these caves could also capture temperature anomalies such as a significant cold spell which might explain significant population drop due to a catastrophic freeze-off.

METHODS: Dr. Virgil Brack has had a long term involvement in Indiana bat hibernacula, especially Jim Ray's Cave (he did his PhD work there in the early 80's). He has been interested in conducting an extensive thermal mapping project in Ray's for a number of years and made several formal recommendation to the Indiana DNR to initiate such a project. However, prior to 1992, only expensive, bulky, temperamental multi-channel data loggers were available to accomplishing this research which made the project impractical. Furthermore, these devices and the thousands of feet of cabling required to completely instrument a cave are vulnerable to vandalism and theft in an ungated cave.

This situation changed with the introduction of a small (see actual size below), inexpensive (less than \$120), self-contained, solid-state single-channel data logger manufactured by Onset Computer Corporation. These devices can be easily concealed on ledges or buried with much less risk of being tampered with or stolen.

After a successful pilot project of three data loggers deployed in Ray's Cave during the winter of 1993/94, a dozen more data loggers were purchased to expand the monitoring in Ray's (six total) and to instrument Coon (four data loggers) and Grotto (three loggers) caves as well as place devices outside the three caves. Most of the in-cave locations were strategically selected to capture ceiling air temperatures near the traditional cluster sites. A few data loggers however, were placed at other locations to better understand the airflow patterns of each cave.

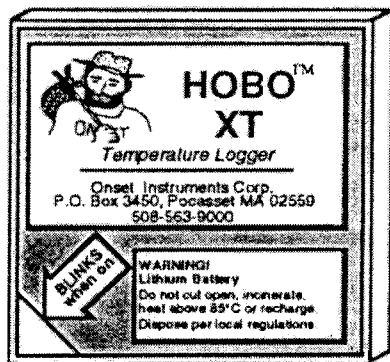


Figure 1 - Actual size of the Onset data logger (thickness = 15 mm)

Because of the long deployment period (200+ days) and the finite memory of the data loggers model purchased (2 kbyte), the sampling interval was set the 3.2 hours, which is more than sufficient to capture the dynamics of the temperature changes. The resolution of the data loggers used were 0.16°C which again is sufficient for this project.

Over the three years this project has been active, more than 44,000 data points have been collected on 32 total data logger deployments.

OBSERVATIONS: Presenting the quantity of data collected over the past three years is far beyond the scope of this article (the full report contain over 40 charts).

Figure 2, Ray's Cave over the winter of 1995/96, is representative of what the raw data charts look like. The cyan curve represents the outside temperature fluctuations, while locations A thru E are ceiling temperature at sequential distances into the cave (A is approximately 60 feet from the entrance while E is 800 feet). As one would expect, the farther into the cave the data loggers were located, the less temperature fluctuations there were relative to the outside.

Location C in figure 2 is situated near the ceiling where the largest clusters of bats are found (about 160 feet into the cave). Location F is at the same location, but vertically positioned near the floor of the cave (approximately 8 foot below location C). At times, there were 10 to 15°C differential between these two locations showing the active thermal layering with the cold (heavier) air flowing across the floor when the outside temperature drops.

Figure 3 depicts the same data as in figure 2 except using 75-point (10 day) moving average function. This smoothing technique filters out much of the clutter making it easier to compare locations and trends, but also attenuates the extreme variations which are equally important.

Figure 4 compares the averaged traces at location C (main clusters) in Ray's Cave for each of the three years of this project. As additional years are added, this chart will more clearly illustrate the average annual trend as well as the year-to-year deviation that can be expected.

Figure 5 compares the averaged temperature traces of the three caves where the largest bat clusters are located. While more data is needed, it would appear that Grotto Cave is significantly cooler (2 to 3°C) compared to Coon Cave, with Ray's seasonal temperatures somewhere in between the two.

FUTURE WORK: Data collection is expected to continue indefinitely in these three caves, although the number of monitoring locations may be reduced in the future so that the extra data loggers can be deployed into other hibernacula. For the winter of 1996/97, in addition to the original fifteen data loggers in Ray's, Coon, and Grotto caves, four new data loggers were borrowed and installed in Batwing Cave. The long term goal is to someday collect temperature data in all of Indiana's Indiana bat hibernacula.

TEMPERATURE MONITORING -- JIM RAY'S CAVE -- 1995/96

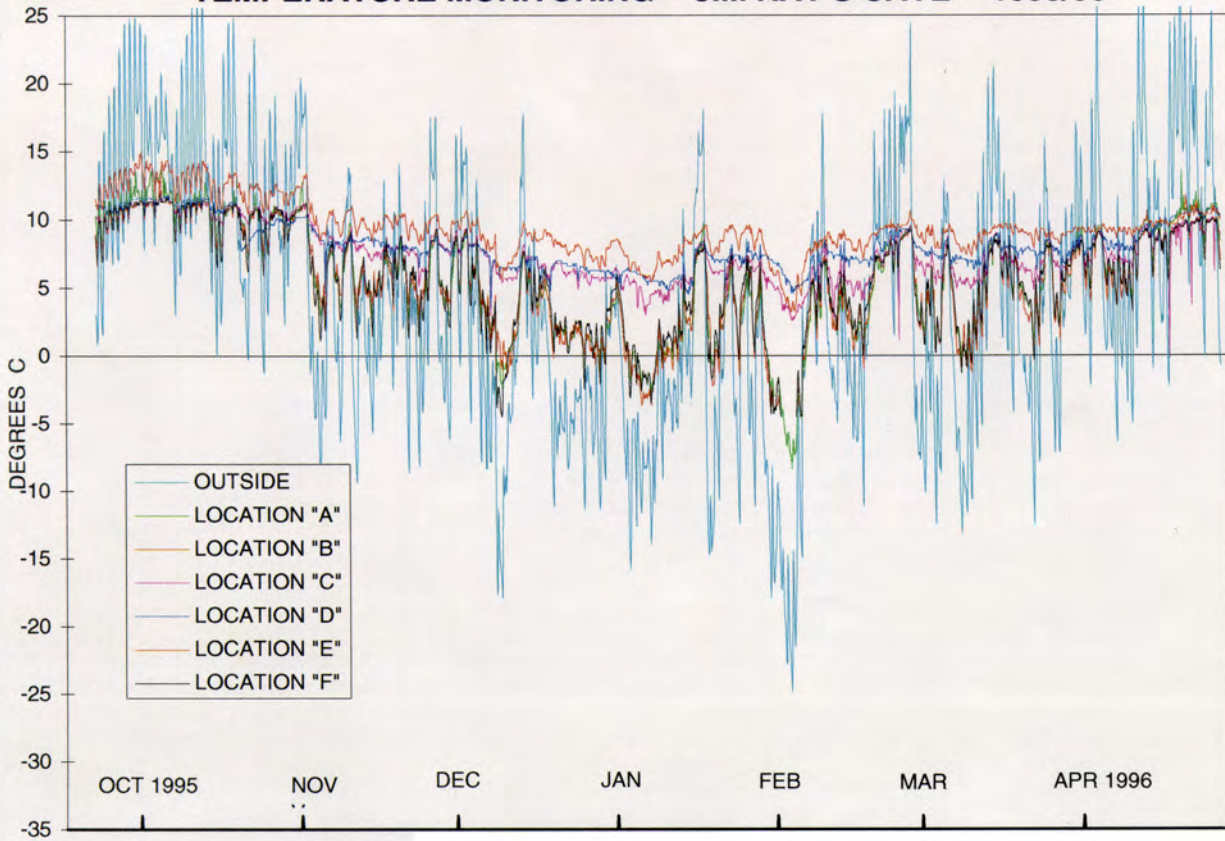


FIGURE 2

TEMPERATURE MONITORING -- JIM RAY'S CAVE -- 1995/96

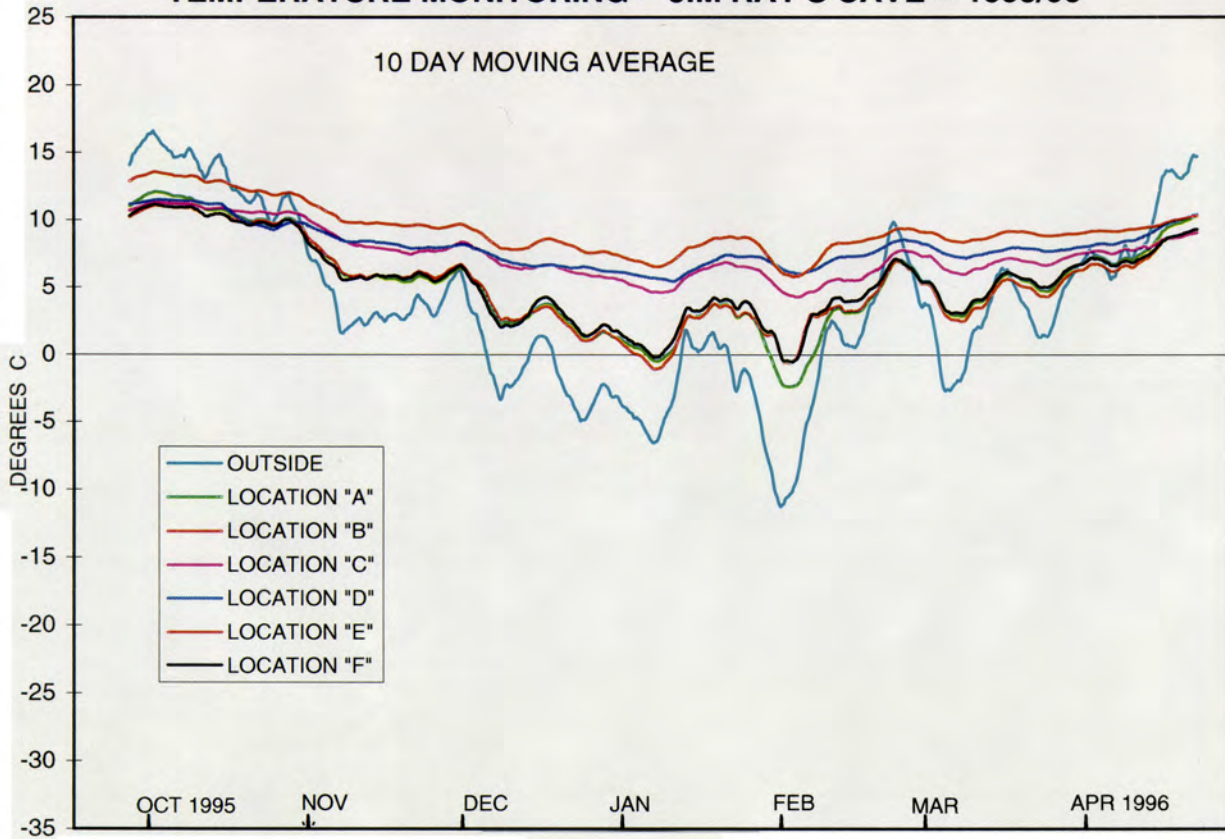


FIGURE 3

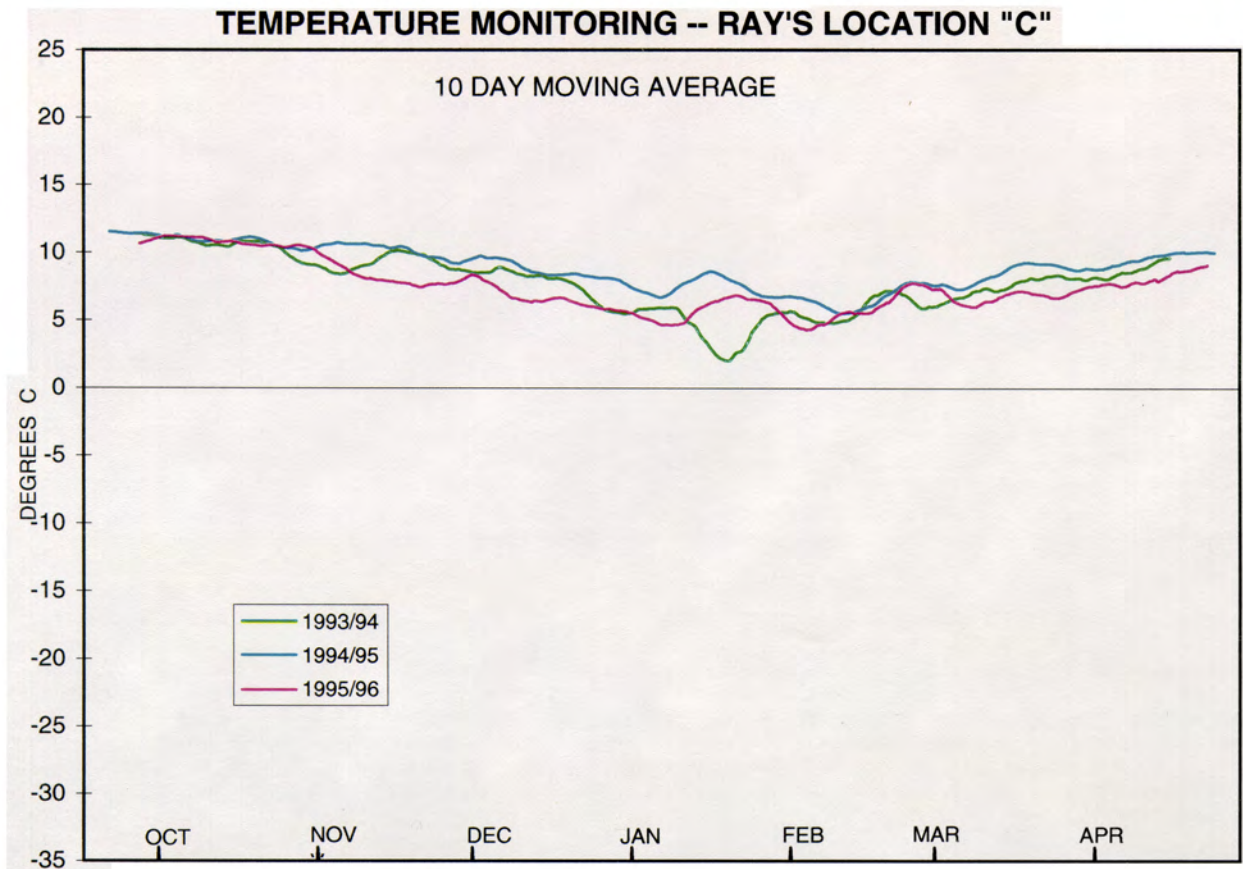


FIGURE 4

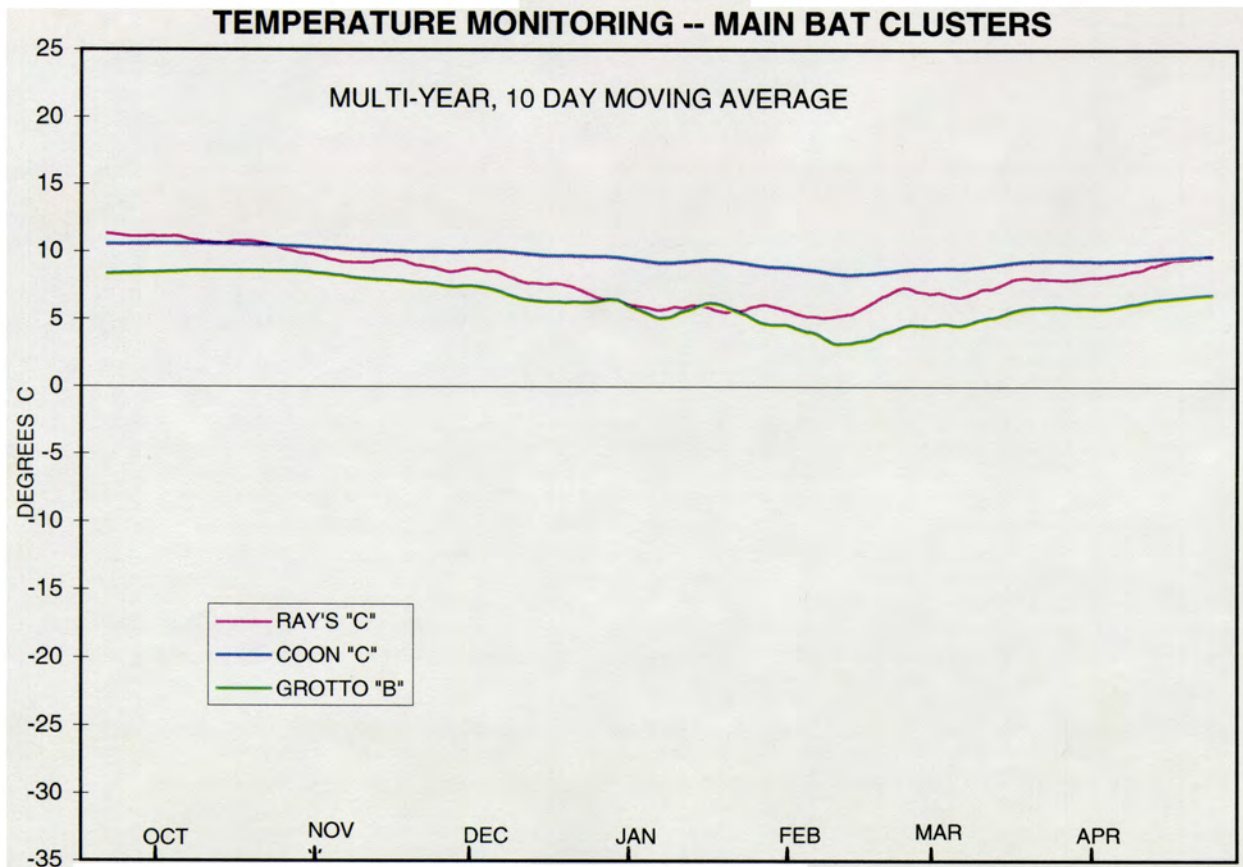


FIGURE 5

HOOSIER ENVIRONMENTAL CONGRESS

by Nick Noe

On February 15-16, I was pleased to represent the IKC at the Hoosier Environmental Congress (HEC) Grassroots Organizing Conference held at the Bradford Woods Recreational Complex in Morgan County. HEC is a collection of environmentally concerned organizations (Sierra Club, Audubon, etc.) in Indiana. About 150 people representing many different interests and organizations were present. Here are some of the issues discussed where the IKC has an interest.

I-69 Extension -- Still a looming possibility through cave country southwest of Bloomington. Strategies are being developed to oppose funding for this project. There is a growing possibility that NAFTA may not be continued by congress due to changes in the political and economic climate in the last three years since its authorization. Thomson Electronic closing their Bloomington and Indy manufacturing facilities in favor of Mexican plants could prove a staggering blow to in-state support. If NAFTA goes away, there will still be local pressure to build the road because Evansville is closer to Louisville and St. Louis markets than Indianapolis via I-64.

Transportation Issues -- Caver Bruce Bundy is backing a light rail system for IU/Bloomington. Continued paving in Monroe County has exacerbated existing flooding problems and he feels that mass transit is the only proper answer to this problem. Also discussed was ISTEA ("Ice-tea"), the reauthorization of the Intermodal Surface Transportation Efficiency Act of 1993. Highway interests are, of course, advocating no expenditure for mass transit, little expenditure for maintenance and upkeep, and massive expenditures for new construction. Write your congressfolks and say that STEP 21 is a step in the wrong direction and to make sure some of our gas tax money goes for things besides pavement.

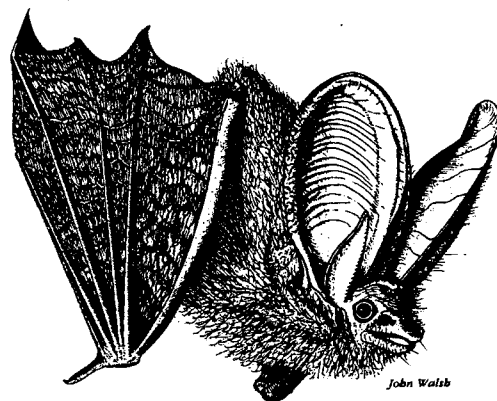
Water Policy -- Intensive feed lots are a growing concern for family farmers and cavers alike. Runoff from these operations in karst areas could cause significant problems. Julian Zizak, who is active in the Southeastern Indiana karst area against

these operations, says the effect could be devastating for the caves. Even though he has produced expert testimony in hearings against feed lots, no one seems to be listening due to the influence of lot backers on local politicians. Julian has asked if there is any empirical data which shows degradation of the karst environment over an extended time period (water quality, biota, formations, etc). I did not know if this information is available; but I'll bet someone out there reading this has an answer to this one. If you do, contact me and I will put you in touch with Julian.

Combustion Waste -- Disposal of coal combustion waste into strip mines is a hot issue in Southwestern Indiana. Weak rules which allow dumping of both in-state and out-of-state waste into Indiana mines could have long term effects on local water quality. As long as the Pennsylvanian overlies the Mississippian, its our problem too!

Campaign finance reform -- Is an issue which appears to be gathering steam. Bipartisan support and a strong public outcry against abuse is making headway against the politics as usual contingent in the congress and legislature. Look for some changes here soon.

Overall, my impression of the Grassroots Organizing Conference was most favorable. It's a good place to network with knowledgeable people who have the resources and contacts to help us achieve IKC's broad goals for karst conservation. My appreciation to the membership for underwriting my attendance at this function. I'm sure it will pay dividends for us in the long run.



IKC QUARTERLY MEETING MINUTES

Saturday, December 14, 1996

Bloomington, Indiana

BOARD MEMBERS PRESENT:

Joshua Abdulla
James Adams
Bruce Bowman
Dave Black (proxy for Bruce DeVore)
Keith Dunlap
Roy Logan (proxy for Dave Haun)
Larry Mullins
Nick Noe
Tom Rea
Eric Schmidt
Robert Sergesketter
Clyde Simerman
Tom Sollman
Bill Tozer

BOARD MEMBERS ABSENT:

Larry Bundy

The Winter Directors' Meeting was held on Saturday, December 14, 1996 at the home of Larry Mullins and Kitty Wooldridge near Bloomington, President Bruce Bowman presiding. The meeting was called to order at 1:15 PM.

Bowman accepted two proxies: Roy Logan for Dave Haun and Dave Black for Bruce DeVore.

The minutes from the September meeting were approved as published in the December issue of the *IKC Update*.

Treasurer Keith Dunlap reported a balance of \$8,098.80 with some outstanding bills. There is a surplus from the National Cave Management Symposium of \$5,925.60 with three outstanding payments expected to come in to the IKC. This money will be turned over to the NCMS Steering Committee.

Four blemished copies of the NCMS Proceedings book were sold.

Dunlap has also been elected Treasurer of the Central Indiana Grotto. He reports that the CIG will transfer funds to the IKC. This will generate interest income for the CIG and will keep the IKC balance above the required minimum.

Bowman reported on activities of the Land Acquisition Committee. The Indian Creek Sinks

property may be developed into ten acre lots. The property is scheduled to be surveyed.

The property containing Carter Byrnes Cave could include a 30 acre plot that might be set aside as a conservation easement. This property is not a priority with the developer and it may be several years before anything is done with this land.

Insurance options are being looked at in preparation to the IKC accepting the Orangeville Rise property from The Nature Conservancy (TNC). Dunlap reported two possibilities: Insurance through the Land Trust Alliance which includes member benefits for approximately \$1,250/year and standard insurance which includes liability on the land plus member liability coverage. It appears that this second option would cover all of the IKC properties at a cost of approximately \$180.00/year.

Dunlap moved to authorize the Treasurer to negotiate an insurance package not to exceed \$250.00 per year. James Adams seconded. Motion passed.

A handbook is available from the Land Trust Alliance. It was suggested that we might want to purchase this book. Bowman deferred this to the next meeting.

Dunlap will conduct a bat census with Virgil Brack in late January and early February at caves on several IKC properties.

Concerning oil and gas drilling activities, Bowman said that meetings have been taking place between the IKC and the Nature Preserves section of the Department of Natural Resources (DNR). It might be helpful to put together a work group with the companies that are doing exploration on the Mitchell Plain. Bowman and Nick Noe will act as IKC representatives with Black contributing whenever possible since he lives in the area. Kevin Strunk has also been helpful in calling this renewed exploration to the IKC's attention and getting a cooperative effort underway.

Mullins mentioned that the Bureau of Land Management has reference material which includes clauses that should be included in docu-

ments that relate to oil and gas exploration. He also talked about drilling procedures and how oil or gas pollution can get into caves from below the karst layer. He said that the wells need to be properly sealed and also that concrete is often pumped into cavities to fill voids such as caves.

The Memorandum Of Understanding between TNC, the DNR, and the Indiana Cave Survey (ICS) is still being negotiated. Black reported that TNC has made some minor changes and the ICS is looking at these. Also, biologist Jerry Lewis is putting together a paper on the cave life of the Blue River area.

An order form was included in the December IKC Update for IKC promotional items that can be purchased. Dunlap moved to order 24 extra hats with the IKC logo to be used as give-aways and for future sales. Robert Sergesketter seconded. Motion Passed.

The Dayton Underground Grotto has requested that the IKC make a presentation at their May meeting in Dayton, Ohio. Bowman asked for volunteers. Receiving none, he will make the presentation himself.

The Ohio Valley Region (OVR) is looking for suggestions for a 1997 project. Work at Wonder Valley Camp was suggested as an option. Bowman has inspected the site and reported that the work to be done there would not keep a large group from the OVR busy for very long. Additional suggestions are needed.

At this point, the general meeting was suspended by the President for approximately 15 minutes so that the Directors and invited guests could discuss certain issues in closed session.

Upon reconvening the Directors' Meeting, Mullins updated everyone on activities of the Hoosier National Forest (HNF). There have been some personnel changes within the administration and Mullins may not be continuing as the HNF Cave Specialist. Current plans call for continuing the karst inventory, management plans and HNF Committee. He explained that the IKC/HNF Memorandum Of Understanding which created the HNF Committee will continue. The Forest Plan would have to be amended in order to drop any MOU.

Mullins explained that the HNF Committee and cavers in general will need to act as "watch-

dogs" to keep the Forest Plan on track. He would like to see the IKC take on the job of overseeing the karst inventory.

Concerning the Wesley Chapel Gulf acquisition by the HNF, a management proposal needs to be put together. The IKC could assemble a coalition to do this. Mullins moved to set up a tour with Bob Armstrong for the IKC and other interested cavers of the Wesley Chapel Gulf property to discuss management possibilities. Adams seconded. No vote. Mullins will discuss possible dates for a tour with Armstrong.

Although there were no issues to discuss from the DNR, Dunlap mentioned that the re-introduction of the river otter by the DNR continues. They are looking for sponsors to contribute money.

The floor was opened for discussion of any other issues or announcements. It was brought to the groups attention that at a recent reptile show at the State Fairgrounds in Indianapolis, a dealer was selling orange salamanders. He maintained that they were from a cave in Indiana.

The 1997 Indiana Cave Symposium, sponsored by the Indiana Cave Survey has been scheduled for April 19th. Black is coordinating papers for the program and is looking for presentations.

Adams asked about Rails for Trails-type programs which seem to be active in western Monroe County. Several members offered their input. It seems many of the railroad right-of-ways are being turned into trails once the tracks are removed. However, some old agreements have been found which specify that these right-of-ways revert back to the private property owners and some Rails To Trails programs have been terminated.

The February Directors' Meeting will be held on Sunday, February 2, 1997 at the Greenwood home of Treasurer Keith Dunlap. The next quarterly meeting was tentatively scheduled for Saturday, March 8, 1997 at the Greenwood Community Center.

The meeting was adjourned at 3:50 PM. Thanks to Larry and Kitty who not only turned their living room over to us for the meeting but also provided a bonfire in the yard for conversation and plenty of good things to eat.

Submitted by James Adams, Secretary

IKC EXECUTIVE BOARD MEETING MINUTES

Sunday, February 2, 1997

Greenwood, Indiana

BOARD MEMBERS PRESENT:

Joshua Abdulla
James Adams
Bruce Bowman
Larry Bundy
Bruce DeVore
Keith Dunlap
Dave Haun
Kitty Wooldridge (proxy for Larry Mullins)
Nick Noe
Eric Schmidt
Bob Sergesketter
Clyde Simerman
Tom Sollman
Bill Tozer

BOARD MEMBERS ABSENT:

Tom Rea

The meeting was called to order at 5:06 PM by IKC President Bruce Bowman at the home of Treasurer Keith Dunlap in Greenwood, Indiana. Introductions of the members and guests were made. Kitty Wooldridge was accepted as proxy for Larry Mullins.

Keith Dunlap reported a balance as of December 31, 1996 of \$8,074.02. The National Cave Management Symposium books have been closed with \$6,086.60 turned back to the steering committee.

Dunlap also summarized the progress on the 1997 Indiana bat census currently underway. Twenty-two caves have been visited, so far. He feels that the general population is down. In Brinegar Cave, the census team noted that a large column has been destroyed. In Buckner Cave, there were several dead bats and evidence that they had been burned out. The bat population of Grotto Cave seems to be up. Dunlap noted that the Grotto Cave population often reflects the inverse of other caves in the area.

Thirty-six polo shirts and four dozen hats have been ordered. Tom Sollman brought in a sample of the IKC logo as it will be embroidered on the shirts and hats. Everyone seemed to be impressed by the quality. The items should be available at the March meeting.

The next IKC reprint should be ready for distribution with the March *IKC Update*, however work has not yet begun. We'll try for the June issue.

Nick Noe volunteered to assist Bruce Bowman at the IKC booth at Earth Day on Saturday, April 19 in downtown Indiana. Noe moved to fund the cost of the booth. Bruce DeVore seconded. Motion passed.

The Indiana Cave Symposium sponsored by the Indiana Cave Survey and the IKC is also scheduled for April 19. It will be at the Milltown facilities of Cave Country Canoes. ICS President Dave Black has sent promotional information to grotto newsletters. The following day, Sunday, April 20, is the annual Sullivan Cave clean-up sponsored by the IKC.

Elections are scheduled for the March meeting. Several members are seeking positions. Bowman, James Adams, and Dunlap are each seeking re-election to their positions. Dick Venier, Mullins, Bruce DeVore, Ted Bice, Tom Sollman, Dave Haun, Nick Noe, and Kriste Lindberg are seeking Directors positions. Joshua Abdulla withdrew his name from consideration.

Bowman will ask Larry Reece to act as Teller for the election. Dunlap and Adams assured the Directors that ballots will be prepared and mailed to the membership in the next week.

Bill Tozer suggested that short biographies be published of the Directors in a future issue.

Bowman has contacted Jim Goodbar of the Bureau of Land Management in New Mexico concerning information on drilling operations on public lands. There has been no response. Bowman urged the Indiana Cave Survey to discuss the use of the ICS cave database for oil and gas drilling site assessment. Also, a working group is being formed with the Department of Natural Resources, drilling companies, and environmental organizations participating.

Suggestions are still needed for an Ohio Valley Region conservation project. John Cole is coordinating the effort. Dunlap suggested that any projects that need to be done in Indiana could be done by the IKC as well as the OVR.

Noe has received a reply from Doug Love concern Noe's recent letter inquiring about the possibility of purchasing rights to Love's publications. The letter that Noe received was short and didn't make any sense, nor did it address Nick's inquiry. The Directors agreed that no future communications should be pursued on behalf of the IKC.

Barry Welling and Glen Hicks recently visited Shaft Cave and found others without permission to visit the property. Their license plate number was noted. Bowman will send a letter to the vehicle's owner and ask for an explanation.

Concerning the Hoosier National Forest, Bob Armstrong has not yet arranged a tour date of the property at Wesley Chapel Gulf. One or more cavers have been identified as possible caretakers of the property, if arrangements can or need to be worked out with the HNF to have someone on site.

Bowman wants to reorganize the HNF Committee. He has sent letters to Indiana grottos to ask for new representatives from the grottos.

GPS training has been scheduled for February 16 and 16. Kitty Wooldridge also noted that more advanced training is scheduled for February 22 and 23. Due to the weather, only five or six people have been able to get together.

No activity has been reported in the last year with the Indiana Department of Natural Resources cave permit committee.

The American Cave Conservation Association has asked the IKC for a membership donation. There was some discussion, however, it was noted that there is no benefit for an organization to become a member in the ACCA. It would be better for individuals to contribute personally.

DeVore reported that no diapers have been reported washing through Cave River Valley lately. Dunlap agreed that there were no problems noted during the bat count two weeks ago. The child in diapers has probably grown up.

At Porters Cave, the new owners seem to be open to groups visiting the cave.

The Hoosier Environmental Council grassroots congress is scheduled for February 15 and 16. Adams moved to fund Noe's attendance at the

meeting. DeVore seconded. Dunlap asked for a summary article for the next *IKC Update*. Noe agreed. Motion passed.

Dunlap mentioned that although there has not been much activity to report from the IKC Land Acquisition Committee, there are several things in the works and activity continues behind the scenes. Hank Huffman has reported that both the Sycamore Land Trust and The Nature Conservancy are pursuing properties which might eventually fall under IKC management. Both of these groups, and others, are aware of the IKC quest for karst property.

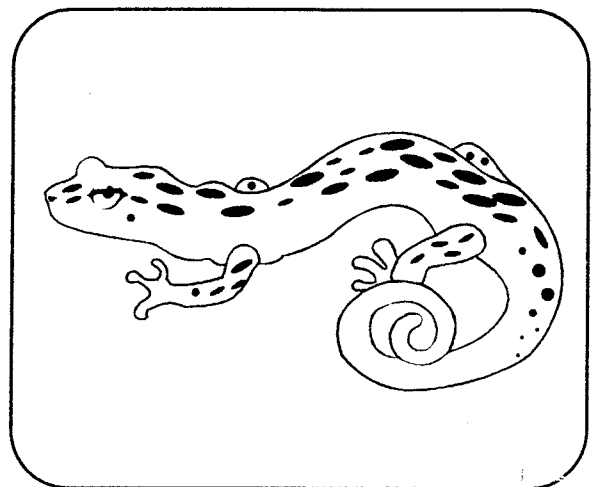
Haun reported that Goodes Cave in Monroe County is for sale.

Noe has written a letter to Governor O'Bannon concerning water quality issues. Nick has also received a press release that indicated that the current state administration may be receptive to acting favorably on water quality concerns.

Clyde Simerman asked if there was an interest in the IKC putting up a web page. DeVore said that the Michigan Karst Conservancy has a page with basic (low maintenance) information about the group. Haun relayed that the Central Indiana Grotto is looking into a page. As Treasurer, Dunlap was concerned about the cost. Abdulla offered to supply the computer space. Bowman will attempt to put a proposal or demo together for the next meeting.

The next meeting will be held at the Greenwood Community Center on Saturday, March 8, 1997 beginning at 10:00 AM. The meeting adjourned at 7:01 PM.

Submitted by James Adams, IKC Secretary



INDIVIDUAL MEMBERS

Joshua	Abdulla	Forest East Room 1126	Bloomington	IN 47406 (812) 857-8334	9503
James	Adams	620 Jackson Road	Greenwood	IN 46142 (317) 882-3724	9103
John	Ahlberg	19054 Sherman Street	Lansing	IL 60438 (312) 895-0514	8804
Robert	Armstrong	3101 Washington Blvd	Indianapolis	IN 46205	9603
Bruce	Barnes	2712 Torrey Avenue	Ann Arbor	MI 48108 (313) 434-9162	8906
John	Benton	2006 Leland Drive	Huntingburg	IN 47542 (812) 683-2733	9006
Ted	Bice	20260 Maple Raod	Argo	IN 46501	9508
David	Black	PO Box 147	Georgetown	IN 47122 (812) 951-3886	8712
The	Boehler Family	503 West Street	Genoa	OH 43430 (419) 855-8474	9302
Jim	Bowden	551 N Dearborn Street	Indianapolis	IN 46201	9501
Bruce	Bowman	8364 S State Road 39	Clayton	IN 46118 (317) 539-2753	9003
Jeff	Bray	355 Kingwood Street, Apt 3	Morgantown	WV 26505 (304) 296-5178	9004
Larry	Brewster	PO Box 4002	Kokomo	IN 46904 (317) 868-9506	9502
Carl	Brown	7710 Camby Road	Camby	IN 46113 (317) 856-3488	9612
George	Brutchen	306 West South Street	Winchester	IN 47394 (317) 584-1562	8603
Larry	Bundy	499 Young Street	Franklin	IN 46131 (317) 736-8841	9004
Linda	Bundy	499 Young Street	Franklin	IN 46131 (317) 736-8841	9004
D A	Burden	3410 South Rural Street	Indianapolis	IN 46237 (317) 781-0701	9303
Ronnie	Burns	PO Box 336	Salem	IN 47167	9509
Kenneth	Byrd	3253 Brisbane Road	Indianapolis	IN 46208 (317) 293-4551	9112
Stephen	Cahill	2125 Stoneham Drive, Apt B	Indianapolis	IN 46260 (317) 297-8492	9011
Keith	Calkins	610 N Main Street	Berrien Springs	MI 49103 (616) 473-2572	8904
The	Cannaley Family	4253 Senour Road	Indianapolis	IN 46239	8711
Barb	Capocy	4628 Seeley Avenue	Downers Grove	IL 60515 (708) 620-3350	9302
Chris	Carpenter	3221 Georgetown Road	Indianapolis	IN 46224 (317) 291-7085	8907
Kenny	Carrigan	6647 West Loretta Drive	Indianapolis	IN 46241	8804*
George	Cesnik	4331 Clifford Road	Brownsburg	IN 46112 (317) 293-9247	8603
The	Church Family	9156 E BC Avenue	Richland	MI 49083 (616) 629-5348	9302
Terry	Clark	7124 Cairo Dixie Road	Corydon	KY 42406 (502) 533-6115	9505
Jeffrey	Cobb	1332 Liberty Avenue, Apt 1	Terre Haute	IN 47807 (812) 238-1763	9701
Jeff	Cody	7818 Venetian Way	Indianapolis	IN 46217 (317) 888-9898	8603
Stephen	Collins	2401 Double Branch Road	Columbia	TN 38401 (615) 380-0210	8603
Tom	Cravens	11333 Big Bend	Kirkwood	MO 63122 (314) 984-7695	9603
Tony	Cunningham	22803 Lake Shore Drive	Elkhart	IN 46514 (219) 266-0374	9310
Rane	Curl	2805 Gladstone	Ann Arbor	MI 48104	8704
John	Danovich	5111 Heathwood Drive	Indianapolis	IN 46237 (317) 571-2856	9303
The	DeVore Family	15001 Mill Road, Lot #32	Fort Wayne	IN 46816 (219) 639-7249	9007
The	DeWitt Family	1505 Peck Street	Greenwood	IN 46143 (317) 882-7662	9311
Robert	Decker	3401 E Loretta Drive	Indianapolis	IN 46227 (317) 783-9744	9302
Ralph	Doerzbacher	3133 Kiser Lake Road	St Paris	OH 43072 (513) 663-4671	9305
Keith	Dunlap	32 Troon Court	Greenwood	IN 46143 (317) 882-5420	8602
Cheryl	Early	70 E Kelso Road	Columbus	OH 43202 (614) 261-0876	9302
Bambi	Erwin	1220 E Thompson Road	Indianapolis	IN 46227 (317) 783-4687	9612
Lorlie	Esterly	RR 2 Box 262	Pekin	IN 47165	9302
Jeffrey	Farr	4320 South 450 East	Middletown	IN 47356	9302
Scott	Fee	2501 Gable Blvd	Birmingham	AL 35215	8605
Kathy	Franklin	1717 North Star Road	Columbus	OH 43212 (614) 481-0408	8602
Jeffrey	Frazier	2520 Edgelea Drive	Lafayette	IN 47905 (317) 474-7224	9501
Joseph	Gasperi	6271 Apache Drive	Indianapolis	IN 46254 (317) 297-5467	9412
Harold	Geick	0N660 Prince Crossing Road	West Chicago	IL 60185 (708) 231-9296	9601
Allen	Goodcase	8940 Shields Avenue	Brookfield	IL 60513 (708) 485-7113	9003
David	Haun	PO Box 47961	Indianapolis	IN 46247 (317) 781-1996	8603
Timothy	Heppner	511 E High Street	Davenport	IA 52803	8811
Mike	Hood	23 Wells Drive	Dayton	OH 45431 (513) 252-2978	9302
Hilary	Lambert Hopper	1858 Marlboro Drive	Lexington	KY 40505 (606) 299-4054	9702
Richard	Horn	7156 E Payne Road	Indianapolis	IN 46239 (317) 356-6753	9007*
Tem	Hornaday	706 W Dodds Street	Bloomington	IN 47403 (812) 333-6811	8711*
Henry	Huffman	8358 N Mt Tabor Road	Ellettsville	IN 47429 (812) 876-9645	8712
Donald	Ingle	1924 Spang Avenue	Terre Haute	IN 47805 (812) 466-5015	9404
Patrick	Jarboe	7019 Islander Drive, Apt C	Indianapolis	IN 46214 (317) 388-8461	9612
Eric	Jaroch	8895 Old Nashville Road	Nashville	IN 47448 (812) 988-8904	9612
Kate	Johnson	1705 Safari Drive	St Joseph	MO 64506 (816) 233-5494	9303
Scott	Johnson	IDNR, 553 East Miller Drive	Bloomington	IN 47401	9003
Jonathan	Knott	2227 Lucas Street	Muscataine	IA 52761	9104
John	Koch	623 Kennedy Drive	Bloomfield	IN 47424	9304
Kim	Kohal	620 Jackson Road	Greenwood	IN 46142 (317) 882-3724	9407
Glenn	Kotnik, MD	4085 Country Place	Zionsville	IN 46077 (317) 873-4395	9206
David	Landess	1404 Williamsburg Drive	Champaign	IL 61821 (217) 359-1652	9305
Steve	Lanning	105 Vann Avenue	Evansville	IN 47714 (812) 476-0850	9304
Brian	Leavell	1627 South M Street	Elwood	IN 46036 (317) 552-7619	8809
Glenn	Lemasters	40 W Waterbury Road, Apt A	Indianapolis	IN 46217 (317) 888-1662	8602

Kriste Lindberg	2354 Windingbrook Circle	Bloomington	IN 47401 (812) 339-7210	9606
Stephen Lockwood	RR 1 Box 107	Mitchell	IN 47446	9302
Roy Logan	1004 S Keystone	Indianapolis	IN 46203 (317) 261-1129	9310
Daniel Lucas	11234 Lantern Road	Fishers	IN 46038 (317) 849-2784	9104
David Luckins	3683 Oakleaf Drive	West Bloomfield	MI 48324	8803
Bob Masta	2247 Prairie	Ann Arbor	MI 48105 (313) 662-2284	9302
Richard Maxey	173 W Kanawha Avenue	Columbus	OH 43214 (614) 888-2285	9302
Angie May	2422 Cedar Crest Drive	Columbus	IN 47203 (812) 376-6753	8706
Steve McKenzie	PO Box 11101	Ft Wayne	IN 46855 (219) 426-2522	9112
Susan McLoud	1500 Pennington Road	Mooreville	IN 46158	9505
Jane Miller	4020 S Rural Street	Indianapolis	IN 46227 (317) 784-3724	8704
Jon Miller	PO Box 65	Celina	OH 45822 (419) 363-2969	9305
Lynn Miller	4020 S Rural Street	Indianapolis	IN 46227 (317) 784-3724	8603
Douglas Moore	335 Cherry Valley Road	Vernon Hills	IL 60061 (847) 367-5568	9608
Tony Mulbrecht	432 Barker, NW	Grand Rapids	MI 49504	9310
Lawrence Mullins, Jr	Route 1 Box 465	Heltonville	IN 47436 (812) 834-5313	8807
Mary Ellen Murphy	City Hall, 401 W Morton	Bloomington	IN 47404 (812) 349-3423	9601
Carl Nelson	6163 Ralston Avenue	Indianapolis	IN 46220 (317) 254-5633	9509
Richard Newton	9611 S County Road 425 E	Marengo	IN 47140 (812) 365-2495	9006
Nicholas Noe	534 E Edwards Avenue	Indianapolis	IN 46227 (317) 782-3442	8711*
Scott Nordhoff	5839 Ralston Avenue	Indianapolis	IN 46220	9401
Richard Orr	334 S Marguerite	Ferguson	MO 63135 (314) 521-0355	9510
Ernest Payne, Jr	6131 Holly Berry Drive	Evansville	IN 47715 (812) 477-7043	8608
Gene A Pelter, Jr	720 Poplar Street	Fort Wayne	IN 46802	9004
Donald Peters	508 Jefferson Avenue	LaPorte	IN 46350 (219) 362-9987	8704
Joe Petersen	RR1 Box 429E	Paragon	IN 46166 (317) 537-9847	9406
Rosemary Petersen	RR1 Box 429E	Paragon	IN 46166 (317) 537-9847	9406
Everett Pulliam	560 W Lincoln Street	Danville	IN 46122 (317) 745-6357	9612
Jan Pursley	13175 Fairwood Drive	McCordsville	IN 46055 (317) 335-2228	9504
Steve Ragsdale	5460 Shawkoto Trail	Belmont	MI 49306 (616) 874-7599	9010
Kevin Rasmus	203 S State Street	Bloomington	IL 61701 (309) 828-0316	8707
Tom Rea	8677 South State Road 243	Cloverdale	IN 46120 (765) 653-4423	8603
Larry Reece	2929 E Southport Road	Southport	IN 46227 (317) 787-3619	9105
Charles Rex	4926 N Marmora	Chicago	IL 60630 (312) 283-6097	9302
Jim Rexius	20044 Sunbury	Livonia	MI 48152 (810) 442-0405	9612
Ronald Richards	8141 Pickford Drive	Indianapolis	IN 46227 (317) 888-6749	9004
Gary Roberson	c/o Marengo Cave, PO Box 217	Marengo	IN 47140	9210
Robert Roundy	5668 Bergan Drive	Dayton	OH 45424 (513) 233-0328	9302
Jay Savage	1991 W Dunmore	Hoffman Estates	IL 60195 (708) 885-1165	9302
Eric Schmidt	2424 N County Road 425 W	Danville	IN 46122 (317) 745-6739	8909
Diana Schuh	3175 - 3 Watergate Place	Indianapolis	IN 46224 (317) 329-7643	9404
Stephen Schuh	3175 - 3 Watergate Place	Indianapolis	IN 46224 (317) 329-7643	9308
Bill Schulze	479 Kernel Ridge Road	Rockholds	KY 40759 (606) 526-0695	9306*
Robert Sergesketter	1090 Hopf Avenue	Jasper	IN 47546 (812) 482-5517	8712
Mark Sheehan	9553 Meadowlark Drive	Bozeman	MT 59715	9212
Ray Sheldon	16195 East 300 South	Elizabethtown	IN 47232 (812) 579-6481	9105
Don Shofstall	5004 Bassett Avenue	Evansville	IN 47715 (812) 867-2510	8906
Clyde Simerman	1121 Sinclair Street	Fort Wayne	IN 46808 (219) 422-3030	9503
Noel Sloan	8715 Garden Rock Court	Indianapolis	IN 46256 (317) 845-8821	8609
Gordon Smith	9850 N Skyline Drive	Floyds Knobs	IN 47119 (812) 945-5721	9006
Thomas Sollman	RR 2, Box 23A	Fort Branch	IN 47648 (812) 753-4953	9105
Gregory Stamp	5551 Lesourdsville-West Chester Rd	Hamilton	OH 45011 (513) 777-7488	9302
Susan Strickland	1701 E 58th Street	Indianapolis	IN 46220 (317) 253-5395	8704
Kevin Strunk	6068 Riverview Drive	Indianapolis	IN 46208 (317) 257-3323	8606
Bob Thompson	7351 Cayman Way, Apt 6	Maineville	OH 45039 (513) 459-9275	9512
Dan Thornton	3845 Fairview	St Louis	MO 63116 (314) 776-6367	9601
Bill Tozer	9698 South 150 West	Pendleton	IN 46064 (317) 778-3259	8603
Bruce Trotter	5580 E Baseline Road	Columbus	IN 47203 (812) 379-1348	8707*
Charles Tubbs	1418 W Lexington Avenue	Elkhart	IN 46514 (219) 522-5701	9101
Nancy Tubbs	1418 W Lexington Avenue	Elkhart	IN 46514 (219) 522-5701	9101
Gina Turner	119 Coventry Road	Decatur	GA 30030 (404) 377-1135	9604
Charles Vandeventer, Jr	525 Lawndale Drive	Greenwood	IN 46142 (317) 888-4501	9302
John Vargo, Jr	7419 S Linden Road	Swartz Creek	MI 48473 (810) 655-4057	8706
Richard Vernier	RR 2 Lake Road	Princeton	IN 47670 (812) 385-5058	8704
The Waldrop Family	464 Jack Turner Drive	Lancaster	KY 40444	9303
Derk Walker	28 Conrey	Shelbyville	IN 46176 (317) 398-2835	9604
Norbert Welch	5404 E 200 N	Lafayette	IN 47905 (317) 589-8663	9305
John Wilkerson	20970 Delaware Street	Southfield	MI 48034 (810) 549-4912	9209
Kitty Wooldridge	Route 1 Box 465	Heltonville	IN 47436 (812) 834-5313	9606
Kevin Wools	5828 W 300 S	New Palestine	IN 46163 (317) 861-0014	9302
Bob Wright	23 E Collins Street	Oxford	OH 45056 (513) 523-4558	9208
The Wright Family	7400 Brophy Road	Howell	MI 48843 (517) 546-7794	9302
Michael Wuerth	2926 Eggers Place	Cincinnati	OH 45211	9302

----- ORGANIZATION MEMBERS -----				
Bluespring Caverns, Inc		RR 11, Box 988	Bedford	IN 47421 9511
Central Indiana Grotto		PO Box 153	Indianapolis	IN 46206 9101
Dayton Underground Grotto		23 Wells Avenue	Dayton	OH 45431 9401
Evansville Metro Grotto	c/o Ernest Payne	6131 Holly Berry Dr	Evansville	IN 47715 9108
Harrison-Crawford Grotto	c/o Dave Black	6917 Dalby Road	Georgetown	IN 47122 9103
T E A M S Inc		PO Box 2151	Bedford	IN 47421 9602
Mid-Hoosier Grotto		PO Box 632	Franklin	IN 46131 8801
Northern Indiana Grotto		PO Box 10297	Ft Wayne	IN 46851 9104
Stygian Grotto	c/o Dennis Huebler	2784 Brandenburg Ln	St Louis	MO 63129 9601
Windy City Grotto	c/o Steve Petruniak	PO Box 299	Pell Lake	WI 53157 (414) 279-3601 8706*
Wyandotte Cave SRA	c/o Roger Gleitz	RR1 Box 85	Leavenworth	IN 47137 (812) 738-2782 9702
----- COMPLIMENTARY -----				
Bat Conservation International		PO Box 162603	Austin	TX 78716
American Cave Cons Ass'n	c/o Dave Foster	PO Box 409	Horse Cave	KY 42749
American Cave Cons Ass'n	c/o William Elliott	12102 Grimsley Drive	Austin	TX 78759
NSS Cave Acquisition Comm	c/o Doug Medville	11762 Indian Ridge Rd	Reston	VA 22091
NSS Conservation Chair	c/o David Jagnow	1300 Iris #103	Los Alamos	NM 87544
NSS Grant Committee	c/o John Tichenor	PO Box 8234	Richmond	VA 23226
NSS Library		2813 Cave Avenue	Huntsville	AL 35810
NSS News Newsletter Review	c/o Bob Springston	17034 Wilson Way	Watsonville	CA 95076
NSS Speleo Digest	c/o Scott Fee	2501 Gable Blvd	Birmingham	AL 35215
Bloomington Indiana Grotto		PO Box 5283	Bloomington	IN 47407
Detroit Urban Grotto	c/o Daniel Crowl	1025 Crestwood Glade	Hancock	MI 49930
Dogwood City Grotto Library	c/o John Stambel	209 15th Street NW	Atlanta	GA 30318
Eastern Indiana Grotto	c/o Brian Leavell	1627 South M Street	Elwood	IN 46036
Fort Knox Grotto	c/o Steve Gray	263 Forest Trace	Radcliff	KY 40160
Greater Cincinnati Grotto	c/o John Wisher	7427 Thompson	Cincinnati	OH 45239
Louisville Grotto	c/o Alex Hicks	4806 Lacarem Drive	Louisville	KY 40279
Michigan Interlakes Grotto		Box 218	Union Lake	MI 48387
Michigan Karst Conservancy		2805 Gladstone Avenue	Ann Arbor	MI 48104
Windy City Grotto	c/o Ralph Earlandson	802 South Highland	Oak Park	IL 60304
Wittenburg U Speleo Society	c/o HH Hobbs	PO Box 720	Springfield	OH 45501
Indiana Cave Survey	c/o Bruce Trotter	5580 E Baseline Road	Columbus	IN 47203
Cave Conservationist	c/o Jay Jordan, Editor	11201 CR 132	Celina	TX 75009
Ohio Valley Caver	c/o Jay Kessel	426 N Park Place	Yellow Springs	OH 45387
Hoosier National Forest	Attn: Larry Mullins	811 Constitution Ave	Bedford	IN 47421
US Fish & Wildlife Service	Attn: David Hudak	620 S Walker Street	Bloomington	IN 47403
US Fish & Wildlife Service	Attn: Ron Ressenider	AE/OES Federal Bldg	Twin Cities	MN 55111
BIG Liaison	c/o Anmar Mirza	1600 E 3rd Street	Bloomington	IN 47401
Waynes Cave Patron	c/o Serena Smith	405 N Johnson Avenue	Bloomington	IN 47404
Jackie Bellwood	Cincinnati Museum	1720 Gilbert Avenue	Cincinnati	OH 45202
Thomas Brent	Mitchell Plain Research	1516 R Street	Bedford	IN 47421
Terri Brown	VA Dept Of Conservation	PO Box 1506	Dublin	VA 24084
Gary Bush	COMC Chairman	2630 Stonegate Drive	Jacksonville	FL 32223
John Cole		PO Box 555	Lexington	KY 40506
Ben Hubbard	IDNR-Div of Forestry	402 W Washington St	Indianapolis	IN 46204
Julian Lewis		217 W Carter Avenue	Clarksville	IN 47129
Tim Maloney	Hoosier Enviro Council	1002 E Washington St	Indianapolis	IN 46202
Allen Purcell	The Nature Conservancy	PO Box 5	Corydon	IN 47112
Rob Stitt		1417 9th Avenue West	Seattle	WA 98119
Pete Thorn	Harrison-Crawford SF	7240 Old Forest Road	Corydon	IN 47112
Fred Wefer	NSS Executive Vice Pres	PO Box 47	McDowell	VA 24458
John Wilson	NSS Administrative VP	9504 Lakewater Court	Richmond	VA 23229
Mark Young	Spring Mill State Park	PO Box 376	Mitchell	IN 47446

Continued from page 7...

Sullivan is appropriate for beginners and older children. ***All that we ask is that everyone have a helmet, proper footwear, and adequate light sources.*** A liability waiver must also be signed for the owner.

For those coming from the north, we plan to car pool (parking is limited) from the west side Bloomington K-Mart (SW quadrant at

SR 37 and 48, specifically directly behind Bob Evans), leaving at 9:15 AM. There will be a short safety/orientation meeting at the cave's entrance at approximately 10 AM. Someone will be stationed at the cave's entrance all day, so you may show up later and still participate. Plans are to be out of the cave by 4 PM. To obtain further information, contact Keith Dunlap (317-242-2505/ 882-5420) or Bob Vandeventer (317-888-4501).

ANNUAL BUSINESS MEETING

SATURDAY, MARCH 8th, 10:00 AM

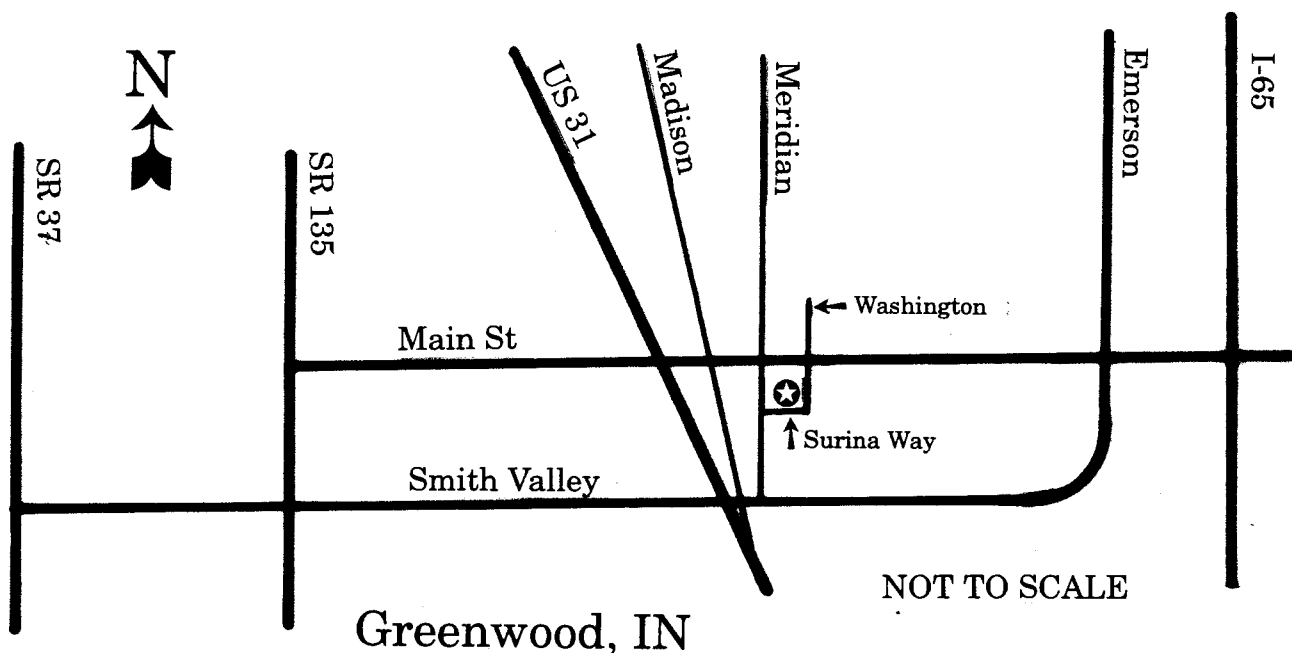
GREENWOOD, INDIANA

GREENWOOD COMMUNITY CENTER

Directions from SR 37: Take Smith Valley east across SR 135, US 31, Madison Ave, to Meridian. Turn north on Meridian pass the schools. Turn east on Surina Way (Craig Park entrance) to the Community Center.

Directions from I-65: Take Main Street west approximately 1.5 miles. Immediately after crossing the railroad tracks and before the fire station, turn south on Washington. Cross the little bridge and continue to Surina Way. Turn west past the police government center to the Community Center.

Enter the Community Center via the main entrance and turn right. Our meeting room is on the right just past the game room.



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 _____

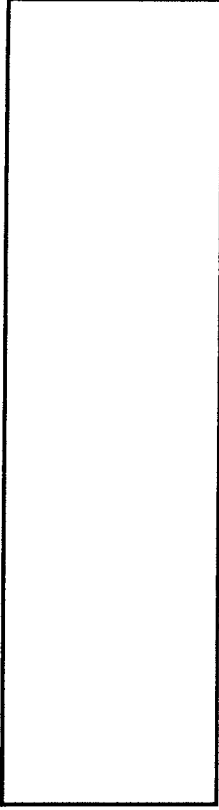
CITY/STATE/ZIP _____

PHONE # _____

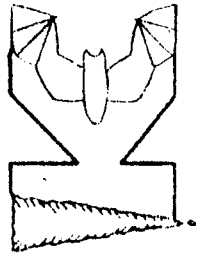
Make checks payable to the Indiana Karst Conservancy, Inc. and mail to the IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapolis, IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations fully tax deductible.

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

FORWARD & ADDRESS CORRECTION



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PROTECTING CAVES THROUGH ACTIVE CONSERVATION

