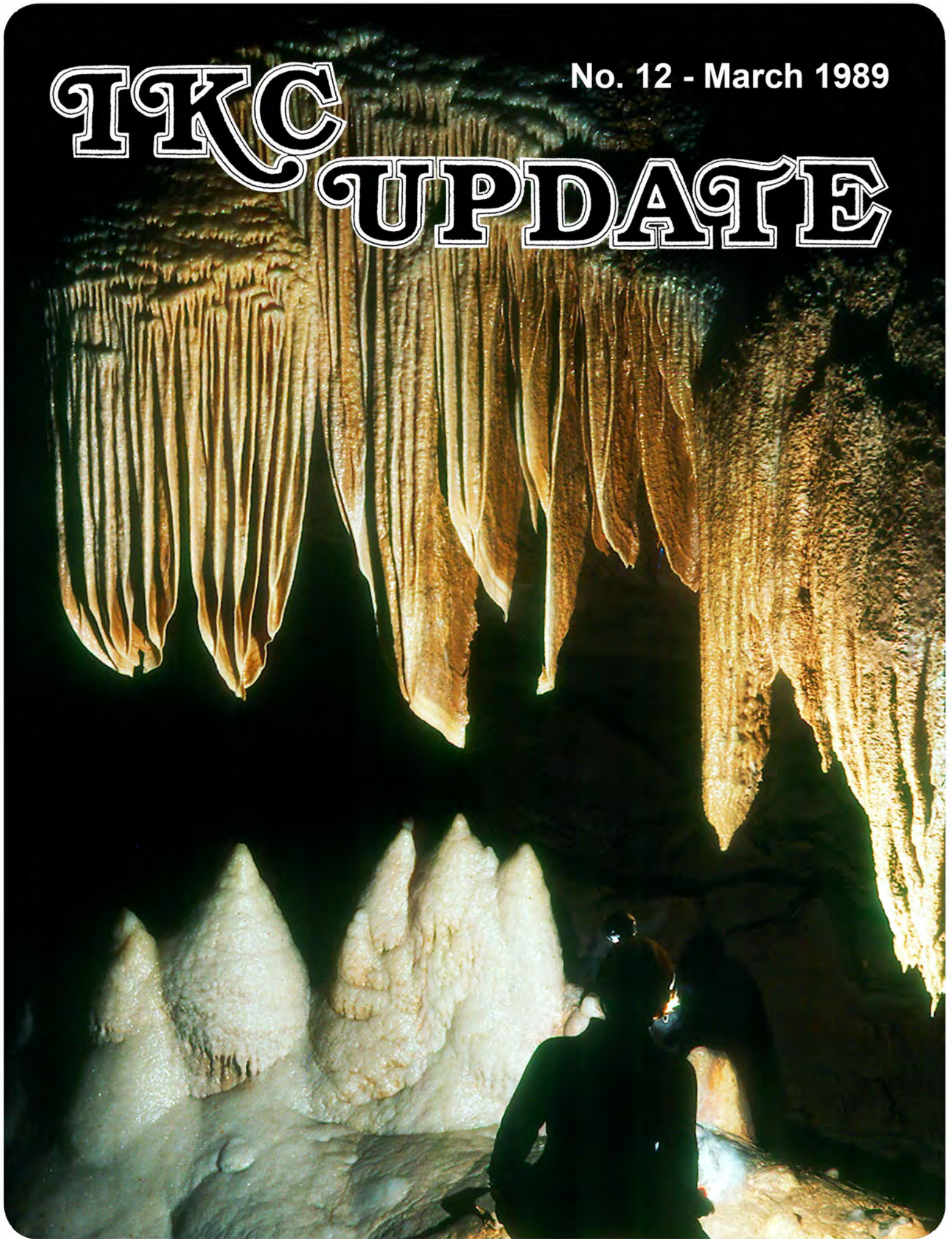


# TKC

No. 12 - March 1989

# UPDATE



**INDIANA KARST CONSERVANCY, INC.**

PO Box 461, Plainfield, IN 46168

*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.

\*\*\*\*\* BOARD OF DIRECTORS \*\*\*\*\*

President Keith Dunlap ..... (317) 242-2505(W)/(317) 882-5420(H)  
 Secretary Kathy Hornaday ..... (317) 634-6122(W)/(317) 881-7936(H)  
 Treasurer Cindy Riley ..... (317) 634-3837(H)  
 Director Mike Miessen ..... (317) 353-6624(H)  
 Director Lynn Miller ..... (317) 632-4525(W)/(317) 784-3724(H)  
 Director Ernie Payne ..... (812) 428-2959(W)/(812) 477-7043(H)  
 Director Tom Rea ..... (317) 252-4248(W)/(317) 745-7772(H)  
 Director Noel Sloan ..... (317) 929-8961(W)/(317) 845-8821(H)

\*\*\*\*\* COMMITTEES/ CHAIRMEN \*\*\*\*\*

Cave Acquisition & Management/ Keith Dunlap ..... (317) 882-5420  
 Research & Science/ Kevin Strunk ..... (317) 257-3323  
 Education/ Noel Sloan ..... (317) 845-8821  
 Membership/ Kathy Hornaday ..... (317) 881-7936  
 Publications/ Keith Dunlap ..... (317) 882-5420  
 Buckner Cave Renovation Project/ Mike Miessen ..... (317) 353-6624  
 Enviromental Concerns, HEC Liaison/ Lynn Miller ..... (317) 784-3724  
 Hoosier Forests Project/ Kathy Hornaday ..... (317) 881-7936

\*\*\*\*\* CAVE PATRONS \*\*\*\*\*

Coon Cave/ Keith Dunlap ..... (317) 882-5420  
 Grotto Cave/ Mike Miessen ..... (317) 897-1668  
 Shaft Cave/ Keith Dunlap ..... (317) 882-5420  
 Shiloh Cave/ Marty Atherton ..... (317) 783-2194  
 Wayne's Cave/ Tom Rea ..... (317) 745-7772  
 Woodard Cave (TN)/ NIG - contact Gene Pelter ..... (219) 456-3374

\*\*\*\*\* GROTTO LIAISONS \*\*\*\*\*

Bloomington Indiana Grotto/ Dave Everton ..... (812) 333-5797  
 Central Indiana Grotto/ Mike Miessen ..... (317) 353-6624  
 Evansville Metropolitan Grotto/ Ernie Payne ..... (812) 477-7043  
 Mid-Hoosier Grotto/ Jeff Cody ..... (317) 736-7596  
 Northern Indiana Grotto/ Gene Pelter ..... (219) 456-3374

Cover photo by Greg McNamara in a cave he once visited.

Publishing facilities courtesy of the Central Indiana Grotto; Editor and Publisher Keith Dunlap, Assistant Angie Manon.



**ANNUAL BUSINESS MEETING REMINDER****SATURDAY, MARCH 18th, 10:00 AM****INDIANAPOLIS, INDIANA  
INDIANA WAR MEMORIAL  
MacARTHUR HALL**

The annual business meeting is specifically called to elect Officers and Directors for the corporation. It is also a time to reflect upon past accomplishments and plan for future projects. As always, IKC meetings are open to members and other interested persons. Discussion, comments and constructive criticism are always welcome. The meetings are informal, and everyone is encouraged to attend and participate.

Agenda: Election of Officers and Directors; Committee reports (Research & Science, Hoosier National Forest, Education, Buckner); Hancock property; Bat census results; Update of other current projects; maybe even a video or two.

Meeting Directions: The War Memorial is located four blocks north of the circle in downtown Indianapolis. It is bound by Michigan, Pennsylvania, Vermont, and Meridian. Enter by the north doors.

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**EVENTS CALENDAR**

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|--------|---|---|
| 18 MAR | = | IKC ANNUAL BUSINESS MEETING, Indianapolis (see above).    |
| 20 MAR | = | INDIANA CAVE SURVEY QUARTERLY MEETING (contact Scott Fee) |
| 09 APR | = | CLEANUP AT PATON CAVE (see page 18).                      |
| ?? JUN | = | IKC QUARTERLY MEETING, Bloomington (tentative).           |

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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 461, Plainfield, IN 46168.

Permission is granted to all National Speleological Society affiliated organizations to reprint material in this publication, with proper credit given to the author and the *IKC Update*. Articles do not necessarily represent the opinion of the NSS or the IKC.

## RAMBLINGS FROM THE PRESIDENT...

As the IKC enters its fourth year of incorporated existence, it is perhaps appropriate to reflect back on our activities during the past year. Fortunately, our third year brought with it expanded opportunities, especially in the areas of cooperative projects with federal and state agencies, and further diversification of our involvement in protecting Indiana's karst and its inhabitants.

Highlights for 1988 included:

- Signed a Memorandum of Understanding with the Hoosier National Forest to assist with inventorying and proposing management plans for the caves on that 188,000 acres of publicly owned property. The work in the forest is performed by cavers under the direction of an IKC standing committee made up of representatives from the Indiana grottos, plus the IKC and ICS. Accomplishments for the year include issuing a position paper on cave/karst management submitted to the forest management plan working committee, formulating an internal list of known caves on the forest, and field checking cave and significant karst locations on tracts of land proposed to be exchanged.
- Participated in developing a management plan proposal for the Deam Wilderness. While the majority of the plan centered on the recreational use of the above ground forest, there are karst features needing protection, the most significant being Paton Cave.
- Participated in the gate construction project at Batwing Cave, a major hibernacula for the endangered *myotis sodalis* bat. The project was sponsored by the IDNR and USFWS. The IKC supplied approximately 60% of the 1100 personhours required to complete the work, plus assisted in the planning and other technical aspects of the project.
- Surveyed and drafted a map of Batwing Cave for the DNR. The map is to assist those performing the biannual bat population census.
- Reactivated the Research and Science Committee. The committee has assisted in a sedimentation research study in the Garrison Chapel Valley, identified papers to be reprinted under the Special Reprint Series, and investigated ways to address pollution problems in Pless and Dog Hill caves.
- Supplied grant monies to a karst related research project being conducted by IUPUI undergrad students.
- Participated in the Hoosier Environmental Congress and maintained active support of the Hoosier Environmental Council and its environmental and conservation activities.
- Participated and presented a paper at the Management of Privately Owned Undeveloped Caves Symposium at the 1988 NSS Convention.
- Participated in the biannual non-priority I bat census, sponsored by the DNR. Performing the count was Dr. Virgil Brack Jr, assisted by other members of the IKC.
- Continued to search for additional bat hibernacula. Several caves were identified and reported to the IDNR for inclusion in subsequent census.
- Continued to support the seasonal closing of significant bat hibernacula. The IKC has publicized the closures through the organized caving community. It has also enforced closures of the two hibernacula it manages.
- Continued active management of six caves, using various management policies as appropriate for the protection of the caves and their ecosystems, while still maintaining reasonable access to responsible cavers.

- Remained active in the Buckner Renovation Project, conducted several cleanup trips, maintained a register and donation box, and mailed educational information to those that requested it.
- Organized successful cleanup trips into Coon, Grotto, and Wayne Caves, and encouraged other organizations to do likewise.
- Further established our existence and credibility with federal and state agencies including the US Forest Service, the US Fish & Wildlife Service, the IDNR Division of Fish & Wildlife, the IDNR Division of Nature Preserves, and the IDNR Division of Forestry.
- Further established our existence and credibility among the organized Indiana caving community and the Indiana grottos, maintaining open communication through our grotto liaisons.
- Continued holding quarterly meetings for the membership, alternating locations between Indianapolis and Bloomington.
- Expanded our membership within and outside the State.
- Continued quarterly publishing of the *IKC Update*, keeping the membership, Indiana grottos, and others informed of IKC activities, and reprinting karst conservation related articles.
- Reprinted two additional publications under the IKC's Special Reprint Series on karst related subjects.

The membership should be proud of *their* accomplishments. We are still a young organization, but we have done much in the past three years to develop credibility for ourselves and for cavers/caving in general. While the IKC does not profess to speak or act for all cavers on all subjects, we have at least established a direction for karst conservation in Indiana that is making a difference.

- Keith Dunlap

\* \* \* ELECTION NOTICE \* \* \*

All members should have received a letter several weeks ago with a ballot enclosed (if you did not, please contact Keith Dunlap). It is important that you vote (either in person at the meeting, or by absentee ballot) as this is your primary means of influencing the direction that the IKC will take in the up coming year. Since the Board governs the Conservancy, you should vote for the Directors that will represent your views in cave conservation.

The election this year will see some new faces (or old faces in new positions) as two of our board members (Treasurer Cindy Riley and Director Tom Rea) are not seeking re-election. Additionally our Secretary, Kathy Hornaday, is running for a Directors position. Officer nominations include your current President, Keith Dunlap, for re-election; Jane Miller for Secretary, and current Director Lynn Miller for Treasurer. Others seeking election or re-election to the Board include Kenny Carrigan, Jeff Cody, Glenn Lemasters, Mike Miessen, Ernie Payne, Steve Reesman, Noel Sloan, and Kevin Strunk. Nominations are open up to the time of the elections.

Our membership as of February 20th stands at 73 and probably will not grow substantially between now and the March 18th meeting. Therefore, the Board will most likely consist of eight members (the three Officers, plus five other Directors). With the new adopted By-laws, three of the Director's positions will be for two year terms with the remainder elected for a single year term.

## NEWS BRIEFS...

- In December, the IKC extended our lease on the Hancock property (Coon, Grotto, and Shaft caves) for another year. In our correspondence to Mr. Hancock, as in the past, we summarized our past year's activities pertaining to his property (clean up trips, a new sign, a new cable, continued patrolling, etc...). Mr. Hancock was pleased with our involvement; so much so that he has made a *substantial* donation to the IKC. The money will be directed towards the funding of projects related to his property/caves.
- And speaking of projects for the Hancock property, a couple are in the works to be completed by this spring. First, at the request of Mr. Hancock, posts and a cable will be placed across the small parking area in the pines (just west of the parking area across from Mr. Stewart). Also, a new sign is being routed to be placed behind the new cable stating "NO PARKING, NO TRESPASSING".
- Another Hancock project that never seems to get accomplished is the fence around Shaft Cave to protect the "unaware" from stumbling into the pit. An alternative proposal to accomplish the same goal is being considered, installing an unlocked "lid" (i.e. a grate with no clasp). This would minimize the chance of an injury, reduce the IKC's and Mr. Hancock's liability, and hopefully be agreeable to those that felt compelled in removing our previous locked gates. Because in the past this has been a controversial topic, please let your Directors know your thoughts.
- Members and selected others on our mailing list should have received with their *Update* two publications in the IKC's Special Reprint Series (selected, published, and distributed by the Research and Science Committee). Publication Number 2 is entitled "The Indiana Bat" by Virgil Brack, Jr (also one of our members). Virgil's sixteen page report was originally printed in the *Audubon Wildlife Report 1988/1989* and is perhaps the best synopsis to date pertaining to the plight of this endangered species. Publication Number 3, "Bibliography of Indiana Karst and Karst Related Literature" was compiled by Thomas Waldron and Dr. Tom Miller and was reprinted from *Professional Paper No. 18* of the Department of Geography and Geology, Indiana State University. The bibliography mainly contains technical references, some of which are classics in Indiana karst. We hope to continue the Series with other papers. Suggestions may be forwarded to Kevin Strunk or Keith Dunlap.
- The Indiana bat received some positive PR on the locally produced show "At the Zoo" (on Channel 6) airing February 4th. The ten minute segment was filmed at one of the bat caves during the biannual census. The host generally asked the right questions and stressed bat protection. Virgil Brack and Scott Johnson (IDNR) also did a good job of promoting conservation. The video of the show may be shown at the annual meeting.
- Upon visiting Coon and Grotto caves for the bat census, it was observed that there is still some winter traffic occurring at both caves. The perpetrations happened between Dec 10th and early January. There was evidence of individuals sliding under and climbing over the fence at Grotto, and a new tree was found in the entrance pit at Coon. The IDNR warning sign was also removed at Coon.

- There was an incident reported at Wayne's cave that occurred in January. It seems that one of the local resident decided to have a little "fun" by unloading his gun over the heads of cavers that had just come out of the cave and were near their vehicles. The cavers (a group from EMG and another group from Michigan) had not done anything to provoke the incident (they were not blocking any driveways, they were being discrete in changing clothes, and they were not being loud). While hopefully this was an isolated incident, cavers visiting Wayne's should be extra sensitive to nearby neighbors and keep a very low profile (for that matter, this is a good operating procedure anywhere cavers go!).
- The February issue of the NSS News was dedicated to cave restoration. Feature articles included reports of several large restoration projects and on restoration techniques and specialized equipment. It is good to see the NSS emphasizing this less glamorous aspect of caving.
- If you are an Indiana resident with a refund on your state taxes, you are reminded to consider using the tax refund check-off to redirect part of your refund to the non-game and endangered species wildlife fund. Your contribution will help to fund projects such as Indiana bat studies and the eagle reintroduction programs.
- Another way to help the aforementioned non-game and endangered species fund is to purchase one of the DNR's new T-shirts. These high quality, 50/50 blend shirts sport a four-color rendition of a bald eagle and her young with the slogan "Support Indiana's Non-game And Endangered Wildlife". The price each is \$12 postpaid (specify size: S/M/L/XL) and may be ordered from the DNR Sales Section, 612 State Office Building, Indianapolis, IN 46204. Perhaps cavers should petition to have a second design created featuring the Indiana bat.
- The IKC would like to thank member Jeff Cody (and MAB paints) for the donation of more wire brushes for our cleanup efforts.
- March 31st marks the official end of the bat hibernacula season. Cavers should take advantage of the spring and summer months to visit the endangered bat hibernation caves while the bats are taking advantage of our unendangered mosquito/bug supply.
- The membership and mailing lists as of February 20th are included in the back of this issue. Please send any corrections to our Secretary.
- The amended IKC bylaws were finally adopted at the January Director's meeting. Because of the extensive revisions, the entire new bylaws are reprinted in this issue, starting on page 31.
- Also at the January meeting, Lynn Miller was appointed to be the HEC liaison, the position formerly held by Kathy Hornaday; Noel Sloan was appointed to the Education Committee, previously vacant; and the Fund Raising Committee was deactivated as its function is currently not needed.
- You may have noticed the *Update* was published and distributed a couple of weeks earlier than normal relative to the quarterly meeting. This is to allow your President/editor to take a much needed vacation studying psudo-karst on some far away tropical island. Therefore, direct any questions you may have to our Secretary or other Directors between March 3rd thru the 13th. Also, your President is making his annual move, this time to 32 Troon Court, Greenwood, IN 46143, effective March 15th (same phone numbers as before).

## GROSS HOLE

by Joe Oliphant

*(Editor's note - This article was solicited from Joe as an excellent example of a karst conservation project that was initiated, executed, and completed by individuals, independent of the IKC. Other cavers should make similar efforts to work with landowners uneducated about the significance of the cave/karst features on their property.)*

Last summer, Rick Cadwell and Joe Oliphant went to find Gross Hole (Monroe Co.). While asking permission, we learned that the new landowner did not want us to enter the cave.

He had two small children, one and three years old and was going to use his tractor in the next few weeks to move a bunch of dirt and several big rocks over the entrance to close the cave off completely/permanently.

His knowledge of caves was very typical of the general public. We sat down with him and discussed his concerns and found out that he had also been using the pit as a garbage dump for his trash and spoiled deer meat. *He then also told us that his well was in the same area as the cave.* Rick and I then talked to him about how caves are valuable resources made by nature and could also house important bats. We asked him if the cave could be gated by the Indiana Karst Conservancy, would he consider not closing it physically. He asked us to find out more information, but stressed that time was very important due to his kids exploring his property all the time more and more. He wanted to eliminate the possibility of them falling down the pit as soon as possible.

I then contacted Keith Dunlap of the IKC for his expertise on gates and these kinds of situations. Keith stated that he thought the IKC could help, but not in the timely manner the landowner was requesting. He sent us some diagrams of gates and gave me an overall good impression of the IKC and its goals and purpose.

Due to the time lag that would be involved with the IKC, Rick and I decided to take on the gate project ourselves. We then went down and met with the landowner again. This time we stressed our conversation on cave education (i.e., him possibly polluting his own water supply, etc...), and told him we would gate the cave for him; constructing it so bats could fly in and out, but that his small children would not be able to squeeze into the cave. He agreed to this and stated he would also leave the cave open to cavers. We then suggested to him that anyone in the future who enters the cave needed to have vertical and horizontal experience, and also suggested what things he should look and ask for.

The cave was gated and numerous bags of trash were also hauled out. The cave had a distinct odor due to the raw spoiled deer meat, but we feel that due to the nature of the pit draining large amounts of water, the odor will go away in the next year.

We feel we established some goals that are now going to be used in the future as we continue exploring caves on private property: 1) cave education to landowners; and 2) conservation/preservation of a valuable resource.

P.S. - I might add that the land owner incurred no cost for this gate. He even offered! I feel this established an even stronger relationship between cavers and landowner!





Bobby Walker, Rick Cadwell, and Gary Barger at the entrance to Gross Hole.

The gate was engineered by Rick Cadwell, and installed by Rick, Joe, Bobby Walker, and Gary Barger last October. The gate required six hours to fabricate (weld) and was constructed from  $1\frac{7}{8}$ " and 2" galvanized pipe. Sixteen manhours were required to install the gate, anchoring it in the ground with numerous large rocks (approximately 100 pounds each), plus two bags of concrete mix. Specifically, the installation consisted of using a long-handled shovel and a special long-handled heavy-duty spade to clear dirt and rock in about a six foot radius around the entrance. Large flat stones were then dry stacked in the cleared area to form an approximate two foot by two foot opening. The gate was then placed in a horizontal position and more rocks were stacked such that the gate was at the lowest point. This way the water could drain naturally into the cave, just as it did before we started. The gate will be inspected closely in the next year to make sure everything settles properly and no major shifts occur due to large rains.

The description of the cave is as follows: The entrance is now a manmade rock slot that leads directly to a 52' pit that bells out some after 6 to 10 feet. One half to three quarter of the way down the pit is a small display of flowstone formations. Approximately seven feet from the floor is a small muddy passage that leads to a 18' pit that is free climbable, but should be negotiated only with a rope due to the mud. Kevin Komisarcik and Dave Black mapped the cave on Dec 28, 1977 with stats of 80' TVE and 150' THC.

The cave can be considered open, but only with the owner's permission, as he has the keys.

Joe added a little personal commentary in that in the past he has been opposed to gating caves, especially ones that have already been vandalized. However, he felt that in this particular case, gating was justified as it saved a cave from being closed and set up good landowner relations for an area that also has [other caves] nearby. Finally, Joe offered his and Rick's assistance on future IKC projects.

## BUCKNER AREA ANNOUNCEMENT

*(Editor's note - The following notice was forwarded to me via Mike Miessen and is another example of individuals (Buddy Rogers and Art Gayheimer) taking on the responsibility of cave conservation. Both caves were in need of such protection. If you are down in the area, drop by Bud's shop and express your appreciation for their efforts.)*

Queen blair and S.I.S.G. Show Case caves have been gated and locked due to recent vandalism in both caves. These caves need your protection, please cooperate with us in preserving them.

You may gain access to either cave by following a few simple rules:

- 1) You must sign the register at the Bent Arrow cave shop or at Buckner, giving name, driver's license and/or vehicle plate number.
- 2) A deposit of \$5.00 will be required to obtain a key. The deposit will be refunded when the key is returned. Person or persons signing for the key will assume responsibility for the group while inside the cave.
- 3) After entering the cave, lock the gate behind your group to prevent other unauthorized parties from entering. Only one party will be allowed access at a time.
- 4) Please help us keep these caves intact by reporting any damage when you turn your key in.
- 5) For rather obvious reasons, no overnight camping will be permitted.
- 6) When visiting Show Case Cave, please do not park your vehicle along the roadside. There is ample parking space without creating ill-will with land owners and vehicle traffic.
- 7) Remember that the caves belong to someone who owns the property above and around them. Respect the property and help us keep the good will of cave owners. Trespassing on private property is *not* a right of cavers. *It is a privilege.* Please help us keep caves open for all to enjoy. Take your garbage back home with you and dispose of it properly instead of dropping it for someone else to pick up.

Remember this, if you respect the caves and rights of the owners, you will always have the privilege of visiting their caves.

Any infraction of these rules will terminate your caving privileges to these caves. Help us by reporting any vandalism. We would love to test the cave law and see those thoughtless and irresponsible people punished for making our caves a garbage dump. We need your help and cooperation to keep caving a clean, safe, and enjoyable past time.

## THE 1989 INDIANA BAT CENSUS

by Keith Dunlap

As has been discussed in these pages quite often in the past, Indiana has about a dozen caves that serve as hibernacula for the endangered Indiana bat (*myotis sodalis*). The total known populations for these bats have decreased considerably in the last twenty-five years, generally attributed to three causes: winter disturbance during hibernation, summer habitat site loss, and pesticide poisoning. In order to monitor the population trend, a biannual census is taken in all caves known to contain significant populations. The caves classified as Priority I caves (over 30,000 bats in the recent past) are counted by Richard Clawson of the Federal Bat Recovery Team. Non-priority I caves are left up to state agencies to census. In Indiana, this task is the responsibility of the IDNR Division of Fish and Wildlife and is administered and funded under the Non-game and Endangered Species Grant Program. The last several population counts have been conducted by Dr. Virgil Brack. In 1987 and again this year, IKC members assisted Virgil with this census.

This year's census included nineteen caves; nine of which were known in the past to contain Indiana bats and several more reportedly to contain small clusters but had not previously been verified. The remainder were included as part of another DNR project or were checked because of their proximity to known hibernacula. The following is a brief record of this year's field work:

Donnehue Cave - (27JAN, Virgil Brack, Keith Dunlap, Scott Bell, Dr. Don Wong).

We entered the cave from the river bluff entrance and went as far as the flowstone blockage. Several Big Browns were found in the entrance sections and a sizable population of Little Browns were found in the high canyon section. No Indiana Bats were found. Dr. Wong accompanied us to collect several Little Browns for a research he is conducting.

King Cave - (27JAN, Virgil Brack, Keith Dunlap, Scott Bell, Dr. Don Wong). This cave was included because I had been "censusing" a small cluster of bats in this cave for the last four years and wanted a positive identification of the species. They turned out to be Big Browns.

Clyffy Cave - (27JAN, Virgil Brack, Keith Dunlap, Scott Bell, Dr. Don Wong).

This cave had been included in the past with a known small population of Indiana and Little Brown bats. The population appeared to have increased and was scattered considerably. Several clusters were very near the entrance, indicative of a mild winter. We "explored" a considerable distance in the cave beyond the bats. Dr. Wong collected several more Little Browns.

Ray's Cave - (27JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson, several other DNR personnel, "At the Zoo" film crew and host). This cave contains the second largest colony of Indiana bats in Indiana. It was truly an impressive sight to see these clusters, some containing over a 1000 bats each. The film crew was there to publicize bat protection/education. Most of their filming was at the entrance of the cave and was only allowed in the cave for a short time during the count. Back in the first breakdown room (approximately 500' from the entrance) and past all the bats was new graffiti spray painted in two foot high white letters stating something like, "SATIN WORSHIPERS, WE HATE BATS", plus a large six-pointed encircled star. While this was probably just locals having fun, it is just another example of the volubility of this significant colony and the immediate need for a physical barrier for protection. The population appeared to have increased.

Continued...

Aunt Liz Cave - (28JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson, Angie Manon). This cave is located on the Crane Naval Weapons Support Center. The purpose of visiting this cave was to follow up on a bat project conducted in the summer of 1987 (Scott Bell assisted Virgil on this project). At that time the cave could not be found because of a mis-plotted location. We found the cave with only minimal difficulty. The cave basically consists of a single stream passage, three feet high and several small tight side leads. One room, eight feet high and twenty feet in diameter exist approximately 400' from the entrance. Quite a few pipistrelles were found in this room. No Indiana bats were found.

Granny's Cave - (28JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson, Angie Manon). This cave is located across the valley from the previous cave on Crane. It has a fifteen foot "climbable" pit entrance and less than 100 feet of cave. No Indiana bats were found.

Pleasant Cave - (28JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson, Angie Manon). This cave also was not located during the 1987 Crane project due to a wrong location. This time we had supposedly had the correct location but only with a quarter-quarter resolution. After a couple of hours of searching, we gave up on finding this cave. Obviously no Indiana bats were found.

Leonard Springs Cave - (28JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson, Angie Manon). This cave is located near Bloomington. Several IKC members had told Scott Johnson of possible Indiana bats clusters in this cave from previous visits. Scott and Dave Everton had checked the cave the previous week and confirmed the reports. The bats were scattered in the entrance room and clustered in one spot further in. We continued in about 1000 feet before turning around.

Grotto Cave - (29JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson). The bats were scattered into many small groups compared to previous years so it was difficult to guess by casual observations whether the population was up or down. Virgil and Scott Johnson collected guano samples to be analyzed for traces of pesticides.

Coon Cave - (29JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson). Again the bats were scattered much more than in previous years and located in different places. Virgil attributed this to a warmer than normal winter. Guano samples were also collected in this cave.

Buckner Cave - (29JAN, Virgil Brack, Keith Dunlap, Scott Bell, Scott Johnson). The bats in previous years were located high on the ceiling in the entrance room, usually in small holes and cracks. This year there were very few bats found.

Wyandotte Cave - (09FEB, Virgil Brack, Scott Johnson, and others). This commercial cave run by the state has is an interesting situation as the bats are located in high in the main passage with tours conducted through the area daily. Since 1981, the population was been gradually increasing and was thought to have been up again this time. Could the bats be adapting to the periodic disturbance? Gauno samples were collected in the cave. Batwing cave was also visited this day by the federal people.

Saltpeter Cave (Crawford) - (10FEB, Virgil Brack, Scott Johnson). I wasn't there, and didn't get the details. Twin domes Cave was also counted this day.

Robinson Ladder Cave -(10FEB, Virgil Brack, Scott Johnson). Several small clusters were reported to Scott Johnson by Bloomington caver Kent Wilson. The clusters were verified to be Indiana bats.

Parker's Pit - (11FEB, Virgil Brack, Keith Dunlap, Steve Collins). The census two years ago was conducted entirely by IKC cavers, as Virgil did not feel experienced enough to do the cave. This year with his improved vertical system, the pit was not a problem, but he was still concerned about making it back to the e<sup>i</sup> Room after hearing the many horror stories of Parker's S-bend and X-canyon. Steve and I convinced him that he would physically fit, if he could "mentally fit". He did a very good job in and out with a little coaching. It was obvious that the population was down in the cave as the major clusters two years ago were in the main alcove between the first and second drops. This year there were only one small cluster located in that room. The population in the alcove opposite the main alcove and in the e<sup>i</sup> Room appeared to be about the same. Guano samples were collected in the e<sup>i</sup> Room.

Jug Hole - (11FEB, Virgil Brack, Keith Dunlap, Steve Collins). The population in this cave seemed much more scattered in this cave than during the last census, making it impossible to formulate an in-cave guess to the population trend. Guano samples were collected in this cave.

Bentz Cave - (12FEB, Virgil Brack, Keith Dunlap, Steve Collins, Kenney Carrigan, Scott Johnson, Robert Rolley). This cave was turned in to Scott Johnson by a local resident and was field check last year by myself and Angie Manon. The population in this cave was identified by Virgil to be primarily Little Browns with a few Indiana bats mixed in.

Little Millet Pit - (12FEB, Virgil Brack, Keith Dunlap, Steve Collins, Kenney Carrigan, Scott Johnson, Robert Rolley). This cave was suggested by Kent Wilson due to its Proximity to Robinson Ladder. Only Virgil and I entered this small pit. No bat of any kind were found.

Millet Pit - (12FEB, Virgil Brack, Keith Dunlap, Steve Collins, Kenney Carrigan, Scott Johnson, Robert Rolley). Again because of the proximity to Robinson Ladder, this pit was checked. Virgil, Steve, Kenney, and I dropped the pit. No Indiana bats were found, but the pit was well worth the visit.

Counting Virgil, five IKC members participated in the census this year. I also had several other members that had volunteered to help, but were not needed due to Scott Johnson and Scott Bell taking an active role this year. Virgil's horizontal and vertical caving skills have advanced in the past couple of years, and he enjoys caving even when not counting bats. Scott Johnson also seems to be developing into a caver, although he tries to deny it (Scott ended up the muddiest in Bentz Cave, and sports a caver's bat sticker on his DNR pickup).

Also as a reminder, many of the caves visited on this project are closed seasonally for the bats or are closed year around by the landowners (e.g., Ray's, Leonard Springs, and Clyfty caves).

PRELIMINARY RESULTS: Virgil sent me an advanced copy of the tallied results. Overall the total population was up, primarily due to large increases in Ray's and Wyandotte caves. Jug Hole was also up and Clyfty's small population doubled relative to the previous census. Three other caves (Leonard Spring, Robinson Ladder, and Bentz) had small population undocumented in the past that added to the total. Five other caves (Grotto, Coon, Buckner, Saltpeter, and Parker's) had decreased populations, the most drastic was Buckner with its small population dropping by over ninety percent. Because of the unusual winter, not too much concern should be given to the decreasing populations in some of these caves, as most of them still have populations greater than they did in the early '80. The complete census report should be published in several months.



## RESEARCH AND SCIENCE COMMITTEE REPORT

by Kevin Strunk, Chairman

Due to continuing reports of "gasoline in Pless Cave", Kevin Strunk and Keith Dunlap met with representatives of the Indiana Department of Environmental Management (IDEM) on February 24, 1988. We asked to be briefed on the facts as they know them, and for a status report of any existing or possible enforcement actions. The issue is both simple and complex, and unfortunately, is possibly only another example of why Indiana has so many environmental problems: no in place laws at the time of the incident, and no funding and staff to deal with the current laws. To understand the situation, some facts need to be understood.

In August of 1985, a major 5000 gallon unleaded gasoline spill occurred at the Amoco station at the corner of US 50 and SR 37 in Lawrence County (Bedford West quad). No prior releases had ever been documented from the three (four?) stations at the intersection. Not long afterwards, the owner of Pless Cave, located one mile to the northwest, reported gasoline in the cave stream to the Emergency Response/Spill Section of IDEM. He was concerned because his cows were at risk due to use of the cave water for bovine consumption. The spill was traced to the Amoco station where it was discovered that a pipe connection had become detached from the tank (the tank did not leak) and that the situation had occurred over about a weeks time due to suspected theft, not leakage, of the product. The piping was repaired and the tanks have since been tightness tested for integrity.

Cavers visiting the cave shortly after the spill reported that all the biology in the cave was killed and the cave could not be safely entered in their estimation. Since then, the situation has improved with time and sightings of life were made in the past year or two.

In late 1988 after another report of gasoline in Pless Cave, the IDEM made another visit to the cave for water samples and noted a heavy gasoline smell in the air. Their test results showed no detectable amounts of hydrocarbons dissolve in the water and concluded that the smell is still coming from the 1985 spill. They feel confident that the three operating stations are not leaking and are currently requesting verification of a fourth station that is now closed.

What else is going on, and why was there no clean up or enforcement action originally? The answer is fairly ugly and symptomatic.

In 1985, the IDEM was a brand new agency with little enforcement power. The existing (1988) USEPA rules on Leaking Underground Storage Tanks (LUST) were not in effect. Indiana is suppose to be handling this area, but since Hoosiers refuse to pay taxes, there is only a skeleton staff to deal with the over 200,000 underground tanks in Indiana. With no threat to human life or water supply in the immediate Pless Cave area, and as no one complained to the proper authority at the time (cavers, that is), nothing in the way of a cleanup and enforcement action occurred. Why the apparent recurrence of gasoline in the cave? It is speculated that while most of the 5000 gallons moved through the cave system in 1985, some fraction of the amount is trapped in small voids somewhere between the leak site and the main cave passages. Every time a large rain comes more of this fraction is washed into the cave. The heavy smell is due to the fact that gasoline is a volatile aromatic compound. A little goes a long way. If in fact the spill was a one time event, what to do? It may be a nice idea to force Amoco to do a cleanup, but is this practical at this late date? How does one cleanup such a spill in

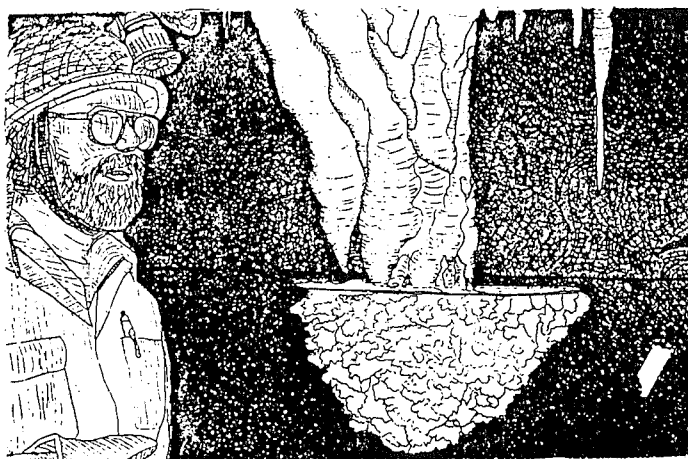
an unknown drainage network? I suggest that we keep on IDEM to fine Amoco, placing the funds in a Karst Pollution Research Fund, wait for the rains to flush out the remaining product, and hope the critters come back (maybe transplant some from Blue Springs?).

The sewage situation at Doghill Cave, also near Bedford was discussed. Apparently, this needs to be discussed in detail with the stream discharge section as a possible violation of Bedford's NPDES permit. As the situation has been going on for years (decades), we may have a lot of inertia to overcome. We could very well have to force IDEM to sue the City of Bedford if we wish the situation to be fully corrected.

Another cave related spill was brought to our attention by IDEM staffer Rachel Davis, a Washington County (Salem) native. Turns out her father-in-law owns a previously unreported stream cave that was polluted with whey from the now closed Salem Cheese Company lagoons. This situation occurred in 1986 and is apparently much improved. Several water samples were taken and things are "back to normal". The cave drainage system inferred from the spill results is over one mile in length and points out the lack of knowledge we have about caves.

What is the IKC and the Indiana caving community at large going to do about these and the other possibly existing or future situations? We must organize an effective caver/IDEM notification system. The IDEM can do some without us, but if cavers see something and don't report it to the IDEM (or indirectly via the IKC), or wait to inform other cavers at a grotto meeting months later, the event is over, and a cleanup or enforcement action may be meaningless. The IDEM has a 24-hour environmental "hot line" which should be used for reporting incidents. The number is (317) 241-4336.

The IDEM could also use our help in other situations. Specifically they could perform their tasks much better if they were to have access to a state cave list. Then, if there was an environmental accident in a karst area, they could check to see if any caves were located in the immediate area and act appropriately to contain the accident in such away as to possibly not pollute the cave. Indiana cavers should demand that IDEM and IDNR begin treating karst flow systems with respect, but we can not expect them to do so if they are not aware of where the caves are. Unfortunately, current caver philosophies and mistrust of governmental agencies will keep these agencies from operating in *our own* best interest.



ROCKY MOUNTAIN CAVING

## MONROE COUNTY PROSECUTOR MEETING

by Keith Dunlap

In January, Scott Johnson of the IDNR and myself were discussing the laws protecting the Indiana bat and means of enforcing such laws. This lead to Scott contacting an authority in the DNR's law enforcement division. He and I then discussed the situation with Lieutenant Hauer, the supervisor of the Conservation Officers for Monroe County. Lieutenant Hauer stated that his CO's would respond to our calls for hibernacula violations at Coon and Grotto, but was unsure what the county Prosecutor would do. Therefore a meeting was arranged to discuss the matter with the Prosecutor's Office.

On February 15th, Conservation Officer Marlin Dodge (one of four assigned to Monroe County) and myself met with David Hunter, Deputy Prosecuting Attorney, Special Investigations. I described what the IKC was and why it was formed, and the various management arrangements we have. We then discussed the laws protecting the caves and endangered species, specifically: the Federal Endangered Species Act (Public Law 93-205), the Indiana Non-game and Endangered Species Conservation Act (IC 14-2-8.5-7), the Indiana Cave Law (IC 35-43-1-3), and the Trespassing laws. The Deputy Prosecutor said they could not prosecute on the federal law (violations must be filed with a federal prosecutor), but could and would prosecute on the other three laws as appropriate.

The Indiana Endangered Species Act could be applied any time someone is caught inside a posted hibernacula during the seasonal closure (Sept 1 thru March 31). The DNR signs at the entrance are sufficient to give "prior knowledge". A single eye-witness of the violation and a license plate number are the minimum required, but multiple eye-witnesses and names/addresses are preferred. The prosecutor cautioned against accosting violators, the proper action is to call the authorities. Prosecuting under the Endangered Species Act would be a matter of proving to the judge or jury that visitation to the cave during the hibernation season is considered harassment. This would entail obtaining testimony from expert witnesses (Virgil Brack has volunteered his services). *Anyone* can call the authorities on this offense.

The Indiana Cave Law would also be applicable in the above situation since it has a section that covers cave life harassment. Other appropriate uses for the Cave Law would be for witnessing vandalism of the cave (damaging formations, graffiti, littering, etc...), or vandalism of a gate or fence, maybe even a sign at the cave. The evidence needed is the same as above and the procedure is the same, call for a law enforcement officer. While anyone can call the authorities on a Cave Law violation, usually only the landowner or a designated representative may actually prosecute due to the way the law is written (it is *not* against the law to vandalize a cave *with* the landowner's permission). This means that violators to on the Hancock property would be prosecuted, but it would be questionable at Wayne's, Buckner, and many other caves in which the landowner's attitude is apathetic to the cause and not wanting to become involved.

The Trespassing laws in Indiana are only enforceable with appropriate posting (the deputy prosecutor thought our signs on the Hancock property were more than sufficient) and only the landowner or designated representative can call the authorities. With the proper evidence and identification, trespassing can be the easiest to prosecute on, and would always be included with either of the other law violations.

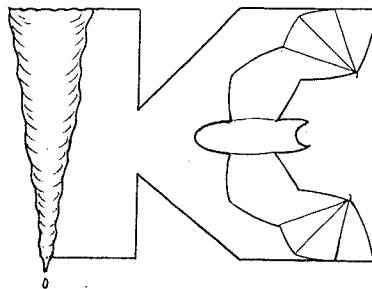
Contacting the appropriate law enforcement agency for the above law violations is important. *Violations to the Endangered Species Act or the Cave Law should be directed towards DNR's Conservation Officers* (in the Bloomington area, call the Paynetown office: 812-837-9536). Trespassing only violations should be reported to the Sheriff's Department (trespassing is not the responsibility of CO's unless combined with the other law violations).

It is much more likely that a successful prosecution will occur if a CO is involved. This is because a CO has the authority to file for prosecution directly with the Prosecutor's Office, they can issue warrants themselves on the spot if necessary (to out of state violators), and they can have warrants served to the violators throughout the state via their own statewide agency. A Sheriff's deputy on the other hand will only collect the information of the violation, then leave it to the person reporting the violation or the landowner to file complaint with the Prosecutor's Office. Once the Prosecutor's Office issues a warrant, it then must be served by the local law enforcement agency in the location(s) where the violators live (the Deputy Prosecutor realistically said that if the violators do not live in Monroe County or one of its neighboring counties, that it will probably not be served, and it is almost impossible to get a warrant served in Marion County or outside the state).

(After this meeting, and at the suggestion of the Deputy Prosecutor I stopped in to the Sheriff's Department and talked with Major Eenney Perry, a supervisor of the Monroe County Deputy Sheriffs. He said that they would respond to a call if a unit was available, and confirmed that they would probably only serve in the capacity of obtaining names and addresses from the violators, leaving the filing of a complaint up to the owners or their representatives.)

The Deputy Prosecutor made an interesting comment that probably our best long term protection mechanism for the bats and/or caves would be to make an extra effort to try and catch a violator of either the Endangered Species Act or the Cave Law, prosecute to the fullest extent, and if the violators are found guilty, publicize the event as much as possible through the media (he related this to a similar situation the County Welfare Office has with welfare fraud, stating that they do not prosecute to recover the money involved, but to publicize the trial as a deterrent for others).

Overall the meeting was very productive. The Prosecutor's Office is aware of our existence and the caves we are trying to protect and seemed very willing to cooperate. Officer Dodge is now aware of the endangered bats in Coon and Grotto, their need for protection, and the seasonal closures. He also seemed very cooperative and willing to help and said he would inform the other CO's of this information. Finally the IKC is more informed of our legal rights, the procedure to have someone prosecuted, and the proper authorities to contact.



## ATTENTION PROJECT CAVERS

Anyone interested in learning how to *cave survey* or who would like to participate in cave surveys in Spring Mill State Park please contact Stephen Collins (317-759-6124 RR1 Box 155 Daleville, IN 47334) or Dave Everton (812-333-5797 1107 S. Washington Bloomington, IN 47401). There are also limited openings for photographers, if interested contact John Danovich (317-885-8051 5111 Heathwood Drive Indianapolis, IN 46237).

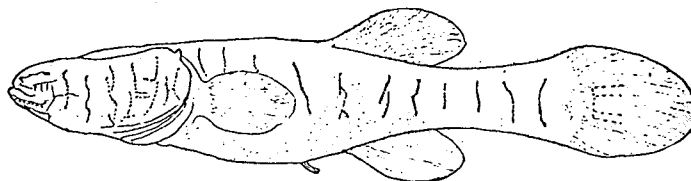
The Park Service is working with the cavers involved to produce a complete file of all the caves within the park. Many are already mapped but need a profile views produced or just plain remapped. The park would also like a photographic record as well. This is a good opportunity to contribute to not only the park, but to the caving community as well.

Guidelines are as follows:

- 1) To maintain a low profile a strict limit of six cavers per project will be observed.
- 2) Due to this low number, (if interest requires), personnel will be rotated per trip to better allow many to participate.
- 3) One exception on rotation, anyone doing the cartography on any of the projects is requested to participate on that project until it is complete. (This is why we are remapping some of the caves, let's not let it happen again!)

If you just want to tour the cave(s) then do so on your own time, the purpose of these trips are to teach the different aspects of *cave surveying* (which will hopefully result in some more active cave surveyors) and to produce high quality maps for the park and the Indiana Cave Survey (ICS).

*(Editor's note - this announcement was sent in by IKC member Steve Collins. The IKC proposed the same project several years ago, but never got it off the ground because of too many other projects at the time. Hopefully Steve and the others can get the project going and keep it going. I would encourage all of our members to participate if they can.)*



Amblyopsis spelaea



HOOSIER FORESTS PROJECT COMMITTEE  
QUARTERLY REPORT

by Kathy Hornaday, Chairman

The second group of Forest Service land exchanges has been checked, and the report forwarded to the Brownstown District - once again, no caves on Forest land. A third request has recently been received from Leo Swettenam, Brownstown District Ranger. This involves checking both the Federal land being given away, and the piece of private land to be received in exchange. The deadline for this project is April 1. Volunteers are welcome.

There have been some changes in staff at all three offices. Larry Mullins moved from Brownstown to the Supervisor's office in Bedford. The contact at Brownstown is now Bob Aynes. Larry is the contact at the Bedford office, with Ron Abraham having left for Ohio, and Mary Wilson moving to the Regional Office in Wisconsin. Larry Martoglio has left the Tell City office for Utah, and the Tell City contact is now Ted Senior.

In a related vein, the April CIG grotto trip will be a clean-up trip to Patton Cave. Patton is located north of Frog Pond Ridge, in the Charles C. Deam Wilderness. Because of the popularity of the area among horsemen and hikers, the cave frequently accumulates a lot of trash, especially around the entrance. There is also some graffiti inside the cave which needs to be removed. Patton is not a large cave, so the group size may need to be limited.

MID-HOOSIER GROTTO BRINEGAR CLEANUP

by Jeff Cody

Sunday, February 12 was our day to clean Brinegar Cave. During a King Blair connection trip in December, I had noticed an extra amount of trash in the entrance room, the voice connection to Trap Door, and the upper level near the Reid Room.

MHG members Mark Webb, Larry Bundy, Linda Bundy, Mike Lorange, Brent Fountain, Chris Burgett, and I showed up for the trip. On our arrival at Blenz's house, we spoke to Dick and were told of a possible collapse in the breakdown near the entrance. I went in, checked it out, and reported a collapse at the top of the breakdown climb. Because the collapse was very recent, it was feared that a group might be trapped in the cave, so Brent, Mike, Chris, and I entered King Blair and made our way into Brinegar to the lower side of the collapse. After nearly a five hour trip, we came back out of King Blair, finding no sign of anybody in Brinegar.

While we were in the cave, Mark, Larry, and Linda removed three bags of trash *plus a deflated rubber raft* from Brinegar's entrance room. We plan on another trip into King Blair to remove some trash out of the upper Brinegar level. If the collapse stays, we hope it will curtail the traffic in Blair Spring and make Brinegar as clean as the rest of the cave.

## IKC CLEANUP TRIP - WAYNE'S CAVE

by Keith Dunlap

On December 11th, the IKC sponsored its third annual cleanup trip into Wayne's Cave. The Central Indiana Grotto had also designated this trip as their month grotto trip, so the project was well attended with *twenty-eight* cavers registering at the entrance. While not everyone made it through the crawlway, those that did spent the day touring the cave, removing graffiti, picking up what little trash could be found, and in general enjoying one of Indiana's best caves.

Initially, most of the effort was dedicated around Camp I, wire brushing the wall, and utilizing "brown-washing" techniques to renovate the cave. Many of the participants also made the trip to Camp II, picking up trash that had eluded previous cleanup trips. A few energetic soles ventured on to Camp III while others returned to Camp I, then explored the "Wells" and "RPI Discovery" sections of the cave.

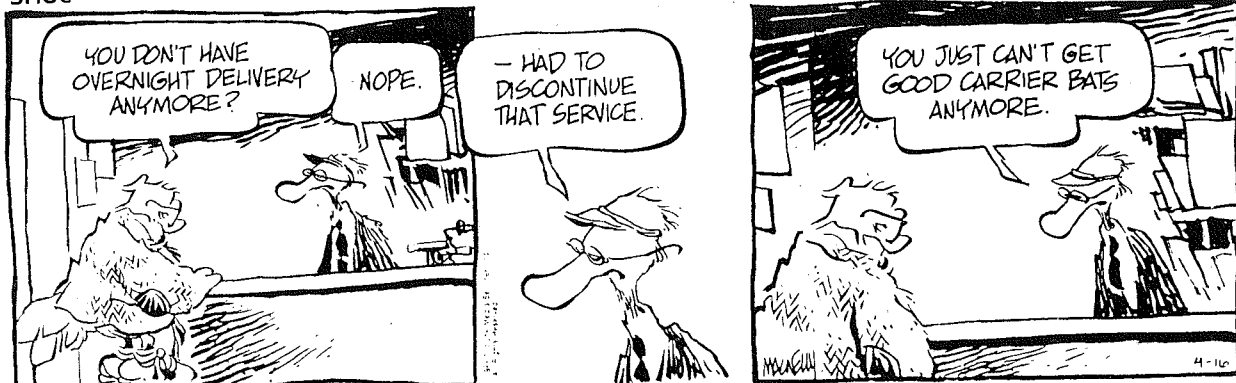
While there is always more to be done, the cave has been markedly improved. Graffiti around Camp I still exist, but is not nearly as obvious as several years ago. The cave between Camp I and Camp II is pretty well graffiti-free and trash-free (only one partial bag of trash could be found this time). North of Camp II is also in good shape thanks to several "independent" groups spending considerable time up there.

Anyone that has not been in Wayne's for several years should make an effort to visit this cave, as it is truly an enjoyable experience once again. Thanks to all that have participated in the past three years. Hopefully our efforts can continue.

December 11th participants included Dave Behrens, Jacob Brady, George Cesnik, Jeff Dean, Tawnya Dossett, Keith Dunlap, Robin Fitch, Jay Hallgarth, Christi Jackson, Jeff Jackson, Dirk Koester, Lloyd Koester, Tom Liddle, Lori Macy, Tim Macy, Angie Manon, Tim McLair, Chris Nack, Eric Schmidt, Spike Selig, Matthew Selig, Dan Solman, Susie Sweeney, Sam Thornburg, John Toedebusch, John Vargo Jr, and Barry Welling.

NOTE: Two buckets and two brushes were left in the cave between Camp I and the stream so that further brown-washing could be done. Anyone feeling inspired while at Camp I should mix up a bucket of mud/water slurry and do a little "painting". However, please wash out the bucket(s) and brush(es) when done and place them back where they were found.

Shoe



# America's Karst Regions Need More Attention

By Jay Lehr

**M**uch of the United States is underlain by the "cave rocks" of limestone, dolomite, marble, and gypsum. These regions are heavily dissolved by ground water to form large solution channels and caves. They are called karst areas. They are often beset by an assemblage of environmental problems, which include ground water pollution.

The major American karst areas extend from the Ozarks across Kentucky and Tennessee to northern Alabama, then northward through the Appalachians. America's rural karstlands are commonly areas of economic poverty, a poverty rooted in our poor adaptations to the prevailing natural resource conditions.

The economic and environmental costs of America's inadequate and inaccurate understanding of how karstlands function are staggering. Multimillion dollar cleanup costs are routinely incurred when wastes are allowed to enter a karst ground water system. Green Forest, Arkansas, illustrates the nature and magnitude of one type of problem that can occur.

Green Forest is a small town in the limestone karst of northern Arkansas. The town is the location of a large chicken processing plant. Poorly treated wastes from the town and the processing plant enter the regional ground water system through a losing stream and a sinkhole. Wells and springs within a 50-square-mile area are affected by the discharged sewage. The direct economic losses, including the cost of constructing rural water lines to serve the affected area, are about \$10 million. This value does not include any monetary estimate

of the associated health costs, even though the affected ground waters are contaminated with bacteria, viruses, and parasites.

The American Cave Conservation Association (ACCA) concluded that major educational efforts were needed if cave and karst resources were to be protected and wisely used. Out of this need grew the idea of an American Cave and Karst Center, a center with three interlocking programs:

1. A national scale interactive museum devoted to caves, karst, ground water, and man's interactions with, and dependence on, these resources. Currently, there is no museum in the United States that deals extensively with this subject. The museum will be far more than a repository for natural and cultural artifacts. It will be a modern, interactive, exciting facility that creates public understanding of today's environmental problems and ways to prevent and solve them.

2. Educational programs to increase understanding of natural resources in karstlands. These programs will be focused primarily on school children. We will never adequately prevent natural resource damage and environmental problems in karst areas until we have broad public understanding of how man's actions can affect natural resources. Understanding should begin with the children.

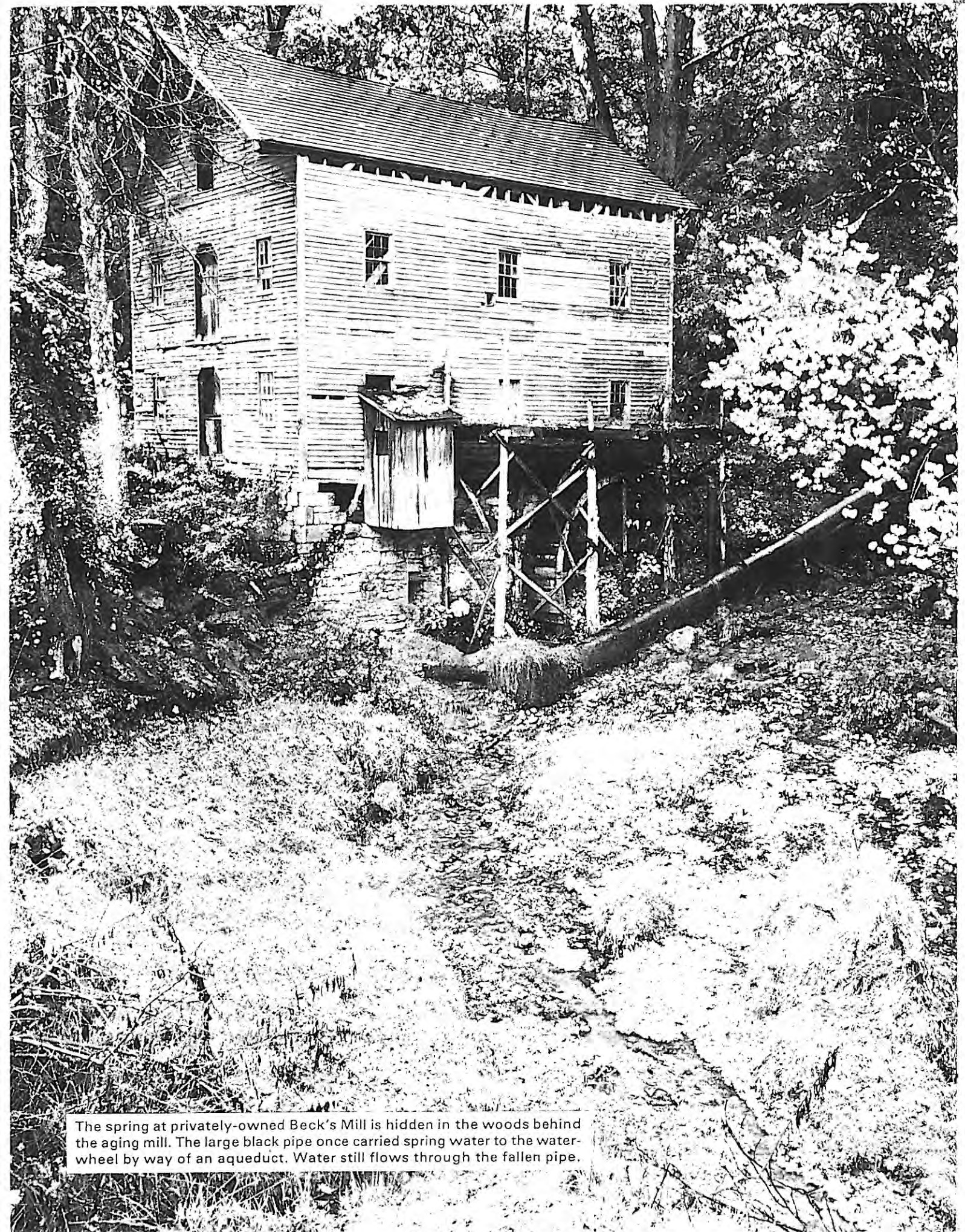
3. Networking and referral services to help industry and other entities understand and reduce karst-related problems. The objective is to develop a functional karst awareness among those who need

our services. There is a growing public perception that karst and ground water resources are doomed to destruction. That perception is wrong and has damaging consequences. What is needed are bridges between what is known by scientists and professional resource managers and what is perceived by the public, government, and industry. The services envisaged will build these bridges, protect resources, and prevent costly mistakes.

Few residents of karstlands have an accurate understanding of how the land "works." Many of the natural resources are "out of sight" and, as an unfortunate result, they are often damaged because they are also "out of mind." The people of America's karstlands urgently need a deeper look at, and a deeper understanding of, the land upon which they live. Such an awareness will benefit both the people of the karst lands and the natural resources of these areas.

America's water well industry and ground water community should strongly support the lofty goals of the ACCA's Cave and Karst Center. The American Ground Water Trust is raising funds to tell the true story of ground water use and abuse all across America. The Cave and Karst Center will strengthen our efforts in the unique and complex regions of karst hydrology.

Readers who wish, in some way, to take an active part in ACCA's plans for the Karst Center, as well as those simply seeking assistance with problems relating to these areas, should contact Thomas Aley at the Ozark Underground Laboratory in Protom, Missouri. ■



The spring at privately-owned Beck's Mill is hidden in the woods behind the aging mill. The large black pipe once carried spring water to the water-wheel by way of an aqueduct. Water still flows through the fallen pipe.



# The Springs Of Life

Reprinted from  
*Outdoor Indiana*  
November 1988

By Carl Rexroad

Springs! The word conjures up a vision of chill water rising in a clear pool in the shade of an overhanging sycamore tree. Some of Indiana's springs nearly match that picturesque view. Many have a long, romantic history, for springs attracted the early settlers and served them as a source of water, as a source of power to grind their corn, and as a coolant for distilling a different sort of corn product. As the population of Indiana grew, even large towns depended on spring water for at least part of their needs. Most of these towns, such as Bloomington, Bedford, Salem, Marengo, English and Corydon, are in southern Indiana, but farther north towns such as Delphi have used springs in addition to wells.

Many towns simply outgrew the capacity of their springs as a water source; however, I can guess why the state condemned the water supply coming from Marengo Spring at Marengo. The day I visited Slush Tube Cave a little more than a mile north of town a farmer had dumped a number of dead piglets in the cave entrance. As was proved a number of years earlier, Slush Tube is a very direct source of part of the spring water. A red dye trace to find the outlet of the water in Slush Tube Cave turned the city water supply red, and the ice machine in a local restaurant provided startled patrons with red ice cubes.

Many interesting springs recall aspects of early Indiana history. Organ Springs in southern Washington County mixes the old and the new. A long-abandoned log cabin exemplifies the old; plastic pipe being laid in a ditch from one of the three springs to a modern dwelling up the hill

represents the new. Organ Springs collectively rank among the 15 largest springs in Indiana. They were named because water issuing from a cave entrance sounded, at least to the namers, like organ music. At one time, Organ Springs formed the center of a thriving community large enough to have its own post office. The town, consisting of a collapsing log cabin, now exists as a town only in the imagination of those who print our state map.

The largest of Indiana's springs is Harrison Spring in southwestern Harrison County. Only a minimal imagination is needed to picture it as it was in the days when prehistoric Indians visited and camped around it. With a little more imagination, it is easy to picture the spring in the days of William Henry Harrison. It was the site of two successive mills a few hundred feet downstream from the spring, and traces of an old mill dam can still be found.

Like Organ Springs and all of the other springs mentioned here, Harrison is a bedrock spring, but its origin is more complicated than that of many springs. In six-bit words, it is an alluviated cave spring, the mouth of a formerly exposed cave now buried by stream deposits. During the melting of the great masses of glacial ice that once nearly covered Indiana, the meltwater streams cut deeply into the landscape making valleys and hills. Therefore, cave water and other groundwater was able to penetrate deep into the earth to form caves and springs at lower levels than are presently possible. Then, during the dying of the glaciers, the Ohio River Valley and parts

of other valleys, the Blue River Valley for instance, were filled mostly with stream sands and gravels but also in places with lake sediment. This process built the lowland back up to approximately the present valley surface. This fill buried the mouths of many caves. Some had sufficient flow to keep a channel to the surface cleaned out, as was true of Harrison Spring. The depth of the springs is about 35 feet, although I have heard greater depths mentioned. This is a good indication of the amount of filling.

The Orangeville Rise in Orangeville probably is the second largest spring in Indiana. It, too, is an alluviated cave spring. Obviously, not all cave mouths are buried, and exposed caves that discharge water are also considered springs. Examples include Hamer Cave Spring and Donaldson Cave Spring in Spring Mill State Park, and Avoca Cave Spring at the Avoca Fish Hatchery, all of which are interesting spots to visit. Avoca Cave Spring is not very obvious because the mouth of the cave is covered by a dam built to provide a steady source of water for the hatchery. Hamer Cave Spring supplies water, as it did in former days, for the mill at Spring Mill. Also, it has been a major source of water for the cement manufacturing plant in Mitchell for many years.

One of the prettiest springs I have visited is Radcliff Springs below Old Unity Cemetery in southern Washington County. Again think "cave entrance," but this one is neither an open cave nor one buried by stream deposits. The cave entrance has collapsed, and amid the blocks of limestone breakdown are many

Continued...



spring. There is a slight overhang of rock where the water pours forth but no cave-sized passage is present.

Big Spring, the particular Big Spring below Big Springs Church about 9 miles south of Salem, lies in a pastoral setting against a steep, wooded slope in a less obvious spring alcove. There in the clear water you can see the fissure in the bottom of the spring pool. Even though a constant stream flows from the pool, it is so clear that one is not even aware of the movement of the water as it spills from the depths.

One is very aware of the flowing water at Beck's Mill, even though Beck's Mill Spring is hidden in the woods behind the mill and is easily missed by the casual visitor. Actually, the spring is flooded by little trickles of water. Dry Run may be dry above Radcliff Springs, but downstream for the short distance before the stream flows into Blue River, there is a constant flow of spring water. It feels cold in the summer at about 53°F and warm in the winter at about the same temperature. Radcliff does not lend itself to grand photographs but to close-ups of individual trickles.

Another pretty spring is Craven or Clear Spring which is located in a setting typical of many springs. It bursts forth from the base of a low limestone cliff at the head of a spring alcove. The cliff at the spring gives way along each side of the stream to very steep slopes. The slopes form a box canyon or amphitheater-like valley due to erosion by the mill dam, which is about 10 feet high,

and so is hidden. Although there is no sign of the former mills at Harrison Spring, this most modern of three Beck's mills remains much as it was when it was in operation from 1864 into the 20th century. The huge pipe carrying water to run the mill has now fallen from the aqueduct and spills a torrent of water forming a stream on the north side of the mill. The old overshot waterwheel visible from the road no longer turns to grind grain or to card wool.

George Beck, a Revolutionary War soldier, and his two teenage sons crossed the Ohio River into Indiana in the late fall or early winter of 1807. During that winter while hunting, the boys discovered the present Organ Springs and slightly later a cave spring, now bearing the family name. Their father decided the cave spring area was preferable to Organ Spring as a permanent homesite. George's wife and their younger children arrived in the spring of 1808, and the first grist mill, a log structure measuring 15 by 15 feet, was built during the summer of that year in time for harvest. Soon the only roads in the area, trails would be a better word, converged on the mill, and people rode in from as far as 40 miles away with their grain.

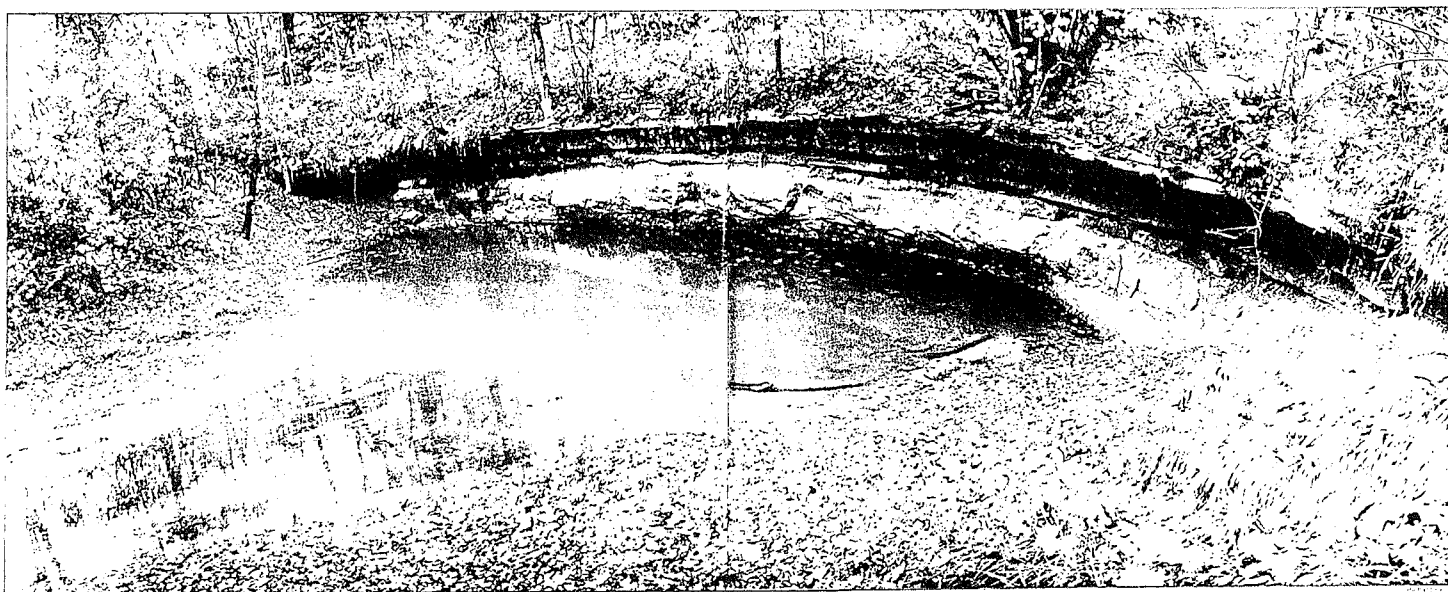
A larger frame structure was built in 1825, and in 1827 a lean-to was built for carding machinery. When the present two-plus-story building was built, the carding machinery went on the second floor. Beck's Mill and the community built around it formed a major county center. During harvest time, the com-

munity hosted a great variety of social events including foot races, shooting matches and many other pioneer games to entertain those who might wait two or three days for their turn to have grain ground to meal.

Beck's Mill, Spring Mill, Harrison Mill, Leonard's Mill, Carter's Mill, Rector's Mill and many others illustrate the important part springs played in pioneer life. Now we have turned to other sources of power. Many once pure springs are now too contaminated to provide drinking water as they earlier did in great abundance. However, Lake Salinda, the spring fed lake that is the primary source of Salem's drinking water, reminds us that great volumes of spring water can still be used if properly purified. Other towns also include springs as part of their water supply. However, the most recent interest in springs centers around their use as recreational and historical sites. Spring Mill State Park and Avoca Fish Hatchery are state-owned examples. Squire Boone Caverns, formerly known as Boone's Mill Cave, with its restored mill, and Porter's Cave exemplify private development. Perhaps Cave River Valley Park could be reopened as might Click's Cave in association with Beck's Mill, and the caves adjacent to Rector's Mill would be another possible site of interest. Combine history and nature in a weekend visit to any of these interesting spots.

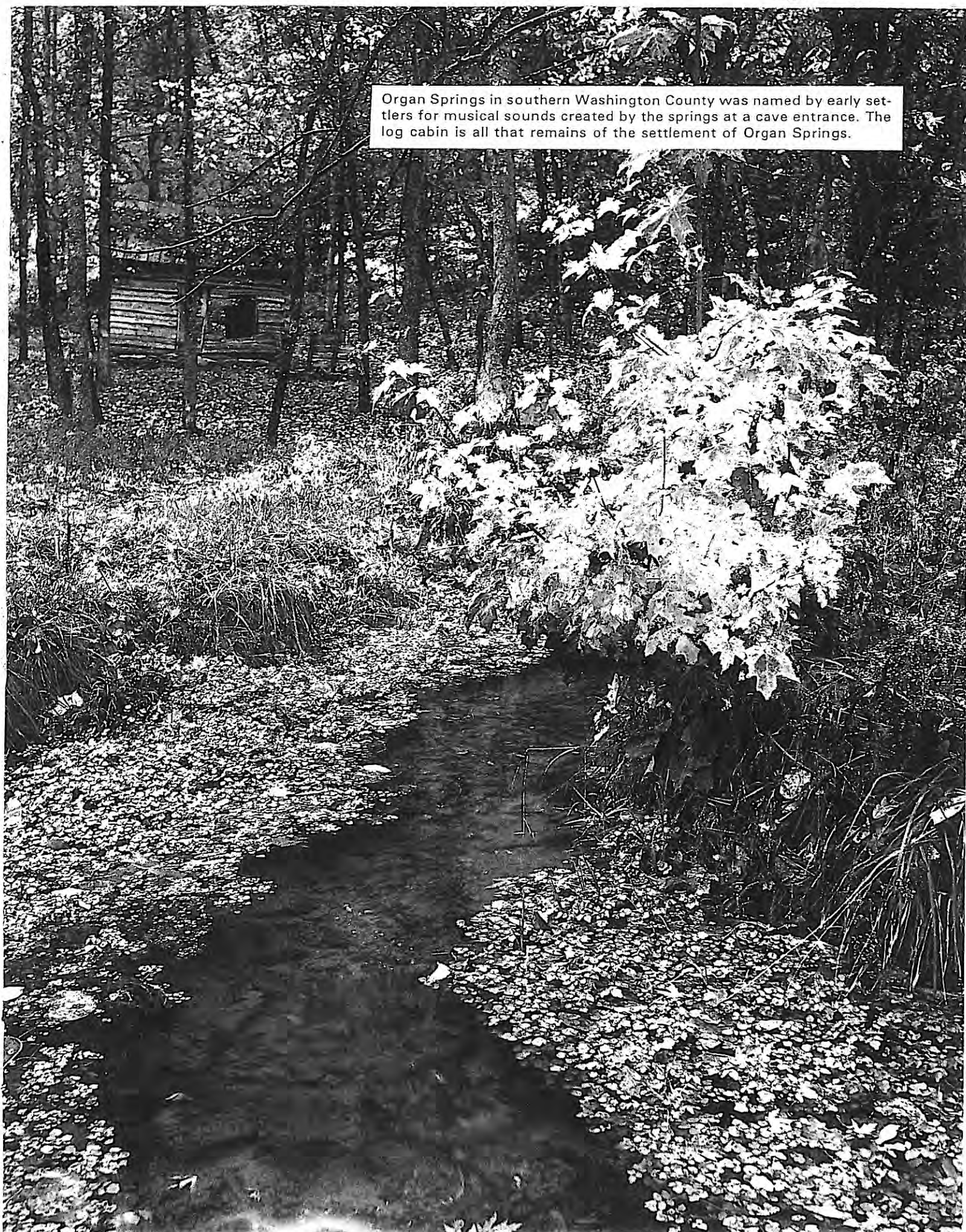
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*Carl Rexroad is a geologist with the Geological Survey Division of the Department of Natural Resources.*



The Orangeville Rise of the Lost River in Orange County is a dedicated state nature preserve. It is believed to be the second largest spring in Indiana.

Organ Springs in southern Washington County was named by early settlers for musical sounds created by the springs at a cave entrance. The log cabin is all that remains of the settlement of Organ Springs.



INDIANA KARST CONSERVANCY, Inc.  
All Funds - Statement of Receipts, Expenditures, and  
Changes in Fund Balance for the Quarter Ending 12/31/88

General Fund

Receipts		
Dues	72.50	
Donations*	413.91	
Interest	<u>18.78</u>	
Total Receipts		505.19
Expenditures		
Update Paper	133.96	
Update Postage	59.80	
Clean-up materials	12.38	
Postage - general	<u>10.80</u>	
Total Expenditures		<u>216.94</u>
Excess to Fund Balance		<u>288.25</u>
Fund Balance, 10/01/88		1632.72
Fund Balance, 12/31/88		<u>1920.97</u>

Buckner Fund

Receipts	- 0 -	
Expenditures	<u>- 0 -</u>	
Excess to Fund Balance		<u>- 0 -</u>
Fund Balance, 10/01/88		259.64
Fund Balance, 12/31/88		<u>259.64</u>

Hancock Property Fund

Receipts		
Donations	500.00	
Total Receipts		500.00
Expenditures	<u>- 0 -</u>	
Excess to Fund Balance		<u>500.00</u>
Fund Balance, 10/01/88		- 0 -
Fund Balance, 12/31/88		<u>500.00</u>

<u>Total Balance - All Funds, 12/31/88</u>	<u>2680.61</u>
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\* Includes \$245 in voided checks received as  
donations from Batwing Gate Project volunteers

INDIANA KARST CONSERVANCY, Inc.  
All Funds - Statement of Receipts, Expenditures, and  
Changes in Fund Balance for the Year Ending 12/31/88

General Fund

Receipts		
Dues	945.25	
Donations	880.16	
Reimbursement - Batwing Prj	693.00	
Interest	76.96	
Total Receipts		2595.37
Expenditures		
Reimbursement - Batwing Prj	693.00	
Grant - IU Geology Foundation	100.00	
Haul bags	47.71	
Clean-up materials	19.36	
Signs - Hancock property	37.43	
Signs	21.90	
HEC dues	20.00	
ACCA dues	15.00	
Update Paper	174.70	
Update Cover paper	10.45	
Update Stencils	67.50	
Update Ink	28.00	
Update Postage	279.52	
Postage & stationary	67.74	
Envelopes	2.39	
Mailing labels	7.29	
Receipt book	1.00	
Postage - bat report	14.98	
Lock box rental	12.00	
State filing fees	10.00	
Keys	3.95	
Phone calls	0.51	
Total Expenditures		1635.99
Excess to Fund Balance		959.38
Fund Balance, 01/01/88		961.59
Fund Balance, 12/31/88		1920.97

Buckner Fund

Receipts		
Donations	60.00	
Total Receipts		60.00
Expenditures		
Lock for donation box	26.95	
Clean - up supplies	25.18	
Kiosk - electrical supplies	15.56	
Signs	12.99	
Total Expenditures		60.68
Excess to Fund Balance		(20.68)
Fund Balance, 01/01/88		280.32
Fund Balance, 12/31/88		259.64

HNF Fund

Total Receipts		- 0 -
Expenditures		
Phone calls	25.73	
Postage	9.27	
Total Expenditures		35.00
Excess to Fund Balance		(35.00)
Fund Balance, 01/01/88		35.00
Fund Balance, 12/31/88		- 0 -

Hancock Property Fund

Receipts		
Donations	500.00	
Total Receipts		500.00
Total Expenditures		- 0 -
Excess to Fund Balance		500.00
Fund Balance, 01/01/88		- 0 -
Fund Balance, 12/31/88		500.00

Total Balance - All Funds, 12/31/88 2680.61

MINUTES IKC QUARTERLY MEETING  
December 10, 1988  
Bloomington, Indiana

## Directors Present:

Keith Dunlap  
Lynn Miller  
Ernie Payne  
Noel Sloan

## Directors Absent:

Kathy Hornaday  
Tom Rea  
Cindy Riley

The meeting was called to order at 7:35 p.m.; four Directors, ten other members, and three visitors were present.

Hoosier Forest Projects Committee - Some field work has been done to check properties identified for potential land exchanges. No significant caves were found.

HNF Land Management Planning Update (newspaper printed by the forest service) 11/88 available for distribution. Paper outlines status of management plan review process.

HEC (Hoosier Environmental Council) postcards expressing support of the "conservationist alternative" to the management plan were available to sign and send to the Forest Service.

Research and Science Committee - Assisting IU grad students in cave sediment studies.

Doghill Donnehue/Pless Caves - IKC intends to pursue resolution of sewage and gas problems in these caves thru administrative and legislative channels - to begin after the first of the year.

Wayne's Cave Clean-up - Sunday, December 11, 1988, 9:00 a.m.

Buckner Cave Project - Clean-up in October was a success. The day's activities included "brown washing" over graffiti. It has been reported that fresh spray paint had been applied to these areas within the week. Even with this type of information it is important to recognize that the clean-up of Buckner Cave will be an ongoing situation. Education and clean-up efforts will continue to be useful.

Hancock Property - Observations are that the new sign is still in good shape; traffic seems to be diminished at the pull off thanks to the cable and sign.

A new (better) cable has been installed at the end of Spicer Lane.

Coon and Grotto Caves are in good shape. Not much evidence of traffic.

Bat Census - Biannual census will be conducted this winter. Virgil Brack has submitted a grant request to the state for funding to survey 10 to 12 caves. All indications are that the grant will be approved soon. Keith Dunlap will be assisting as much as possible. Other volunteer counters are also needed. Contact Keith Dunlap if you are interested.



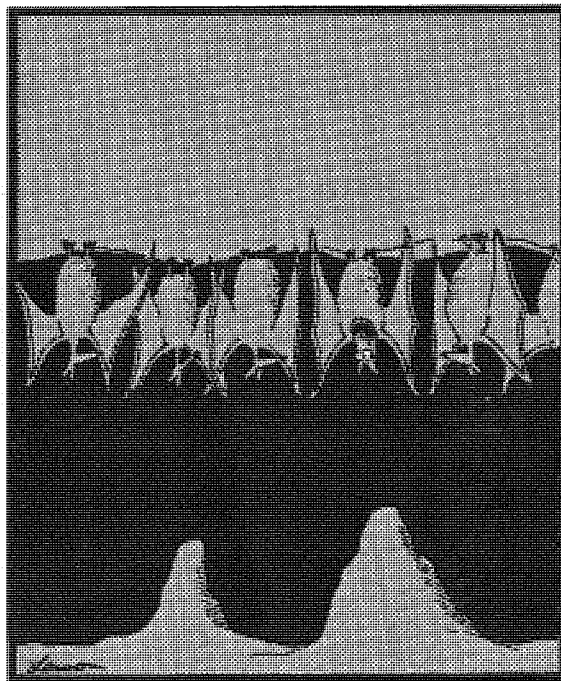
Elections - There will be a Board of Directors Meeting on Friday, January 6, 1989 (at the Miller's) to develop a slate of officers and directors. Three officer and five director positions are available. Current directors should solicit volunteers to serve on the board. IKC members interested in serving should contact Keith Dunlap or any Director. Elections will be held at the annual meeting in March.

IDNR - Scott Johnson reported on projects for which funding has been requested:

- o A study of summer habitat of bats in Indiana. This project will begin in the spring if funding is approved.
- o A winter disturbance project which will attempt to quantify disturbances and over-winter weight loss by netting bats prior to hibernation in the fall and then again in the spring. This project will also be used in developing a range of cave disturbance levels. This project should begin in the fall of 1989.
- o Ray's Cave is a focus of IDNR for protection. They are pursuing lease or easement options to manage the entrance.

Submitted by,

Jane E. Miller  
Acting Secretary



"Aaaaaa! I can see! I can see!  
Aaaaaaaaaaaaaa!"



INDIANA KARST CONSERVANCY  
MINUTES OF THE  
BOARD OF DIRECTORS' MEETING

January 6, 1989  
Indianapolis, Indiana

Directors present:

Keith Dunlap  
Mike Miessen  
Lynn Miller  
Noel Sloan  
Tom Rea  
Kathy Hornaday

Directors absent:

Cindy Riley  
Ernie Payne

Others present:

Angie Manon  
Kevin Strunk  
Glenn Lemasters  
Jane Miller  
Sherri Miessen  
Jeff Cody

The meeting was called to order by Keith Dunlap at 8 p.m.

- 1) The Annual Business meeting was set for March 18, 1989, at 10 a.m. in the War Memorial, Indianapolis. Announcements and ballots for the election of Directors and Officers must be mailed by February 18.
- 2) IDNR will be doing a bat census in non-priority I caves, beginning the end of January. Keith Dunlap will be assisting Virgil Brack.
- 3) Kathy Hornaday reported on the land exchanges being checked by the Hoosier Forests Committee - no new or known caves are involved in the proposed exchanges. There are changes in the Forest Service staff, but relations continue to be good. The committee has not needed to meet, but may do so this spring to plan for 1989 activities.

Kevin Strunk reported on the activities funded through the Research and Science Committee. The two students have received other grant money, and have pretty much completed their work in Trapdoor. Kevin also discussed development of a Bibliography of Indiana speleology, as mentioned in a letter from Dave Black, with various Indiana and neighboring grottos listed. There was some discussion of the structure of DNR and DEM, and the resulting communication problems. Kevin will probably make contact after new commissioners are appointed, especially with regard to the problems in Pless.

Mike Miessen indicated activity at Buckner has dropped off somewhat, with the colder weather. It does appear that more organized cavers are stopping by.

Keith reported on his contacts with Mr. Hancock. The extent of his support was emphasized when Keith opened a letter from Mr. Hancock which included a donation of \$500.00.

- 4) The revised by-laws were accepted unanimously, and will be published in the March *Update*.
  - 5) The slate of officers for 1989 was discussed.

President:	Keith Dunlap
Secretary:	Kathy Hornaday (later retracted)
Treasurer:	Jane Miller
Directors:	Mike Miessen, Lynn Miller
	Noel Sloan, Ernie Payne
	Jeff Cody, Kevin Strunk
	Glenn Lemasters
  - 6) Glenn reported that Joe Oliphant and Rick Cadwell gated Gross Hole near Freeman's Pit, after the landowner threatened to bulldoze it shut. Rick and the landowner have keys. The Directors voted not to take over management of this cave. Joe will write up an article for the Update. Joe and Rick will get letters of appreciation, and honorary membership in the IKC for one year.
  - 7) Noel agreed to undertake development of an educational program (brochure, A/V presentation) to be used for land owner relations and increased public awareness.
  - 8) In conjunction with the above project, Noel agreed to be Chair of the Education Committee. Lynn Miller agreed to be HEC liaison.
  - 9) It was decided to reprint the ISU bibliography, and the Indiana Bat paper, to be offered to members only.
  - 10) Deadline for the Update is February 20. Responsibilities for articles were assigned.
  - 11) There was brief discussion of an article for Outdoor Indiana. No conclusions.
  - 12) Budgets for several committees were established:

Hoosier Forests	\$50
Research & Science	\$50
Buckner	\$money in fund
  - 13) It was suggested that we try putting a "lid" on Shaft cave, without a lock, but with a printed warning/safety message. This will be explored.
- The meeting was adjourned at 10:30 p.m.



**BYLAWS OF THE INDIANA KARST CONSERVANCY, INC.**  
(as amended January 6th, 1989)

**ARTICLE I: NAME**

The name of this organization shall be: Indiana Karst Conservancy, Inc.

**ARTICLE II: PURPOSES**

The purposes of this Conservancy shall be to carry on programs of:

- A) Acquisition, management, and protection of karst features and areas in the State of Indiana and other areas of the world.
- B) Scientific study and conservation education of and about the karst of the State of Indiana and other areas of the world.

**ARTICLE III: MEMBERSHIP**

Members are natural persons who have paid membership dues. Members shall have the right to vote for Officers and Directors, hold office provided they meet all requirements as outlined in Article IV Sub-Section A, be appointed to committees, and chair committees. Members shall have all privileges and benefits of membership which may be established and approved by the Board of Directors. Other individual classes of membership may be established by the Board of Directors with rights and privileges determined by the Board of Directors, provided said classes have the same voting rights as members.

**ARTICLE IV: MANAGEMENT OF THE CONSERVANCY**

- A) The Management of the Conservancy shall consist of a Board of Directors composed of one Director for every ten (10) members, or fraction thereof, provided that there shall be not less than seven (7) nor more than fifteen (15) Directors, including the three principle Officers. All Directors shall be members of the National Speleological Society, or agree to become a member upon being elected.
- B) The Directors shall determine the policies of the Conservancy, set annual membership dues, and authorize acquisition and disposal of properties and leases.
- C) Except for meetings of the Board of Directors specially called for the purpose of amending the Bylaws, notice of which must be given in writing thirty (30) days in advance, meetings of the Directors may be held at any time. Two-thirds of the Directors shall constitute a quorum.

**ARTICLE V: OFFICERS**

- A) The membership shall elect from among themselves the Officers of the corporation, which shall consist of at least a President, a Secretary and a Treasurer. The Officers will serve as members of the Board of Directors.
- B) The Officers shall have the usual powers of Officers in the administration of the affairs of the corporation.
- C) President. The President shall be the Chief Executive Officer. Among his duties shall be the following:
  - 1) The president shall act as the Chief Executive Officer.
  - 2) He shall serve as Chairman of the Board of Directors.
  - 3) He shall represent the corporation and act as the spokesman in public affairs, on the councils of scientific organizations, and in business affairs.
  - 4) He shall coordinate the explorations, scientific research and educational efforts of the corporation.
  - 5) He shall serve as an ex officio member of any special advisory committees that may be established by the Board of Directors.
- D) Secretary. The Secretary shall have among his duties the following:
  - 1) Assisting the President in carrying out his duties.
  - 2) Giving notice of the annual organizational meeting, other public meetings, meetings of the Directors, and other specially called meetings of the corporation.
  - 3) Maintaining the office of the corporation and handling its correspondence.
  - 4) Preparing records and reports required of the corporation.
  - 5) Provide for the keeping of adequate minutes of the annual meetings and meetings of the Board of Directors.
  - 6) Informing Directors of all Board actions.
- E) Treasurer. The Treasurer shall have among his duties the following:
  - 1) Taking charge of the money of the corporation.
  - 2) Keeping adequate books and records showing disbursements and income.
  - 3) Assisting the Secretary in making out reports required of the corporation.
- F) Succession of Officers. In the event of the temporary absence, ill health, or incapacity of the President, the Secretary, and in his temporary absence or incapacity, the Treasurer shall carry out the duties of the President.
- G) Officers shall be elected at the annual meeting of the membership for one year terms. The remaining Directors shall be elected for terms of two (2) years. Exceptions will be one year Director terms for an initial election and occasionally as necessary to provide two approximately equal classes with staggered terms.

**ARTICLE VI: ELECTIONS**

Election of Directors shall be by ballot. The Board of Directors shall select a preliminary slate of Directors and a ballot shall be distributed at least thirty (30) days in advance of the annual organizational meeting. No nominee may be included on the ballot without his or her express acceptance of nomination to

the Board. Members wishing to vote by absentee ballot must return the ballot to the designated Teller prior to the meeting. All members eligible to vote must register (sign in) prior to the start of balloting. Final nominations and election of Directors shall be the first order of business of the annual organizational meeting.

Elected positions shall be determined by the candidate receiving the most votes and will proceed as follows: President, Secretary, Treasurer, Board of Directors. Each office shall be filled individually (one ballot per office). All open positions on the Board of Directors will be filled on a single ballot with those individuals receiving the most votes being seated, up to the number of Board vacancies. Absentee ballots shall be valid for the first vote only.

In the event of a tie the following rules shall apply:

In the election of an Officer, when first place candidates tie, a second vote shall be taken; however, only those candidates who tied on the initial ballot will be eligible to receive votes on the second ballot.

In the election of Directors, a tie within the group receiving the most votes shall be discounted except in the event of the tie occurring for the final position(s) to be filled. A second vote shall be taken with only those candidates who tied on the initial ballot eligible to receive votes for the remaining position(s).

**ABSENTEE BALLOTS:** Absentee ballots (distributed as described above) shall be assigned a numeric identification code at random. The Secretary (or other Director as appointed by the President) shall maintain a confidential record of this code. At the annual organizational meeting the designated Teller will advise the Secretary (or other Director as appointed by the President) of the numbers of the absentee ballots received for inclusion in the voting process. The Secretary (or other Director as appointed by the President) shall then compare the registration (sign in) list with the absentee ballots. Any absentee ballot received from an individual in attendance at the organizational meeting will be disregarded. The Secretary (or other Director as appointed by the President) shall notify the Teller of any ballots to be disallowed by code number. The Teller shall not be made aware of the identity of the member whose ballot is being disallowed, nor will the Secretary have reason to see or learn of the votes cast on the disallowed ballot. This procedure will insure the integrity of the secret ballot process.

#### **ARTICLE VII: OFFICE VACANCIES AND REMOVAL FROM OFFICE**

Should a vacancy occur on the Board of Directors, the remaining Directors shall appoint a member to fill said vacancy. The person so appointed shall serve only until the next annual meeting, but shall be eligible for nomination and election to complete the unexpired term he was appointed to fill.

In the event of a vacancy among the Officers, said vacancy shall be filled by the appointment of the Directors. The person appointed by the Board shall be eligible for nomination and election to that (or another) office at the next annual meeting.

Should an Officer or Director fail to satisfactorily perform his duty, the Board may declare the position vacant by a two-thirds favorable vote.

**ARTICLE VIII: MEETINGS**

The membership shall hold at least once a year an annual meeting, notice of which shall be given in writing at least thirty days (30) in advance at which time it will review matters of policy, finances, and the work of the corporation, and elect a Board of Directors and Officers.

**ARTICLE IX: AMENDMENTS**

Amendments to these Bylaws may be proposed by a member of the Board of Directors or by petition of twenty-five (25) members of the Conservancy or one-fifth of the total membership, whichever is less.

The Bylaws of the corporation may be amended by a two-thirds favorable vote at a meeting called in accordance with Article IV Sub-Section C.

**ARTICLE X: NON PROFIT**

This conservancy shall be a non-profit organization. No part of its earning shall inure to the benefit of or be distributed to its members, officers, or any other private person, except that the Conservancy shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes of this organization as set forth in the Articles of Incorporation granted by the State of Indiana. No substantial part of the activities of the organization shall be to carry on propaganda, or otherwise to attempt to influence legislation and the Conservancy shall not participate in or intervene in (including the publishing of statements) any political statements on behalf of any candidate for public office. Notwithstanding any other provisions of these Bylaws, the Conservancy shall not carry on any other activities that are not permitted:

- A) by a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future Internal Revenue Code), or
- B) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 (or the corresponding provision of any future Internal Revenue Code).

Furthermore, no individuals or participants in a group visiting caves or property owned or managed by the Conservancy may be expected or required to pay any fees or costs in excess of the actual shared trip expenses. Groups requesting permission to visit IKC properties must agree in writing to this policy. Violation of this policy will be sufficient reason for denying any group permission to visit said properties.

**ARTICLE XI: EXCEPTIONS TO THE BYLAWS**

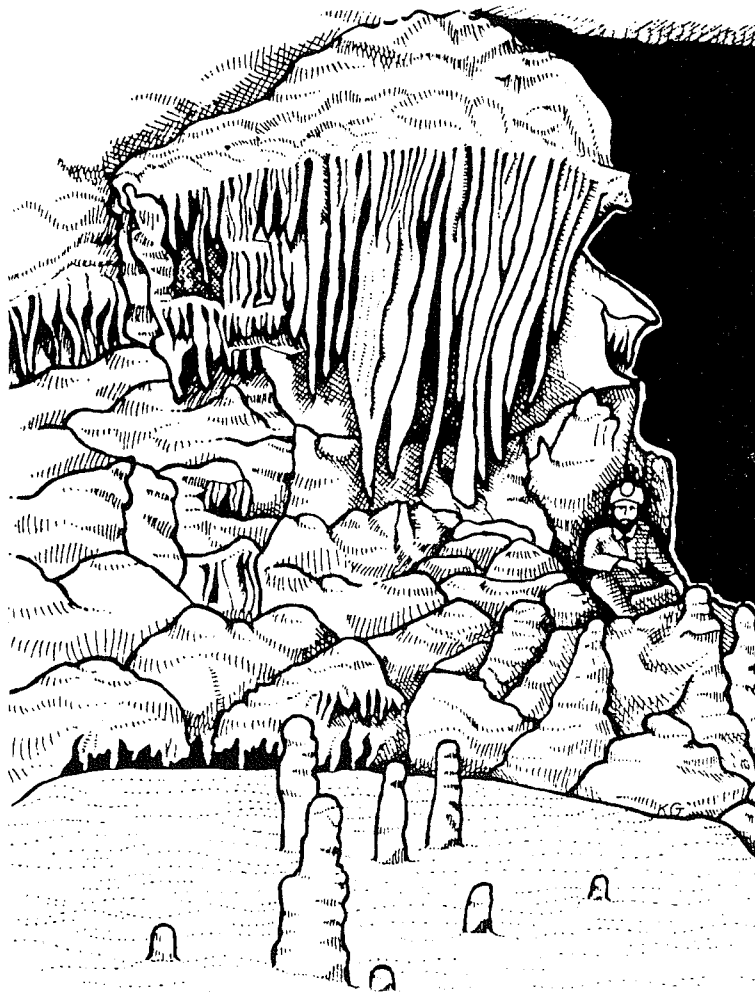
Exceptions removed January 6th, 1989.



**ARTICLE XIII: DISSOLUTION**

It shall be necessary to receive the unanimous vote of the membership or their written proxies attending the annual organizational meeting or a meeting specially called for the purpose, notice of which shall be in writing at least thirty (30) days in advance of such meeting, in order to dissolve the corporation.

Upon dissolution the assets of the Conservancy remaining after payment of just debts or debts ordered paid by law, are to be turned over to the town, city, or county, respectively, where the particular assets are located, provided said unit is willing to accept same and carry on the purposes of this Conservancy for said assets; otherwise to some similar non-profit organization chosen by the court whose intents and purposes encompass those of this Conservancy such as the National Speleological Society or The Nature Conservancy, providing said organization is willing to accept same and carry on the purposes of this Conservancy for said assets; otherwise, said assets are to be turned over to the State of Indiana. It shall be the duty of the President upon dissolution to make arrangements for the transfer of assets. Under all circumstances, the transfer of assets must be consistent with Article IX of the Articles of Incorporation.



MEMBERSHIP LIST  
(as of February 25, 1989)

John Ahlberg  
19054 Sherman Street  
Lansing, IL 60438

Tom Ahlers  
712 S. 10th Street  
Lafayette, IN 47905

Michael B. Alexander  
503 W. Main Street  
Greensburg, IN 47240

Jay Arnold  
10129 Sassafrass Woods Court  
Burke, VA 22015

Marty Atherton  
1405 East Hoefgen Street  
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Bill Baus  
1210 W. 8th Street  
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David Black  
P.O. Box 2262  
Clarksville, IN 47131

Virgil Brack, Jr., PhD.  
c/o WAPORA  
5700 Hillside Avenue  
Cincinnati, OH 45233

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1 North Lane  
Richmond, IN 47374

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Paul Cannaley  
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Indianapolis, IN 46239

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Crawfordsville, IN 47933

Rane Curl  
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Ann Arbor, MI 48104

Lance Danner  
6730 CR 45  
Spencerville, IN 46788

L/cpl David M. Doolin 306760666  
A co. 2d Recon Bn FMF  
Camp Lejuene, NC 28542

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Indianapolis, IN 46227

Greg Gantt  
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Indianapolis, IN 46220

Christine Marie Gerace  
69 H Street N. W.  
Linton, IN 47441

Continued...

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Indianapolis, IN 46206

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Chicago, IL 60643

Vance R. Hodges  
503 N. Ann Street  
Lebanon, IN 46052

Kathy Hornaday  
816 Blue Oak Lane  
Indianapolis, IN 46227

Tem Hornaday  
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Sharon, WI 53585

Brian Leavell  
1627 South M Street  
Elwood, IN 46036

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3947 Cherry Glen Dr.  
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Angie Manon  
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William Maul  
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Mike Miessen  
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Tim Mikesell  
1925 E. Taylor  
Bloomington, IL 61701

Jane Miller  
4020 South Rural Street  
Indianapolis, IN 46227

Lynn Miller  
4020 South Rural Street  
Indianapolis, IN 46227

Lawrence H. Mullins, Jr.  
P. O. Box 12  
Brownstown, IN 47220

George R. Mundy, Jr.  
837 S. 13th Street  
Vincennes, IN 47591

Nicholas W. Noe  
507 Valley Dr. East  
Chittenango, NY 13037

Norm Pace  
1009 S. High Street  
Bloomington, IN 47401

Barb Patrie  
119 Hampton Court  
Charlevoix, MI 49720

Ernest B. Payne, Jr.  
1025 Thompson Avenue  
Evansville, IN 47715

Donald L. Peters  
508 Jefferson Avenue  
LaPorte, IN 46350

Kevin Rasmus  
203 S. State Street  
Bloomington, IL 61701

Tom Rea  
32 Ginseng Trail  
Danville, IN 46122

Steve Reesman  
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Ft. Wayne, IN 46825

Cindy Riley  
650 Alton  
Indianapolis, IN 46222

Rusty Riley  
2023 N. Moreland  
Indianapolis, IN 46222

Norm Rogers  
4324 West Rockwell Drive  
Peoria, IL 61615

Jeff A. Secor  
162 N. Windemere Circle  
Matteson, IL 60443-2159

Robert Sergesketter  
1090 Hopf Avenue  
Jasper, IN 47546

Tina Shirk  
1030 Cameron Street  
Indianapolis, IN 46203

Noel Sloan  
8715 Garden Rock Court  
Indianapolis, IN 46256

Marijean Stephenson  
3415 Stone Road  
Marion, IN 46953

Kevin Strunk  
6160 Carvel Avenue, Apt. C  
Indianapolis, IN 46220

Susan K. Sweeney  
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Indianapolis, IN 46226

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Pendleton, IN 46064

John George Vargo, Jr.  
21212 Locust Street  
Matteson, IL 60443

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R.R. 2, Lake Road  
Princeton, IN 47670

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P. O. Box 194  
Franklin, IN 46131

A. Keith Wesley  
5527 Crestview  
Indianapolis, IN 46220

Bill Wilson  
3543 Norwich Court  
Casselberry, FL 32707

Diane Wilson  
3543 Norwich Court  
Casselberry, FL 32707

Jim Wolford  
5839 North Oakland Avenue  
Indianapolis, IN 46220

Barry Woolsey  
1002 Pheasant Ridge  
Lake Zurich, IL 60047



#### ORGANIZATIONAL MEMBERS

Adventure Club of THSVHS  
c/o Paul Mason  
3737 S. 7th  
Terre Haute, IN 47802

Andrews Univ Area Grotto  
610 North Main Street  
Berrien Springs, MI 49103

Boy Scout Troop 101  
33 W. Dixon  
Dayton, OH 45419

Great Lakes Adventure Club  
c/o 605 Schuring, Apt. D  
Portage, MI 49002

Mid-Hoosier Grotto  
P. O. Box 194  
Franklin, IN 46131

Outings Club of Chicago  
c/o Herb Telfors  
6041 North Marmora  
Chicago, IL 60646

## EXCHANGES and COMPLEMENTARY MAILING LIST

The American Cave Cons. Ass'n  
P.O. Box 409  
Horse Cave, KY 42749

Bloomington Indiana Grotto  
c/o R. Blenz  
Swain Hall W, Physics Dept  
Bloomington, IN 47401

Central Indiana Grotto  
PO Box 153  
Indianapolis, IN 46206

Detroit Urban Grotto  
c/o Daniel Crowl  
1170 Torrey Road  
Grosse Pointe, MI 48236-2339

Eastern Indiana Grotto  
c/o Jerry Litaker  
1009 North 18th Street  
Elwood, IN 46036

Evansville Metro Grotto  
1025 Thompson Ave  
Evansville, IN 47715

Fort Knox Grotto  
c/o Steve Gray  
263 Forest Trace  
Radcliff, KY 40160

Greater Cincinnati Grotto  
5328 Fox Road  
Cincinnati, OH 45239

Harrison-Crawford Grotto  
c/o Joseph A. Keithley  
P. O. Box 275  
Palmyra, IN 47164

Louisville Grotto  
3410 Eastside Drive  
Louisville, KY 40220

Michigan Interlakes Grotto  
Box 218  
Union Lake, MI 48089

Michigan Karst Conservancy  
2805 Gladstone Avenue  
Ann Arbor, MI 48104

Northern Indiana Grotto  
PO Box 913  
Auburn, IN 46706

Wittenburg Univ. Speleo. Society  
c/o HH Hobbs, Wittenburg Univ  
P.O. Box 720"  
Springfield, OH 45501

Cave Conservationist  
c/o Jay Jorden, Editor  
1518 Devon Circle  
Dallas, TX 75217

CIG Library  
17 Chester Drive  
Beech Grove, IN 46107

Fish & Wildlife Service  
Federal Building, Fort Snelling  
Attn. Ron Rensnider, AE/OES  
Twin Cities, MN 55111

Ray Hardcastle  
8931 Triple Ridge Road  
Fairfax Station, VA 22039

Scott Johnson  
Dept. of Nat. Resources  
300 W. 1st Street  
Bloomington, IN 47401

Ron Morton  
5648 Heatherhill Drive  
Richmond, VA 23234

NSS Library  
Cave Avenue  
Huntsville, AL 35810

Janet Thorne  
473 Crescent Blvd Extension  
Coraopolis, PA 15108

John Tichenor  
PO Box 8234  
Richmond, VA 23226

Lester L. Zimmer  
c/o TNC, Eastern Regional Office  
294 Washington, Room 740  
Boston, MA 02108

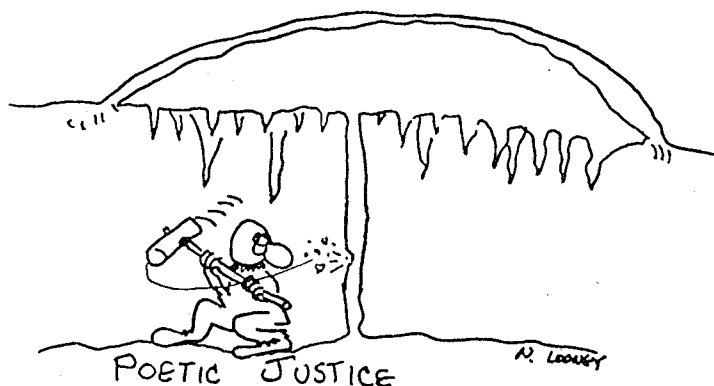
Joe Oliphant  
233 Krewson, Apt 1  
Plainfield, IN 46168

Rick Cadwell  
2267 Black Rock Road  
Plainfield, IN 46168

## MEMBERSHIP RENEWAL REMINDER

This is a reminder to most our members that their memberships expire this month. We hope that you will remain members and support the IKC. Further, we hope you feel our cause is worthwhile and our approach is generally in the right direction.

Annual dues remain at \$15 and may be mailed to our PO box, attentioned to the Treasurer, or they may be paid in person at the annual meeting.



INDIANA KARST CONSERVANCY, INC: PO Box 461, Plainfield, IN 46168

I would like to help the IKC conserve Indiana's unique cave and other karst features.

Enclosed is:

\$\_\_\_\_\_ for IKC membership at \$15 per year ( dues expire March 31st each year, you may pro-rate @ \$1.25/month, if you wish ).

\$\_\_\_\_\_ donation to the general IKC fund.

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

\_\_\_\_\_ I know an area worthy of protection. Please contact me.

\_\_\_\_\_ I would like to volunteer to help.

Name \_\_\_\_\_

Address \_\_\_\_\_

City/state/zip \_\_\_\_\_

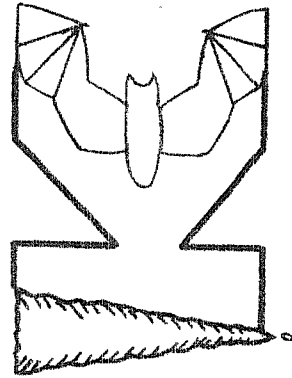
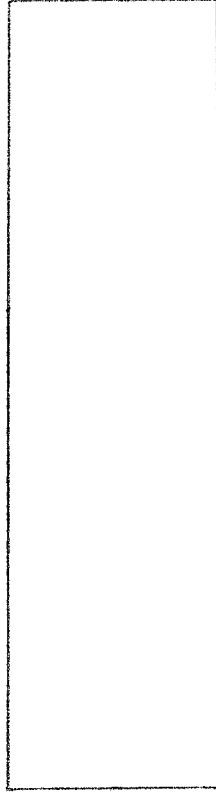
Make checks payable to the INDIANA KARST CONSERVANCY and mail to the IKC TREASURER, PO Box 461, Plainfield, IN 46168. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations tax deductible. A cancelled check is considered an acceptable receipt, but if you wish a separate receipt, check here ☐

Suggestions for other interested persons (names and addresses please):

\_\_\_\_\_



**Indiana Karst Conservancy**  
**PO Box 461**  
**Plainfield, IN 46168**



**PROTECTING CAVES THROUGH ACTIVE CONSERVATION**