

A photograph of a cave interior, likely a karst system, featuring a prominent stalactite formation in the center. The cave walls are covered in various types of rock formations, including stalactites and stalagmites. The lighting is warm and focused on the central formation, creating a dramatic effect. The overall scene is dark and atmospheric.

No. 14 - September 1989

TKC 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.

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- Research & Science/ Kevin Strunk (317) 257-3323
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- 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
- Eastern Indiana Grotto/ Brain Leavell (317) 552-7619
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Cover photo by Stephen Krasemann, courtesy *The Nature Conservancy Magazine* - July/August 1989.

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

**** QUARTERLY MEETING REMINDER ****

SATURDAY, SEPTEMBER 23th, 2:00 PM

INDIANAPOLIS, INDIANA

INDIANA WAR MEMORIAL

MacArthur Hall

The quarterly meetings are for members and other interested persons to have an open forum for discussing past, present, and future IKC projects, a place to voice opinions and make suggestions, and in general, a way to let the Directors know what are the concerns of the caving community. The meetings are informal, and everyone is encouraged to attend and participate.

AGENDA: Update on HNF Committee progress with HNF management plan, discussion/status of various projects under the Science and Research Committee, discussion of cave renovation activities, update on bat projects with IDNR, discussion of event calender items.

EVENTS CALENDAR

- 23 SEP = IKC QUARTERLY MEETING, Indianapolis, 2:00 PM (see above).
- 23-24 SEP = KARST ENCOUNTERS, Milltown. Contact Don Shofstall.
- 23-24 SEP = SPRING MILL SURVEY WEEKEND. Contact Steve Collins.
- 07 OCT = HOOSIER NATIONAL FOREST FESTIVAL, Bloomington (see page 3).
- 18 NOV = HEC CONGRESS, Nashville (see page 9).
- 19 NOV = HEC ANNUAL BUSINESS MEETING, Nashville.
- ?? DEC = IKC QUARTERLY MEETING, Bloomington (tentative).
- 10 DEC = IKC/CIG WAYNE'S CLEANUP TRIP (see page 6).

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.

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RAMBLINGS FROM THE PRESIDENT...

My expectations of the IKC's goals and accomplishments fluctuate considerably. I often feel that we are sometimes too narrowly defined, working on the effects rather than the causes, and our projects serve only a few caves and landowners. Other times I feel that we diversify too much, becoming involved in long term projects with no conceivable end, or losing focus on our emphasis of hard-core cave conservation by diluting our small membership and funds on non-essential side projects. I guess as long as we can see both extremes equally well, the IKC must be functioning somewhere in the middle. And I guess that as long as we have members willing to support both ends of this spectrum, I should not try to steer the organization away from either pole, nor discourage anyone else from gravitating to their desired avocation.

To reexamine my quandary from another perspective, I wonder if, as your president, I should be taking a stronger leadership role, formulating specific goals and focusing only on them, conceding that if we try to do everything, we will not accomplish anything very well. This belief, will undoubtedly disinterest some, disappoint others, and depress the remainder if the goals are improperly selected. Or should I approach my position more philosophically, encouraging and maximizing as many projects as there are willing volunteers to organize them, accomplishing perhaps a hodgepodge of results, but recognizing that any action in the right direction is better than no action. And hopefully everyone is having fun participating.

I'm not sure if even I know what we should be doing. I am asking the membership to give me feedback on the way the IKC has been run, and more importantly how it should be run in the future. Are there things that we are doing that you think are unnecessary, and are we neglecting to do things that you think we should pursue?

- Keith Dunlap

HOOSIER ENVIRONMENTAL COUNCIL ANNOUNCES A
FESTIVAL TO SAVE THE HOOSIER NATIONAL FOREST

DATE: SATURDAY, OCTOBER 7, 1989

PLACE: DUNN MEADOW (7th Street & Indiana Avenue)
INDIANA UNIVERSITY, BLOOMINGTON, INDIANA

TIME: 12:00 P.M. TO 7:00 P.M.

The focus of the festival is to gain publicity for the forest issue. The objective of the day is to send letters to the Forest Service supportive of the Conservationist Alternative to the Forest Management Plan. The HEC has targeted a goal of 1,000 letters.

The day will also be one of fun. Local and regional bands will be performing. Other entertainment is planned. Food vendors will be on hand, or participants may bring a picnic lunch, blankets, lawn chairs, etc.

The HEC is looking for volunteers to assist in the planning and coordinating of this event. If you would like to help, call the HEC at (317) 923-1800.

NEW BRIEFS...

- Steve Collins reports that surveying and mapping of the caves in Spring Mill State Park is progressing very nicely, although slowed somewhat by the considerable rain we have had this year. The Shawnee System continues to grow, especially Upper Twin, as previously unmapped side leads are rediscovered. Whistling Cave is simultaneously being surveyed with the footage currently surpassing 5000 feet. Trips are being scheduled one weekend per month. Contact Steve Collins if you would like to participate in this project.
- The Southwest highway corridor linking Indianapolis to Evansville has been found too expensive to be financially feasible, according to the consulting firm conducting the economic analysis for the proposed project. As you may recall, the IKC expressed its concern with this project due to the fact that several of the proposed routes would have ripped across prime karst regions, adversely affecting known and unknown caves and disrupting sub-surface drainage. While the consultant's overall conclusion should essentially kill the full project, specific segments of the proposed highway plan (mostly upgrading existing roads) were found to be cost effective and recommendations were made to pursue these avenues. The IKC will continue to monitor this project as it develops.
- In the August issue of *FOCUS*, the IDNR's Division of Fish and Wildlife monthly publication, a brief summary of last winter's bat census was given (see page 15 for a detailed report of results). The article also credited cavers for information that lead to two previously unreported hibernacula.
- The IDNR, with funding from the USFWS, is initiating an Indiana Bat Winter Disturbance Project. This two year study, starting this fall, will focus on quantifying overwinter weight loss and correlating the results to different levels of disturbance at three caves (Batwing Cave - no disturbance; Ray's Cave - occasional disturbance; Wyandotte Cave - daily disturbance). Several IKC members have volunteered to assist with the field work.
- The Nongame and Endangered Wildlife Program (NEWP) has been elevated to greater status under the Fish & Wildlife Division with its transfer from the Wildlife Section to the newly-created Planning, Environmental, and Nongame Section. The NEWP now has a Nongame supervisor and is in the process of adding additional staff. Personnel include supervisor Catherine Gremillion-Smith; mammal specialist Scott Johnson; bird specialist John Castrale (replacing Chris Iverson); herps, fish, and invertebrates specialist (vacant); Project WILD coordinator Warren Gartner; Information Specialist Deb Fairhurst; and Nongame planner (vacant).
- The Hoosier National Forest's August newsletter contains comparisons of all the various alternative management proposals for the forest. It is highly recommended that you obtain a copy of this tabloid and study the alternatives (copies will be available at the IKC meeting; and you may have your name added to their mailing list by dropping them a post card to HNF, 811 Constitution Ave, Bedford, IN 47421) . Furthermore, it is very important that you express you opinions in writing to Frank Voytas, Forest Supervisor. Selection of a draft plan is expected this fall.

continued....

- At the IKC Board of Directors meeting held at Cave Capers, Jeff Cody was appointed to the Board. Jeff has been active with the IKC almost from the beginning. He is a member of the Mid-Hoosier Grotto and serves as the liaison between the MHG and the IKC. Jeff is filling the position vacated by Kathy Welling, who moved to Ohio. The Board would like to congratulate Jeff on his appointment and express its sincere appreciation to Kathy for her contributions over the last several years.
- Also, as a result of Kathy Welling's move, the Hoosier Forest Committee, which Kathy chaired, has selected new officers to lead that group's responsibilities pertaining to caves on public lands. The new officers are Kevin Komisarck (BIG), chair; Tom Rea (IKC), vice-chair; and Jack Countryman (ICS) secretary.
- The Eastern Indiana Grotto, a new NSS grotto located in Elwood has become the latest grotto to establish an official relationship with the IKC. Brian Leavell will serve as the EIG's liaison with the IKC. Members of the EIG have been active on several IKC cleanups and projects.
- The Central Indiana Grotto's September Grotto trip was to Vowell Cave (Deboris Co) for a clean-up. Fifteen cavers participated, eliminating graffiti and removing trash. The cave was reportedly left in good shape.
- At the June IKC meeting, the Board voted to donate \$100 to the Hoosier Environmental Council, and subsequently collected another \$25 from members present. Along with the money, a letter was sent to the HEC to express our appreciation for the work that they have accomplished and continue to pursue. The IKC strongly encourages everyone to become a member of the HEC (regular membership is \$15; send to HEC, 3620 North Meridian, Indianapolis, IN 46208; or call 317-923-1800 for more details).
- At the NSS convention, the Wittenburg University Speleological Society headed by Dr. Horton Hobbs, III received the 1989 Conservation Award for their continuous dedication to conservation and for their efforts in getting a Cave Protection law passed in Ohio.
- Also at the Convention, the IKC received two awards in the Graphics Arts Salon for newsletter covers. *Update #8* (photo by Angie Manon) was awarded an Honorable Mention ribbon, while *Update #10* (photo by Glenn Lemasters) received a Merit Award ribbon. Anyone with a high contrast photo (slide or print) or other artwork suitable for a cover is encouraged to contact the editor.
- Other news from the Convention worth noting, the BOG selected Salem, Indiana as the site for the 1992 NSS Convention. This effort, headed by Scott Fee, will bring 1500 to 2000 cavers to the area. It is uncertain to what extent the IKC will become involved, but it is envisioned that we may try to sponsor some cleanup trips over the next three years to some of the "featured" caves. We should also be actively involved in formulating methods to minimize the impact that this number of cavers can have on our caves and landowners.
- The American Cave Conservation Association (ACCA) seems to be getting some of their problems sorted out. They have received several grants and plan to build a karst education center/museum in Horse Cave, KY, overlooking Horse Cave sink. The ACCA also has undertaken the monumental task of educating communities and individual landowners on groundwater

pollution pertaining to karst areas (a serious problem in central Kentucky). Also, the ACCA, after a several year hiatus, resumed publishing their high quality newsletter, *American Caves*. In their Summer 1989 issue, an article written by Kevin Struck (reprinted from *Update #12*) about the gasoline problems at Pless Cave was included with other similar articles to illustrate the growing pollution problems facing karst areas.

- The IKC received a letter in July from the Organization of American Historians requesting help on a bat problem they were having in one of their historic homes in Bloomington. Since we are not in the "bat business" unless it relates to caves, we promptly turned the matter over to John Whitaker (ISU) and Scott Johnson (IDNR). The interesting thing to note here is the individual that contacted us did so because she had seen the Coon Cave bat hibernacula sign on the Hancock Property.
- The IKC and its scheduled activities are getting a lot of publicity at various meetings and in various publications. Our thanks to the Bloomington Indiana Grotto, the Central Indiana Grotto, the Eastern Indiana Grotto, the Evansville Metropolitan Grotto, the Mid-Hoosier Grotto, the Northern Indiana Grotto, the Great Lakes Adventure Club, the Indiana Cave Survey, and others for your continued support.
- The IKC would like to welcome new members Jerry Brickley, Chris Carpenter, and Don Shofstall.

* WAYNE'S CAVE *

IKC CLEANUP & CIG GROTTTO TRIP

Sunday, December 10th

Once again the Indiana Karst Conservancy and Central Indiana Grotto are sponsoring the annual cleanup/grotto trip into Wayne's Cave. If you have never been in Wayne's, or haven't been for several years, this is a golden opportunity to visit or revisit one of Indiana's classics. Wayne's is a caver's cave with a diversity of obstacles including its infamous 1300 foot crawlway. Due to the nature of Wayne's, it is advisable to not attend this trip if you are new to caving, unless you would like to concentrate your clean-up efforts in the Old Wayne's section of the cave (which is still in need of some attention).

The number of participants on this trip may be limited, with those volunteering to perform clean-up work having first priority. For more information and details, contact Keith Dunlap (see page 1 for phone numbers).

RESEARCH AND SCIENCE COMMITTEE REPORT

Kevin Strunk, Chair

Editor's note: In addition to Kevin's IKC activities, he has been extremely busy on a couple of real (read that \$\$\$) consulting jobs. In lieu of his usual report on a floppy disk media received via the mail, Kevin electronically transmitted details for his report to me in the form of a ten minute message on my answering machine. I have tried to combined his verbal geologic descriptions with my amateur observations noted on a recent visit with him to the Muncie caves.

Over the last several months, the Research and Science Committee has been working to arrange for a research project to be conducted at the Irving Brothers' Quarry Caves near Muncie, Indiana (Delaware County). These caves are not only unusual because of their geographical location, but are truly unique in several geological aspects. This largest cave is approximately 500 feet long, primarily a single passage, five to fifteen feet wide, and mostly walking. The Pleasant Mills limestone walls have very distinctive layering that can be followed the full length of the cave as it vertically dips and rises. The rear third of the cave is often very wet, and it is suspected that the water drains directly into the quarry. The cave walls are very fossiliferous and there are many interesting secondary mineralogical examples in the cave that need identification.

The presence of karst features (fissure, mud filled cracks, and small voids) in the general area, and specifically in this quarry have been known for about 15 years, but the main cave in the north wall of the quarry was not discovered by organized cavers until October 1987. The cave runs parallel to the quarry wall and probably would have been mined away had it not been for the owners' concern that further blasting in the vicinity might flood the quarry because the end of the cave is very near one of his ponds.

It is very important that this cave be thoroughly investigated and documented, as it will more than likely be destroyed within the next five to ten years. The owners have seriously considered drilling a large hole to intersect the rear of the cave and then dump excess concrete from their concrete business down the hole to stabilize and plug the cave. This would allow them to return to the north quarry wall for additional stone removal. Kevin and I had a meeting with Bob Irving to convey our thoughts and concerns. Mr. Irving said he could appreciate our interest, but that long term preservation of the cave was not consistent with the quarry's plans. He was, however, agreeable to providing access to the cave for what ever legitimate research we might want to conduct.

Since the amount of effort needed to perform the research this cave deserves is beyond the scope of the IKC, we felt it was best to explore the possibility of getting a university interested in the project. Thus, Kevin contacted Dr. Hall from IUPUI's geology department. After some preliminary discussions, Dr. Hall put Kevin in touch with Bruce Bultman, a geology student who was looking for a master thesis topic. Bruce has had some experience with karst related research and seems very interested. He and Kevin visited the cave on September 9th, and he is in the process of writing up a thesis proposal. He plans to submit a request for funding from the Academy of Sciences, the NSS, and more than likely the IKC.

There is more work to be done than can be covered in a single thesis, but this is a very good start. Bruce will probably need field assistants and we expect that he will be able to rely on IKC volunteers, especially those that live near Muncie and in the Ft. Wayne area.

continued...

On a related matter, the Buckner/Trapdoor cave sediment study (partially funded and assisted by IKC members) being conducted by IUPUI students Sally Letsinger and Marta Corbin is in the final stages of being completed. A draft of the research paper has been submitted for review, and the final report is expected in several months.

HOOSIER FORESTS PROJECT COMMITTEE UPDATE

Kevin Komisarck, Chairperson

The Hoosier National Forest (HNF) has written a draft proposal for standards and guidelines in managing caves on Forest property which will be included in the Forest Service Plan. This means that the caves will be managed according to these guidelines until a new Plan is written (usually every twenty years or so). Also, it may very well turn out that these guidelines will be used in other plans for other parts of the country. Therefore, we are extremely lucky to have input in the planning stage of these regulations.

If management is necessary, (the HNF says it is) then the draft proposal is what the caving community would like to see. In terms of surface management of karst areas, the plan uses our generalized prescriptions almost word for word.

- 1) No cutting within 200 feet of an entrance.
- 2) No cutting within 200 feet of water inputs to a cave (sinkholes or swallowholes).
- 3) No clearcutting within 250 feet of a bat cave.
- 4) Caves with significant bat populations should have a forested corridor between the cave and foraging areas.
- 5) Forested riparian habitat will have no cutting within 75 - 100 feet of either side of perennial streams.

The proposal states that caving will not be promoted to the general public. Information concerning caves (location, features, etc.) will be kept confidential. Information that is given to HNF by cavers will be used to determine the best method of managing a particular cave and the surface above it. Such management measures may include a permit system for fragile caves or even gating. However, gating will be the method of last resort.

All caves will be considered significant until proven otherwise. The definition of significant will be discussed at a meeting of this committee and HNF administrators on Sept. 9th. The significance of significant is that these caves must be protected from damage and disclosure of the cave's location is protected under the Federal Cave Resources Protection Act. This all means that surface use of karst areas will be limited. These uses include cutting, road construction, oil and gas exploration, blasting or applying pesticides.

Finally, the plan also encourages the HNF to include the caving community in the development of specific management standards. This means that we will be giving input to the HNF while standards are being drawn up and not just giving replying to a proposal during a public comment period.

1989 HOOSIER ENVIRONMENTAL COUNCIL CONGRESS & ANNUAL MEETING

(adapted for an article by Mary Wadel Drippe)

The Hoosier Environmental Council will be holding its Seventh Annual Congress and Business Meeting at the Seasons Lodge and Conference Center in Nashville, Indiana on Saturday and Sunday, November 18th and 19th.

This year's Congress is hoping to draw all our member group together, in their chosen areas, to examine environmentally sound economic development and chart the course of action to make sustainable environmental economics one of the most basic underpinnings of the state legislature.

This sounds like a big task, and it is. Every one of our member groups has been fighting in at least one area of concern for some time. The Congress committee and the staff are hoping to consolidate our efforts and increase our collective impact in Indiana. We need to pull our environmental communities together to consider and make real recommendations on how to approach traditional economic problems such as housing, food, transportation, livelihood, recreation, construction and industry (all of the basic, everyday activities that contribute so much to the global environmental crisis). We also need to stand together to ensure that these changes actually come about. It requires patience, planning and persistence.

The Congress is calling on everyone to participate this year by having working panels that will be asked to come together and start hammering out "working documents" for each of several interest areas: Water Quality; Public Lands; Air Quality; Solid Waste/Citizens' Rights; and Sustainable Agriculture. These working documents may contain several pieces of legislation (or resolutions) that will be proposed to our state lawmakers to start the fundamental re-building of our economic "vision." Persons interested in participating on one of these panels should contact the HEC Office, attention Mary Wadel Drippe. Members should also contact their legislators before the Congress and invite them to attend!



In addition, Jim Hightower, the Commissioner of the Texas Department of Agriculture and Dennis Hayes, CEO of Earth Day 1990, have indicated their interest in addressing the Congress. Both men are well-known in environmental circles for their direction-setting positions concerning the environment.

We will be having our member groups' booths and the Post Office during the course of the day to help our Council membership support one another. We are also planning to have some evening activities, including recognition awards (presented by our member groups to their distinguished members) and a square dance.

With regard to lodging, the Seasons Lodge rates are \$58 for a single, \$68 for a double room. Member groups are encouraged to plan ahead to take advantage of these savings. Registration for lodging should be done through the HEC Office.

There is going to be a lot to look forward to and to prepare for this year! Make plans now, and put the Congress on your activist calendar. You won't want to miss it!

LOST RIVER BRIDGE REPORT
by Lynn Miller

On July 25 a letter was written to the IKC by James A. Barker, Project Engineer for AECON Inc., a Nashville, Indiana firm planning to replace a bridge over Lost River on Orange County road 610 North. Mr. Robert K. Ballantyne of the U.S. Forest Service had suggested that AECON contact the IKC for an environmental impact assessment on the proposed construction's effect on the Lost River and associated karst features of the area. They asked for our input by September 1 and since there was no one handy to pass the buck to, I drove down to check it out.

The first thing I noticed at the bridge site was that it definitely did need replaced! It is a very old two span steel and concrete structure spanning a normally dry river bed. What little water that does find it's way across the surface is trapped behind a dirt and rock dike that forms a shallow pond. This pond contains an assortment of ducks and hogs that probably are more harmful to the Lost River drainage than the bridge construction could be. An exploratory trip under the bridge revealed more hogs, lots of chiggers (not really discovered until the next day) and little else. There were no obvious karst features in the immediate area.

A letter was sent to Mr. Barker expressing our opinions of the proposed bridge replacement (see below).

I think the significant thing to note here is that we are finally being recognized as an authority on caves and related karst features in Indiana. I also believe this reflects directly on the fine efforts put forth by the working group in their continuing efforts to work with the Forest Service.

August 14, 1989

James A. Barker, P.E.
AECON, Inc.
P.O. Box 367, Salt Creek Park
Nashville, IN 47448

Dear Mr. Barker,

This letter is in response to your July 25 letter asking for an environmental impact assessment on your proposed construction plans for the replacement of the Orange County bridge on County Road 610 over Lost River. First of all, our organization would like to express our gratitude to you for being asked to express an opinion. We feel that we are the most qualified source of information in Indiana regarding "what is underground", and how above ground actions could affect it.

In our assessment of the bridge construction site, we have determined that there will be no detrimental effect on the Lost River and associated karst features if construction is carried out as per the proposal you have sent to us. We would caution you however, to use care to be sure that no petroleum products (i.e. gasoline, diesel fuel, oil or asphalt) are discarded into the drainage area of the Lost River. This could be very toxic to the the delicate ecosystem of the Lost River drainage system. At least one federally endangered species, (the Northern Blind Fish) lives in this system. We will rely on your personal and professional integrity to help us to insure that our groundwater, and the life that lives in it, is protected.

Sincerely,

Jane E. Miller
Secretary
Indiana Karst Conservancy

COON and GROTTO CAVES CLEANUPS

by Keith Dunlap

The IKC sponsored the fourth annual "end of the summer" cleanup weekend in Coon and Grotto caves on August 26th and 27th. Like the previous years, the cleanup was held on the last weekend before the cave's voluntary closure for hibernating bats. Also like the previous years, we had a very respectable turn out with twenty cavers in Coon on Saturday, and nineteen participants at Grotto on Sunday.

Activities in Coon included the removal of trash in some of the lesser traveled lower levels, graffiti removal by wire brushing (also in the lesser traveled areas), and considerable brown-washing (painting over graffiti with a mud slurry) in the main passages, primarily in the front half of the cave. Substantial effort was also exerted in removing additional "speleo-logs" from the entrance pit, first by sawing them into manageable pieces (or almost so), then hauling them up the pit with a ten person "mule team" and pulley system (see photo). Coon's participants and major affiliation included Bruce Barnes (IKC from Michigan), Russ Cripe, Tom Crismore (CIG), Bruce & Mike DeVore (NIG), Keith Dunlap (IKC/CIG/NIG), Chris Field (CIG), John Hedge (CIG), Jim Hall (EMG), Angie Manon (IKC/CIG/NIG), Terrell Maurer (EMG), George Mundy (IKC/EMG), Dave & Chris Plummer (NIG), Diedre Racine (CIG), Barry Smith (EMG), Serena Smith (NIG), Dave Seng (NIG), Gary Trometer, and John Vargo (IKC/CIG).



Removing "Speleo-logs" from entrance pit (foreground) at Coon with a pulley haul system. Photo by A. Manon

Activities in Grotto were concentrated in the back half of the cave, with graffiti and trash removal accomplished in the POC loop and scalloped-climb areas. Other individuals "brown-washed" in the main borehole primarily between the large breakdown room and the stream, taking advantage of the easy availability of water and "perfect" cave mud to eliminate any evidence of the former graffiti that once was so prevalent in this section of the cave. Grotto's workers included Bruce Barnes, Mike & Jeff Bray (CIG), Larry & Linda Bundy (MHG), Jeff Cody (MHG), Scott Cummings (MHG), Keith Dunlap, Dominic Eble, Joey Hilfiker, John & Sandy McCloskey (CIG), Angie Manon, Chery Miller (EMG), Ernie Payne (EMG), Diedre Racine, Mike Robert, Dave Seng, and John Vargo.

Several participants in both Coon and Grotto had not been in the caves since the IKC began the renovation projects and were quite please to see the caves' improvements. It is estimated that the IKC and others have exerted over 400 personhours in *each* cave. Trash is practically non-existent (this year we were hard pressed to collect a half trash bag full in both caves combined, even working in the lesser traveled areas). Graffiti still exist, but we are making substantial progress. In Coon, most of the upper level is "respectable", although brown-washing is needed in several areas because the spray paint is on bare stone. Also the areas near the lower level pits still need a lot of attention. In Grotto, the main borehole is essential graffiti-free. Brown-washing is still needed beyond the stream and past the crawlway into the next major breakdown room. Logistically, it will be difficult to brown-wash much beyond this room due to the many tight squeezes and crawls; fortunately the vandalism is not too bad and much has already been removed with wire brushes. The final area in Grotto to be restored is the upper level, or Richard's Extension, above the scalloped-climb. Very little work to date has been spent up there, and even a complete assessment of the situation has not been accomplished.

The renovations of Coon and Grotto caves are progressing to the point that we will soon have to evaluate the "diminishing returns" of our efforts spent in these caves, verses directing that labor to other caves that need help. We will definitely continue this project one more year in both of these caves, and probably as long as the support is there to continue.

In closing, the most encouraging part of these two renovation projects have been the enthusiasm of the participants. It is obvious to them that their efforts have made a significant improvement in both caves, and more importantly, that their labor is not futile because the caves' access are being managed responsibly to minimize a reoccurrence of vandalism.



LOOK! AN ANGEL!!

SHAFT CAVE WORKDAY

by Keith Dunlap

On the afternoon before the last IKC Quarterly meeting in Bloomington (June 24th), the IKC sponsored a work day at Shaft Cave. The goals for the day were to remove logs from the bottom of the pit and to install a fence around the entrance to prevent someone from accidentally stumbling into the pit.

The first task of removing logs (or speleo-logs as they were coined by one participant) from the pit required much teamwork. An initial crew of three repelled to the bottom of the seventy-six foot pit and sawed logs into lengths that could supposedly be hoisted out. A vertical rope was rigged between two trees with a pulley attached over the pit opening. A haul rope was run through the pulley, and a Gibbs ascender attached to another tree was used as a one-way safety. As many as ten people were sometimes required to haul on the rope because of the bottom crew's sadistic tendencies to overload each haul. Also, because the logs tended to always jam on the ledges right below the lip, a person rigged in a seat harness was needed in the pit to help guide the logs up and out. After about an hour of continuous hauling, everyone took a short break while the first bottom crew ascended out and a new team was sent to the bottom. After all the big logs were removed, smaller pieces of wood and other miscellaneous materials were loaded into the IKC haul bags for removal. Another hour of hauling got the majority of the debris, so we decided to call it quits because we still had our second task to complete.

The fence around Shaft was not nearly as elaborate as the one around Grotto. It basically is a "farmer's" fence, utilizing six foot steel posts driven two feet into the ground, and three strands of barbed wire around the 15' by 15' perimeter. The installation went pretty smoothly, taking approximately two hours to complete. We anticipated problems of hitting limestone before the post were at full depth, and we were not disappointed with a couple of posts. To augment the corner posts, angle brace posts were also installed. Rather than a swinging gate, the third strand of wire was omitted from one section of the fence to allow cavers to step over the fence without damaging it.

The fence will not serve as a deterrent for anyone purposely intent on dropping the pit (either with permission or illegally trespassing). It will however, reduce the owner's liability by provide some protection from someone unknowingly wandering off into the entrance. The maintenance on the fence could be significant, if the Shaft gate is any indication. However, it is hoped that since the fence can be so easily breached, vandalism will be minimized.

Participants for the day included Paul Cannaley (IKC), Keith Dunlap (IKC/CIG), Chris Fields (CIG), Neal Hammond, Rick Heckler, John Hedge (CIG), Brain Leavell (IKC/EIG), Jerry Litaker (IKC/EIG), Angie Manon (IKC/CIG/NIG), Lynn & Jane Miller (IKC/CIG), Chris Nack (CIG), Ernie Payne (IKC/EMG), Bob Wright (EIG), and John Vargo (IKC/CIG). Mike Miessen (IKC) and Eric Newlon were also present providing photo support.

FENCE UPDATE: As of August 27th, the fence had sustained only minimal vandalism in the form of the removal of a fourth strand of wire placed along one side of the fence at the very bottom. This strand was found undone and the next strand propped up with a stick to allow for the perpetrators to *crawl under the fence*. This is a little worrisome in the fact that if the idiots are not bright enough to enter the fence by the obvious means provided, what are the chances that they know what they are doing at a vertical pit.

SUMMER BAT COLONIES IN CAVES

by Keith Dunlap

There have been many articles written about the various endangered and non-endangered species of bats utilizing Indiana caves for winter hibernation. Considerable research and inventorying has been completed and documented on the subject. Generally the bats start their swarming activities in early September, and begin their hibernation when their food supply disappears, remaining in the caves until weather is suitable in early spring. As a rule, large numbers of bat of the species common to Indiana do not utilize the caves during the summer months (May to August). While it is common to see solitary bats scatter about in Indiana caves during the summer, it is thought to be unusual to see clusters of bats.

Primarily there are two reasons for bats to be clustering in a cave during the summer. First, a cluster may be a maternity colony (most likely the Gray bat (*Myotis grisescens*), the Southeastern bat (*Myotis austroriparius*), the Virginia big-eared bat (*Plecotus townsendii*), or the Rafinesque's big-eared bat (*Plecotus rafinequeii*) - all endangered or of special concern in Indiana). The second possibility is that the clustering bats are a bachelor colony of males, most likely Little brown bats (*Myotis lucifugus*). While bachelor colonies have been observed and documented to some degree, there are still many questions to be answered as to their purpose and function in the social lives of bats. The commonality of bachelor colonies in Indiana caves is unknown and it would be difficult to quantify, given the large number of potential caves, the diversity of suitable climatic locations within each cave (unlike winter hibernation, the bats can be almost anywhere and seem to pick locations a considerable distance from the entrance), the relatively short period of time for colony utilization, and the uncertainty of location loyalty (bats returning to the same spot each year).

Perhaps the best way to collect data on summer colonies is by cavers reporting potential sites (to Scott Johnson of the IDNR, or me). Any tightly bunched cluster of more than five or six bats is probably significant and worth noting. Pertinent information to record would be: the cave's name, the specific location of the bats within the cave, the date and time, the number of bats if it can be obtained without disturbing them, general description of the bats (color, size, relative size within the cluster), and site particulars (amount of guano directly below the cluster and in the general vicinity, the presences of mold/fungi on the guano, stained or polished ceiling, etc...). The site observations can give considerable insight to the colonies established longevity and can even be used to document potential sites during other times of the year. Reported sites that have the potential to be maternity colonies will be checked because of their significance, and other sites may be investigated out of curiosity.

This past summer, a suspected bachelor colony of approximately 50 Little brown bats was documented in Clyfty Cave. The potential site was originally observed last February during the bat census, characterized by a stained ceiling and considerable concentration of guano directly below the stain. While it was hoped that the cluster would have turned out to be a maternity colony, the finding was none the less significant due to its size.

Two other potential bachelor colonies were noted in Coon (50 to 100 bats near the rear of the cave) and Grotto (8 to 10 bats located above the scallop climb) caves during the IKC cleanup weekend. These colonies need to be verified next year in late June or early July, as observations this late in the summer could be attributed to early swarming activities.

CURSORY ANALYSIS OF POPULATION TRENDS
OF MYOTIS SODALIS IN INDIANA CAVES

by Keith Dunlap

NOTE: The population information presented in this article was adapted and combined from two recent reports: *REPORT ON THE STATUS OF PRIORITY I INDIANA BAT HIBERNACULA, 1989* by Richard L. Clawson, Indiana Bat Federal Recovery Team leader; and *A 1988 - 1989 WINTER CAVE CENSUS FOR THE INDIANA BAT IN NON-PRIORITY I HIBERNACULA IN INDIANA* by Virgil Brack, Jr, Indiana Bat Federal Recovery Team member, and Keith Dunlap, Indiana Karst Conservancy. Copies of the latter report is available to any requesting IKC member.

Much has been written in this publication about Indiana Bats because of our involvement in the biennial census, our management of two Priority II caves, and this author's personal interest in bats. Population for various caves have been quoted previously, and generalized trends are well established, but specific trends have been avoided primarily due to the lack of long term population information to substantiate the predicted trends and minimize the short term fluctuations. Even now, after five census in the past decade, it is probably inappropriate to extrapolate much specifically from this data; but I will take the liberty to do so as a cursory exercise. But first I will present some background information.

All Indiana bat activities are the responsibility of an USFWS sponsored task force - the Indiana Bat Federal Recovery Team (IBFRT). This team was formed because of the noted decline of Indiana bats in the seventies, leading to their classification as federally endangered. The team's missions are to monitor population trends and make recommendations to reverse or minimize the observed downward trend. One of their recommendations was to reduce winter disturbance of the hibernating colonies by fencing/gating caves with significant populations. This task, with one or two exceptions, has been accomplished. Two other possible causes for population decline, pesticide poisoning and loss of summer habitat, have been identified, but are much harder to correct because of their global nature (for further information on the subject, see "Indiana Bats: Down for the Count", *IKC Update # 6* and "Who's Endangered and What Can We Do?", *IKC Update # 11*).

The IBFRT has classified winter hibernacula into three categories: Priority I hibernacula current have or had in the past populations greater than 30,000 bats; Priority II hibernacula have between 30,000 and 1,000 bats; and Priority III caves have less than 1,000 bats. Caves with increasing populations will be upgraded to the higher priority once reaching the minimum threshold, but caves will not be lowered in priority should the population decrease below the minimum because they still retain their potential to harbor that many bats.

Censusing of Priority I caves are conducted by a single individual (in recent years Richard Clawson) to minimize error due to variation of techniques. Priority II and III census are the responsibility of the various states and administered by state agencies. In Indiana it is the Nongame Section of the Fish and Wildlife Division of the IDNR. The actual census has been contracted to a specialist, Dr. Virgil Brack, that does the field work. Virgil has primarily conducted the last five Indiana census with consistent methodology.

I will first examine trends from the Priority I caves presented in Table I. The Table shows seven of the eight known Priority I hibernacula (the remaining hibernacula is an abandoned mine which is not census due to safety, but estimated to have a population of over 100,000 bat, making it the largest known colony). The caves are arranged in order of decreasing population based upon the most recent count. Note that of the seven, only three currently have populations indicative of a Priority I hibernacula. In addition to the five systematic census conducted in the eighties, the Table also contains population information for census conducted in 1960 and in 1975. Total population figures for these two census were approximated to allow for a more meaningful comparison.

Examining the total population shows some dramatic declines. Since 1960, the population is estimated to have dropped by nearly *sixty* percent. What is even more startling is that the majority of the decrease has been in the this decade with a 42% drop (an average of 5.3% drop per year, more than twice the yearly rate compare to the drop since 1960). Prior to 1980, the majority of the caves remained stable or increased in population, the exceptions being Bat and Hundred Dome caves in Kentucky, the latter legendary decline caused by a structure built over entrance of the cave that all but wiped out this colony. Since 1980, every Priority I cave has experience decreased populations, most by more than half. At this current rate, the survival of this species is doubtful.

RECENT POPULATIONS OF *MYOTIS SODALIS*
IN USFWS PRIORITY I CLASSIFIED CAVES

CAVES	'60	'75	'80-82	'83	'85	'87	'89
Twin Domes (IN)		100,000	98,250	70,750	56,650	79,650	70,800
Bat (KY)	100,000	45,000	51,500	45,300	36,450	37,600	45,275
Great Scott (MO)		81,800	72,500	85,700	77,950	60,650	38,875
Batwing (IN)			29,950	26,650	14,750	17,450	14,500
Dixon (KY)	2,500	3,600	30,900	30,000	26,850	16,550 ¹	10,700
Bat (MO)	30,000	40,000	32,800	30,750	30,450	4,150	4,275
Hundred Dome (KY)	100,000	4,500	550	600	425	250	50
TOTALS (approx) ²	444,250	299,850	316,450	289,750	243,525	216,300	184,475

¹ Due to the change in census method, this and subsequent populations are not directly comparable to prior estimates.

² For the purpose of comparison among years, populations for caves not censused each period were estimated based upon subsequent census.

TABLE I

The analysis of the Non-priority I caves in Indiana is somewhat more encouraging. Examining Table II and the two charts on the facing page (the second chart presents the same data, but focuses on the lower population caves with an expanded scale), it can be observed that during the past five census, most of the Priority II and III caves have remained stable or increase, and the overall population is estimated to have almost doubled. However, when the lost populations of the two Priority I caves are included in the trend, the overall total has decreased slightly (again note that the totals shown in the Table have been adjusted to include population estimation for all the caves shown even if they were not censused). Notice on the upper chart how the total population curve mimics the Twin Domes curve. This is not unexpected as this one cave contains over half the total population for the state.

(continued on page 19)

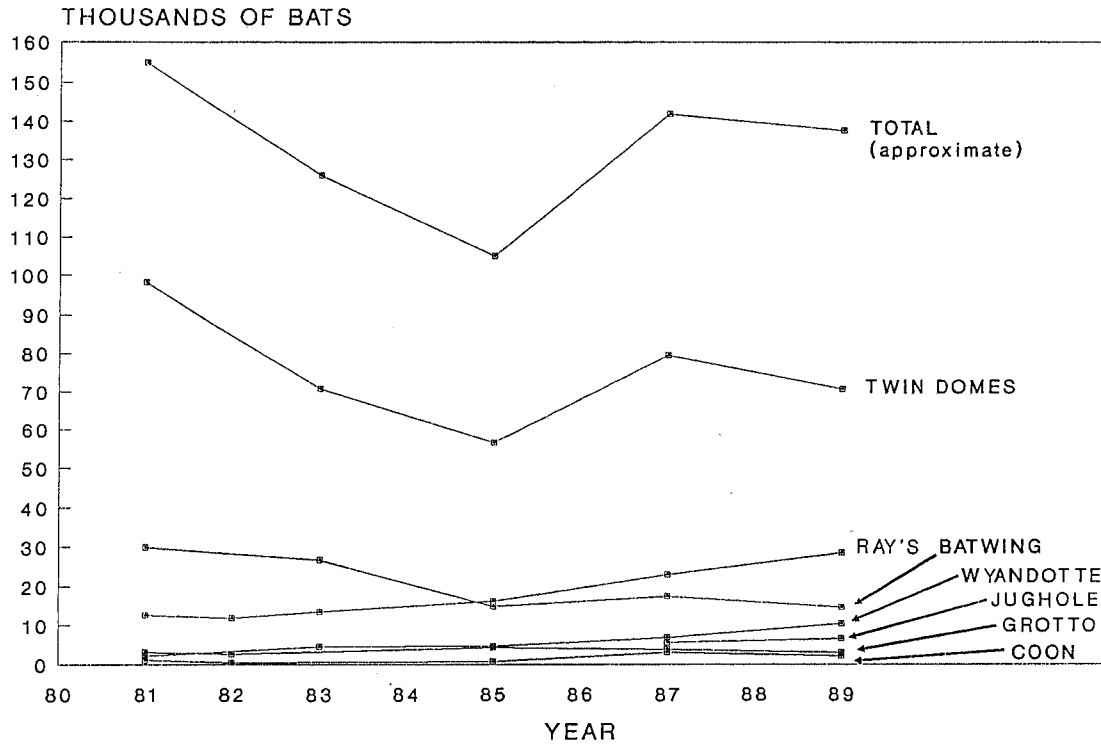
RECENT POPULATIONS OF *MYOTIS SODALIS*
IN KNOWN INDIANA CAVES

CAVES	'81	'82/83	'85	'87	'89
Twin Domes (Harrison) ¹	98,250	70,750	56,650	79,650	70,800
Ray's Cave (Green)	12,500	13,475	16,200	22,990	28,581
Batwing Cave (Crawford) ¹	29,950	26,650	14,750	17,450	14,500
Wyandotte (Crawford)	2,152	4,550	4,627	6,681	10,344
Jug Hole (Harrison)				5,535	6,424
Grotto Cave (Monroe)	3,190	2,692	4,198	3,778	2,985
Coon Cave (Monroe)	1,190	550	777	2,950	2,103
Parker's Pit (Crawford)		~450		1,803	1,104
Clyfty Cave (Green)		66		198	412
Saltpeter (Crawford)		352		427	295
Leonard Springs (Monroe)					135
Robinson Ladder (Crawford)					95
Buckner Cave (Monroe)		480	301	336	24
Saltpeter Cave (Monroe)		83		19	
Brinegar Cave (Monroe)				12	
River Cave (Washington)		104		5	
Bentz Cave (Crawford)					3
Endless (Washington)		2		1	
Salamander Cave (Monroe)		74		0	
Wildcat Cave (Crawford)		29		0	
TOTALS (approximate)²	155,000	126,000	105,000	142,060	137,835

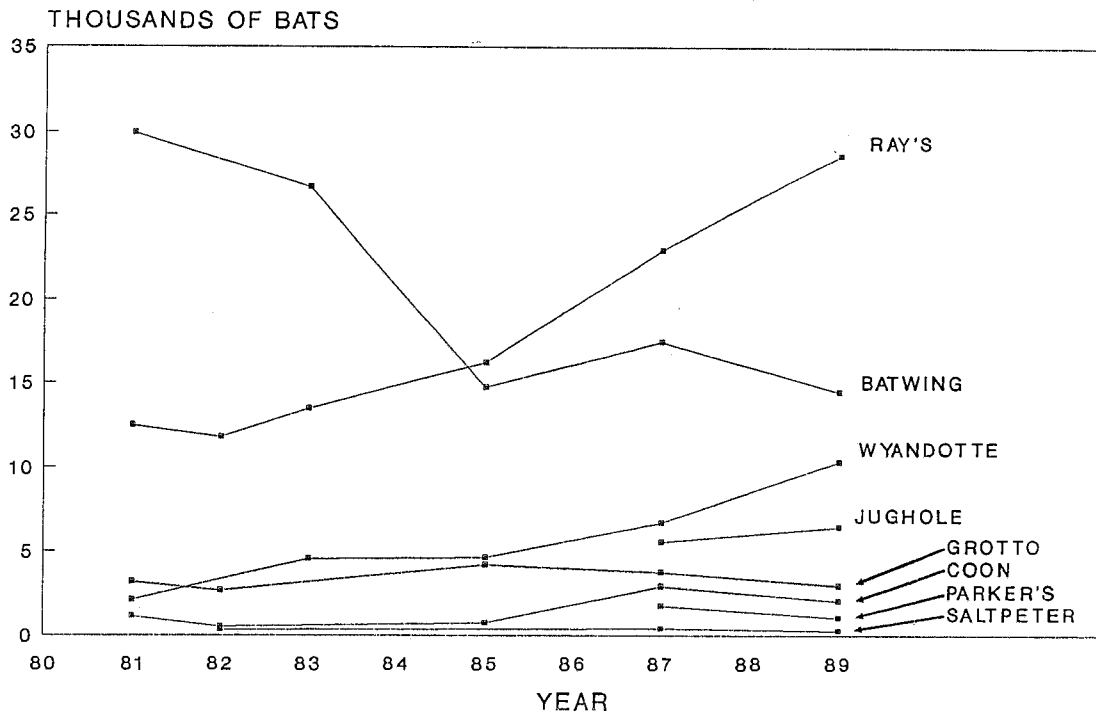
¹ Classified as Priority I caves by the USFWS.

² For the purpose of comparison among years, populations for caves not censused each period were estimated based upon individual trends.

POPULATION TRENDS OF MYOTIS SODALIS In Selected Indiana Caves



POPULATION TRENDS OF MYOTIS SODALIS In Selected Indiana Caves (Excluding Twin Domes)



To facilitate formulating overall trend information on the more significant caves with five sample points, a least-squares linear curve fit was performed on the available data with the equations given as

Total population:	$p(x) = 137750 - 913x$
Twin Domes:	$p(x) = 86720 - 2300x$
Ray's Cave:	$p(x) = 8330 + 2083x$
Batwing Cave:	$p(x) = 30685 - 2005x$
Wyandotte:	$p(x) = 1042 + 926x$

where: x is the number of years since 1980 and
 $p(x)$ is the corresponding predicted population.

The coefficient of x gives the number of bats gained or lost per year, with Ray's Cave showing the greatest absolute gain and Twin Domes showing the greatest loss. However it may be more beneficial to look at the relative changes compared to the corresponding colony population. Thus using the predicted 1985 population as the basis, an eight year average population trend was determined as follows (in order of decreasing/increasing populations): Batwing Cave decreased at 9.7% per year; Twin Domes decreased at 3.1% per year; Ray's Cave increased at 11.1% per year; and Wyandotte increased at 16.3% per year. The overall population trend decreased by 0.7% per year.

Another bit of information that can be obtained by looking at this trend analysis is the significant abnormality that occurred in 1985. It is obvious that Twin Domes and Batwing had significant population losses that year, but Ray's and Wyandotte also showed signs of the anomaly with increased populations, but at a decreased rate.

It is also interesting to note that the population changes predicted between the '87 and '89 census with the above five linear regressions generally matched the actual population change.

Populations in Grotto and Coon caves have fluctuated considerably over the last eight years. Grotto decreased in '82, increased significantly in '85, then has decreased the last two census to a level approximately the same as it had in '81. Coon's population dropped by over 50% between '81 and '82, then more than tripled in '87, then decreased again in '89. Its population is still considerably larger than it was in the first half of the decade, but apparently less than in the 70's, according to cavers.

The population in Buckner Cave decreased slightly from the early 80's to '87 and dropped significantly in '89. Apparently the continual disturbance has been too great for this colony to survive. The population in Clyfty Cave on the other hand, has steadily increased, and hopefully will continue to do so.

As we move into the 90's, additional data will be collected to see if the trends continues for the Priority I caves to decrease in population, while the Indiana Non-priority I caves increase. Obviously if this occurs, there will be greater emphasis placed on the smaller colonies that seem to be holding their own, and serious questions raised about the methods used to protect these remaining bats.

INDIANA KARST CONSERVANCY, INC.
Statement of Receipts, Expenditures, and Changes in
Fund Balance for the Quarter Ending 6/30/89

GENERAL FUND

RECEIPTS

DUES	790.00
DONATIONS	115.00
INTEREST	20.88

TOTAL RECEIPTS	925.88
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EXPENDITURES

UPDATE	227.99
POSTAGE, GENERAL	47.80
FEES, DUES	35.00
GATE MAINTENANCE	26.54
CHECK PRINTING CHARGE	7.76
DONATION TO HEC	125.00

TOTAL EXPENDITURES	470.09
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EXCESS TO FUND BALANCE	455.79
------------------------	--------

FUND BALANCE 3/31/89	1678.10
FUND BALANCE 6/30/89	<u>2133.89</u>

BUCKNER FUND

RECEIPTS

	0.00
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EXPENDITURES

DONATION BOX REPAIRS	26.98
TOTAL EXPENDITURES	26.98

EXCESS TO FUND BALANCE	-26.98
------------------------	--------

FUND BALANCE 3/31/89	259.64
FUND BALANCE 6/30/89	<u>232.66</u>

HANCOCK PROPERTY

RECEIPTS

	0.00
--	------

EXPENDITURES

	85.58
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EXCESS TO FUND BALANCE	-85.58
------------------------	--------

FUND BALANCE 3/31/89	500.00
FUND BALANCE 6/30/89	<u>414.42</u>

TOTAL BALANCE - FUNDS 3/31/89	2437.74
TOTAL BALANCE - FUNDS 6/30/89	<u>2780.97</u>

MINUTES IKC QUARTERLY BUSINESS MEETING
June 24, 1989
Bloomington, Indiana

DIRECTORS PRESENT:

Keith Dunlap
Ernie Payne
Lynn Miller

Mike Miessen
Glenn Lemasters
Jane Miller

DIRECTORS ABSENT:

Kathy Hornaday
Kenny Carrigan

The meeting was called to order at 7:35 p.m. Introductions were made. One correction to minutes of 5/10/89 director's meeting: Mike Miessen is also a member of the committee to research the feasibility of producing an educational video/slide program.

HOOSIER FOREST PROJECTS COMMITTEE - Meeting held today. Election of new officers in view of Kathy Hornaday's impending move to Ohio. Chairman, Kevin Komisarck; Vice Chairman, Tom Rea; Secretary, Jack Countryman.

The committee discussed the need to provide the Forest Service (FS) information on caves. The committee will provide a list of known caves including locations, etc., to the FS. Larry Mullins (our liaison with the FS) wrote an addendum to the FS management plan concerning caves which is favorable to caver's input into methods of cave management and surface area management. The addendum includes many of the recommendations made to the FS by this committee over a year ago. The continued success of this cooperative effort with the FS will require a great deal of work in the inventorying of cave resources on the Forest.

The current proposal for the overall management plan (3/89) is a significant improvement over the 85 plan, but it still requires our attention and support to ensure that the gains made are retained.

RESEARCH & SCIENCE COMMITTEE - See the status report of this committee in the June, 1989 IKC UPDATE.

VIDEO FEASIBILITY COMMITTEE - Butler and IUPUI have been contacted concerning the possibility of our proposed video functioning as a student project. This option will await further consideration at the beginning of the fall semester. Other possibilities include a do-it-yourself style project in conjunction with one of the television stations. This would involve training time and rental of their equipment. The discussion became rather involved with filming techniques and available technology. Lynn expressed concern that our present focus should be to evaluate content and audience. The Education Committee (Noel Sloan & Mike Miessen, initially) will prepare a proposal for the content of a video presentation for discussion at the next Director's meeting.

"CAVE REGISTRY PROGRAM" - Jane has received materials from Paul Carmony of TNC via Kevin Strunk but has not had opportunity to sufficiently review them. Hank Huffman provided additional information at this meeting. Hank acknowledged that the program works very well over time. Our thanks to Hank for the additional info.

BUCKNER PROJECT - Prosecution is ongoing on two cases. We do not have current status on the spray painting incident. LSD use case has been tried. The perpetrator pled guilty, but under "trial aversion" proceeding if he stays out of trouble he will have no permanent record.

Art Gahimer is living on the property and taking an active interest in management of the property. The cave is beginning to be trashed out again.

HANCOCK PROPERTY - More posts and cable were installed along the road on May 20.

Shaft Cave: A barbed wire fence was installed around Shaft June 24 after an enthusiastic and hardworking 16-member volunteer crew hauled an abundance of logs (trees!) from the pit. Thanks to all who participated.

Coon/Grotto: Annual end of season work weekend will be August 26 & 27, beginning at 10:00 a.m. each day. This will be your last opportunity to visit these caves until spring due to the seasonal bat closures. Why not come do some caving and cleaning that weekend?

DNR ACTIVITIES - Keith asked about the status of various state park management plans and how they may affect the IKC and cavers in general. Hank responded that the management plan for Versailles State Park calls for investigating the re-opening of Bat Cave. While it is not an extensive cave, it has been described as the most significant geological feature in the park. Funding in budget for a feasibility study. Safety factors create significant concerns.

"Evansville Highway" projects. Hank has reviewed all three alternatives and doesn't care for any of them. All have significant negative impact on karst areas.

Palmyra treatment plant. Hank reviewed project and approved it. He was unaware of any caves in the area. In future if we have concerns about a project of this type, contact Hank directly and make him aware.

Scott Johnson summarized the results of the Bat Census. There were significant declines overall in the 7 Priority I caves surveyed. Populations in Non-Priority I caves were up about 17%. Statewide bat populations were down about 3% overall.

Scott met with the nephew of Ray's Cave's landowner. He is concerned about the property and will talk with the landowner to encourage the initiation of a conservation easement for the property. Scott was very encouraged by this progress.

Indiana Bat Summer Habitat Study has been postponed one year due to administrative difficulties with the grant proposal.

Winter Disturbance Study will begin this fall.

Anyone interested in receiving a full copy of Virgil's report should contact Keith ("A 1988-1989 Winter Cave Census for the Indiana Bat (*Myotis sodalis*) in Non-Priority I Hibernacula in Indiana").

continued...

CAVE CAPERS - The IKC has placed an ad in the Capers Guidebook. Will provide a door prize(s).

HOOSIER ENVIRONMENTAL COUNCIL - The HEC is experiencing cash flow problems currently. Discussion of HEC's positive contributions to environmental causes (including HNF). Lynn's motion, seconded by Tom to donate \$100 to the HEC carried. Members donated an additional \$25 which will be included. The secretary is to write a note of thanks and encouragement to forward with the donation check.

NEXT QUARTERLY BUSINESS MEETING - Saturday, September 30, 2:00 p.m., Indianapolis.

OPEN DIRECTORSHIP - With the resignation of Kathy Hornaday from the Board one vacancy exists. Members wishing to be considered for this position should contact a current Board member. Jeff Cody, Noel Sloan, and Steve Reesman are current candidates. The Board will elect a new member at the next Director's meeting (which is tentatively scheduled for Cave Capers).

EASTERN INDIANA GROTTO - Steps will be taken to establish a formal relationship with the EIG as has been done with other grottos in the state.

SULLIVAN CAVE - Tom Rea is to discuss possibilities of IKC management with the owner.

The meeting was adjourned at 9:30 p.m.

Submitted by Jane E. Miller, Secretary

IKC DIRECTOR'S MEETING
July 15, 1989

DIRECTORS PRESENT:
Keith Dunlap Mike Miessen
Lynn Miller Glenn Lemasters
Kenny Carrigan Jane Miller

DIRECTORS ABSENT:
Ernie Payne

The meeting was called to order at 4:00 p.m.

DIRECTOR ELECTION - Kathy Hornaday has resigned due to her move to Ohio. Noel Sloan, Kevin Strunk, Jeff Cody and Steve Reesman were nominated by the Board. Jeff Cody was elected to fill the vacant Board position. Congratulations to Jeff and thanks to Noel, Kevin, and Steve for their willingness to serve.

NEXT QUARTERLY BUSINESS MEETING - Saturday, September 23, 1989, 2:00 p.m. at the War Memorial Building, downtown Indianapolis. This meeting was previously announced for Saturday, September 30, 2:00 p.m.. Please correct your calendars.

SHILOH CAVE - The lease on this property has been renewed for another year.

ENVIRONMENTAL PICNIC - The Sierra Club is sponsoring an Environmental Picnic on the grounds of the Indianapolis Museum of Art on Saturday, July 22, 1989. IKC Directors are encouraged to attend.

WILDERNESS ACT - 1989 is the 25th anniversary of the Wilderness Act. There will be a celebration of this anniversary at the Hickory Ridge Lookout Tower on the edge of the Charles C. Deam Wilderness on Saturday, September 23, 1989. The celebration will be sponsored by the Forest Service.

HOOSIER FOREST PLAN STANDARDS AND GUIDELINES (concerning CAVES) - The Federal Cave Resources Protection Act of 1988 mandates protection of significant caves on federal lands. The Forest Service is preparing a Forest Cave Management Implementation Plan. Directors received a copy of the draft "guidelines and standards" and "implementation plan" prepared by Larry Mullins. Directors are encouraged to review these documents and provide input to Keith. (Secretary's Note: Following is one direct quote from the draft standards: "ALL caves will be managed as significant caves until determined otherwise.")

MUNCIE QUARRY - A situation exists concerning a cave, a pond, and a quarry in the vicinity of Muncie, Indiana. The landowner (quarry owner) is concerned that blasting in the quarry may "uncork" the pond above the cave and cause the water to flow through the cave and into the quarry. Kevin Strunk and Dave Haun will discuss the situation with the landowner and encourage the conservation of the cave.

KARST REGISTRY PROGRAM - Discussions were continued on the desirability of establishing a registry program similar to The Nature Conservancy's Natural Areas Registry. A motion was made, seconded, and passed to create a registry program within the IKC.

The meeting was adjourned at 5:00 p.m.

Submitted by Jane E. Miller, Secretary

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 _____

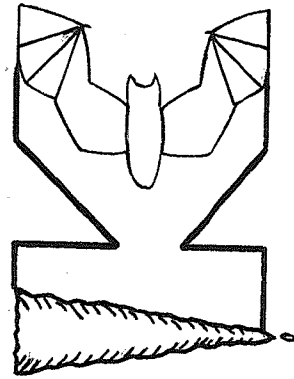
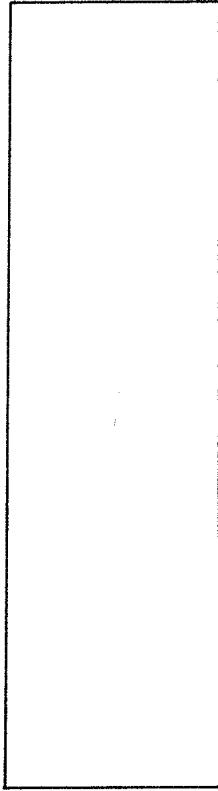
Address _____

City/state/zip _____

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

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

Indiana Karst Conservancy
PO Box 461
Plainfield, IN 46168



PROTECTING CAVES THROUGH ACTIVE CONSERVATION