
IKC Update

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INDIANA KARST CONSERVANCY

INDIANA KARST CONSERVANCY, INC.

PO Box 2401, Indianapolis, IN 46206-2401
Affiliated with the National Speleological Society.



The Indiana Karst Conservancy 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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Grotto Cave

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Cover - Speed Hollow resurgence of Sullivan River
 during higher than normal flow, April 1998.

Photo by James Adams © 1998

Editor Keith Dunlap.
 Publishers Keith Dunlap & Bambi Erwin.



QUARTERLY MEETING & COOKOUT REMINDER

SATURDAY, SEPTEMBER 19th, 5:00 PM

MITCHELL, INDIANA

HOME OF STEVE LOCKWOOD, RR 1, BOX 107

The quarterly meetings are for members and other interested persons to have an open forum for talking about cave and karst conservation and related topics. Past, present, and future IKC projects are discussed to solicit comments and input from our members and the caving community as a whole. The meetings are informal, and everyone is encouraged to attend and participate. The IKC Board *wants* your input.

Preliminary Agenda Items: Sullivan Cave status; Indian Creek clean-up; Saltpeter Cave; Brief recaps of last quarter's activities; IDNR activities; HNF inventorying project; HNF/IKC committee status; Wesley Chapel Gulf discussion; Beaver Creek SIA; other HNF activities; Reprint #10 status; and more....

Following the business meeting (approximately 7 PM) will be the annual pitch-in cookout. The IKC will provide the grilled burgers, hot dogs, and brats; condiments, and soft drinks. Please bring a salad or cover dish to share. Finishing off the evening's activities will be the highly contested dessert competition. Bring an entry or enjoy sampling and selecting the winners. Contact Steve Lockwood or Kriste Lindberg for further details.

Meeting Directions: See page 19

EVENTS CALENDAR

- 19 SEP = HNF COMMITTEE MEETING/HNF CAVE INVENTORY WORKDAY
- 19 SEP = IKC QUARTERLY MEETING, Mitchell (see above)
- 17 OCT = HNF CAVE INVENTORY WORKDAY (contact Kriste Lindberg)
- 07 NOV = INDIAN CREEK CLEAN-UP, Corydon (see page 12)
- 21 NOV = HNF COMMITTEE MEETING/HNF CAVE INVENTORY WORKDAY
- ?? DEC = IKC QUARTERLY MEETING (date/place TBD)
- 20 MAR = IKC ANNUAL BUSINESS MEETING, Greenwood (tentative)
- 10-14 APR = SINKHOLE CONFERENCE, Pennsylvania (see page 5)

For more information on the Indiana Karst Conservancy, visit our web site at <http://www.caves.org/conservancy/ikc> or write to our PO box. 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 and caving community informed of IKC activities and other news related to cave/karst conservation. Submission of original or reprinted articles for publication is encouraged.

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RAMBLINGS FROM THE PRESIDENT...

Lately, it seems like everyone is approaching cavers looking for a handout. It can be annoying, and often is. "Save the caves - give me a donation. Buy a bat. Buy a raffle ticket. Buy an honorary entrance. Visit our silent auction web page and bid high and often. We'll charge it to your credit card on a monthly basis, and it's all tax-deductible!" Other environmental organizations want money, too. The United Way campaign comes along and hits you up at work. And don't forget to save back 10% for your church. You can't turn around without someone asking you to pull out your wallet, one more time.

Sure, all of these causes are good. Protecting caves through purchase is a great idea. Many cavers want to support the effort. But there are just too many people and organizations involved. An individual simply can't support them all.

I'm beginning to feel like the IKC has somehow been pitted against other worthy organizations - including cave conservancies - for financial resources. If we get a dollar, that's one dollar that someone else isn't going to get. The converse may also be true; if the Northern Wisconsin Speleo-conservancy gets a grant, it may represent another lost opportunity for the IKC. Am I wrong? I certainly don't like feeling that way. I also don't know what can be done about it.

The IKC directorship is sensitive to this; therefore, we've tried not to get "in your face" over Sullivan Cave. Most of our fund-

raising activities have been (hopefully) fairly low-key. We've tried to keep it on a regional level; requesting money mainly from folks who may have visited Sullivan once or twice, and perhaps have some fond memories. We've also tried not to let the "competition" aspects keep us from helping some of the emerging cave conservancies get a good start. Despite the restrictions we've placed on ourselves, we've still managed to collect a substantial portion of our goal in less than nine months.

That said, other organizations might not be holding back this much. As it looks now, we still need over \$20,000 to complete the acquisition. We were hoping that a major foundation would come through with a grant to make up the difference. But so far, that hasn't happened. We're also disappointed that we haven't managed to liquidate the house by now (*editor's note: as we go to press, we have an offer pending*). I find myself wondering if what we're doing is the best way to go, or if we're just tying our hands for no good reason.

Should we extend our reach, in hopes of bringing in more money? Is it okay to get more aggressive in our fund-raising, or are you fed up with that kind of approach? Do you have other ideas on how we can raise the rest of the money and put all this behind us? Please e-mail me at beb@lilly.com, or write/call and let me know. This is, after all, *your* organization.

- Bruce Bowman

IKC FASHION WEAR

Get them while you can...The new IKC hats in two fashionable styles. Available in a pre-washed khaki material with a matching visor or in an off-white denim with a forest green visor. These high-quality hats are embroidered with the IKC logo in four colors and the words Indiana Karst Conservancy across the bottom. Either design are just \$10, plus \$2 shipping. Use the inserted form to order or contact Keith Dunlap with questions.



NEWS BRIEFS...

- ❑ With the busy summer months behind us and the leaves beginning to fall, it's time to once again get out in the woods locating caves and doing productive speleo-science. One opportunity to undertake such adventures is with the Hoosier National Forest karst team who have been diligent in locating and inventorying the 100 or so caves on the HNF. This information will then be used to write specific management plans for each cave. Experience is not required, just the desire to learn and commit a few days to the cause. The work days are typically scheduled for the third Saturday of the month. Contact Kriste Lindberg (see page 2) for further information and specific details. The next workdays will be September 19th, October 17th, and November 21st.
- ❑ Speaking of the Hoosier National Forest, we have bad news, good news. The bad news is that we are losing Ellen Jacquart as our HNF karst liaison. Ellen has faithfully worked with the cavers for the past year and a half, keeping us informed on HNF activities which may effect caves, as well as being our direct avenue of communication to the HNF staff when we have issues needing to be addressed. The good news related to Ellen is that she is now employed by the Indiana Chapter of The Nature Conservancy, serving as their new Director of Stewardship. Pat Merchant of the HNF will be our new karst committee liaison.
- ❑ One long-term initiative being undertaken by the Hoosier National Forest is the designation of Special Interest Areas (SIAs). These areas, ranging in size from a few acres to over 4,000 acres, are designated to preserve unique biological, cultural, geological, or other special features. Several proposed areas are being so designated for caves or karst. Specifically, one such area is along Beaver Creek just south of Moorestown in Lawrence County where several active swallowholes and rises occur along the creek bed, making for a unique opportunity to see and study classic karst. The designation of this SIA is being complicated by a conflicting plan to extend the Shirley Creek horse trail system which is being proposed to intersect Beaver Creek within the boundaries of the SIA. In order to better understand this conflict, as well as several other complications related to this SIA, a field trip for the interested parties (HNF management, Indiana DNR, IKC) was organized for August 17th. Keith Dunlap represented the IKC. While no immediate decisions were made during the field trip, participants at least got to see and hear the concerns from the various perspectives.
- ❑ A disconcerting development on the Hoosier National Forest is the questionable actions of a Lawrence County Commissioner who seems to be exceeding his authority in designating non-existent "county roads" on the forest. By doing so, the commissioner is circumventing the HNF's management plans by allowing horses, ATV, and four-wheel vehicles in places they should not be. Unfortunately, the HNF staff seems reluctant to challenge the actions of this commissioner even though his actions would appear to be the "taking" of federal property.
- ❑ *The Seventh Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impact of Karst* is scheduled for April 11-14, 1999 in Harrisburg Pennsylvania. This conference series addresses problems encountered when man and sinkholes meet (and the sinkhole usually wins!). This technical conference will be attended by geologists, geographers, and civil engineers designing projects such as roads in karst-prone areas. Proceeding the conference on April 10 will also be a short course offered on the topic of Applied Karst Geology and Hydrology. Anyone interested in this conference can contact Gayle Herring at 423-483-7483 or pelaor@usit.net.
- ❑ The annual work day on the Hancock property (where Coon, Grotto, and Shaft caves are located) was successfully accomplished on June 20th. Nine volunteers walked all the trails picking up trash, walked Spicer Lane and Gardner Road picking up trash, replaced No Trespassing signs as needed, and performed maintenance on the Wayne's gate. Participants included Bruce Bowman, Keith Dunlap, Bruce Gahimer, John Landcaster, Bob Sergesketter, Phyllis Sergesketter, Bruce Silvers, Jonathan Willett, and Tom Willett.
- ❑ The first round of items for the IKC on-line Sullivan auction are about to close. If you have web access, be sure to check these items out before the end of September at <http://www.>



caves.org/conservancy/ikc/auction.htm. Also note that we have recently received a few new items to list (including the hard to find 1973 NSS Bloomington Convention guidebook) which should be on-line very shortly. Thanks to everyone who donated items and to those who have bid on the items. Contact Jim Adams at IKCauction@aol.com for further information.

- ☐ One of several fund-raising initiatives undertaken for Sullivan Cave was an independent raffle organized and conducted by Bob Vandeventer. Bob donated all the prizes and had a number of volunteers selling tickets to cavers, friends, relatives, and co-workers. Three thousand tickets were sold, resulting in \$3000 being donated to the IKC. The drawing for the prizes was held on August 12th with the following winners: 1st prize (a well equipped computer/monitor) was won by Larry Coker of the NIG; 2nd prize (HP 890 inkjet color printer) was won by Louise Whisler (mother of IKC member Rich Whisler); 3rd prize (56k voice modem) was won by Eleanor Welling (daughter of IKC member Kathy Welling); and 4th prize (56k voice modem) was won by Dick Blenz of the BIG. Thanks to everyone who helped Bob sell tickets and/or purchased tickets.
- ☐ Our goal to upgrade our education display is back to square one. Last year we came across a "deal too good to be true" for a professional display structure which we purchased for a nominal price. However, after re-evaluating the display, the Board decided it did not meet the portability requirement so we have decided to divest of the display and start looking again. If anyone through their work or friends know of a good, professional folding display that is being surplusd, please let Bruce Bowman or Nick Noe know. Also if anyone in our membership is a graphics artist willing to volunteer some time, the IKC would certainly appreciate your assistance.
- ☐ Progress continues (admittedly slowly) with the next IKC reprint, "The Swallow-holes of Lost River, Orange County, Indiana" by Clyde Malott. Our targeted completion date is still November so it can be distributed with the December *IKC Update*, but realistically, it may slip to the March issue.
- ☐ Each year the IKC enters its newsletter covers in the NSS Graphics Art salon. In the past we have won two metals and numerous ribbons. This year is no exception as *all four* of our covers were awarded ribbons. Covers #44, #45, and #46 were each given Honorable Mention ribbons while cover #47 was honored with a Merit Award. Cover #44 (March 1997) was a photo in Woodard Cave (photographer unknown) with Keith Dunlap doing the layout. Cover #45 (June 1997) was a photo in Suicide Cave by Jim Adams with Jim also doing the layout. Cover #46 (September 1997) was a photo in Shiloh Cave by Jim Adams with Jim doing the layout. Cover #47 (December 1997) was a photo in River Cave by Melinda Grayson with Jim Adams doing the layout. Congratulations to each of these artists and remember that the editor is always looking for cover-quality/interesting photos.
- ☐ Our publishing costs took a major jump this summer when our printer decided to raise their copying prices significantly (they were ridiculously low and now they are about the same as their competitors). This means you may see a few less pages in each issue to contain costs. However, it also means that you may see a few more photos as the differential cost of including photos is no longer as great.
- ☐ Over the past year, the IKC has been soliciting our membership's e-mail addresses to be included in our database. Having e-mail addresses will allow the IKC to keep our members better informed of IKC activities and announcements in a cost effective manner. As an example, the IKC saved over \$20 by e-mailing the September meeting notice to those members with e-mail addresses rather than mailing them a postcard. Currently 60% of our membership has e-mail access. If you have a new or different e-mail address, be sure to send it to Jim Adams at JKAdams@aol.com. Note: the IKC will not sell or distribute our membership information to others for purpose of solicitation or merchandising.
- ☐ Three new members have joined the IKC in the past quarter. Welcome Dave Lasser (335), Jeff Weston (336) and David Thompson (337). The IKC membership now stands at 141.

McALLISTER PIT - EIG CONSERVATION PROJECT

information provided by Jeff Frazier

McAllister Pit has been a long time favorite of Indiana cavers. Located in Lawrence County with hydrologic ties to the Lost River system, its 65 foot entrance pit is one of the prettiest in the area and the 500 feet of passage at the bottom makes for an enjoyable trip. More importantly however, has been the friendliness and hospitality of the cave's owners who have always granted permission to those how ask permission and sign a liability waiver.

In April of this year, IKC member Bruce White visited the pit and found that the ownership of the cave had changed to the Hendersons, the daughter and son-in-law (Mark) of the previous owner. Bruce also found out that the new owners were in the process of building a new home about 150 yards from the pit. The new owners wanted to continue caver access to the pit, but were also quite concerned about their young children playing near the void. Bruce and Mark discussed the possibility of a fence and Bruce brought the potential project to the attention of Bruce Bowman and Keith Dunlap of the IKC who in turn notified Jeff Frazier of the Eastern Indiana Grotto, knowing the EIG had been looking for a conservation project to tackle.

In late May, several members of the EIG visited the cave, discussed fencing alternatives with the owners, and took measurements. The owner had some fencing material and EIG members came up with the rest.

On July 18th, the EIG returned in full force with fifteen members to install the fence. Despite the miserably hot weather, they got all the post holes dug (four foot deep in mostly sandstone), the posts set in concrete, and the wooden gate mounted. The rest of the day was spent upgrading the trail to the pit, spreading a truckload of cedar chips and setting flagstones along the way.

On the following day, the fence fabric was stretched and mounted to the posts to complete the enclosure project, then the cavers turned their attention to removing approximately 300 pounds of old rusty fence rolls and other debris from the bottom of the pit. Working in the cave was a welcome relief to the heat and humidity of the above ground activities.

Participants included Larry Bundy, Billy Cathey, Jeff Cody, Jake Ekstrom, Nick Ekstrom, Jeff Frazier, Pam Frazier, Brian Leavell, Jim Lewis, Jerry Litaker, Kevin Peters, Dave Randall, Tom Reynolds, Dave Short, and Mark Webb. Also thanks to Dave Short's father who fabricated the gate and donated part of the material.

The new landowners have been very cooperative and appreciative of having this fence installed around the pit to protect their children. Access to cavers should continue as before as long as you ask permission, sign a waiver, and don't overburden them. As always, cave softly and maintain a low profile when above ground.

Dave Randall, Tom Reynolds, Jake Ekstrom, Mark Webb, Jerry Litaker, and Bill Cathey setting the fence gate at McAllister Pit.



photo by Jeff Frazier

IMPACTS OF FOREST AND WILDLIFE MANAGEMENT PRACTICES IN THE KARST AREA OF SOUTHERN INDIANA: A FIELD WORKSHOP

by Kriste Lindberg

June 3-4, 1998

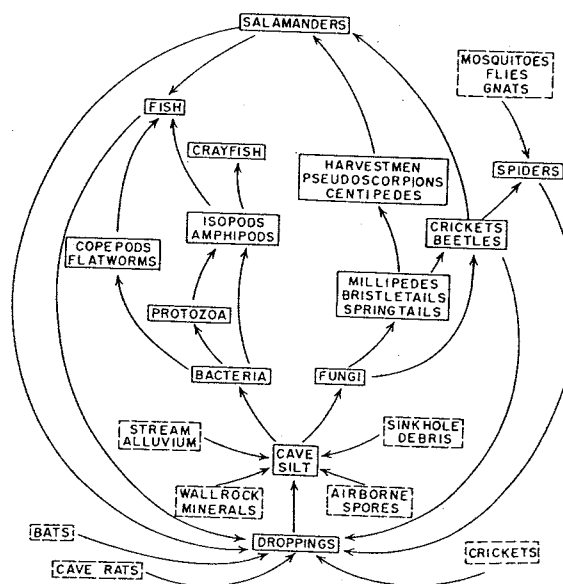
Harrison-Crawford State forest

First, a little background... This was the fourth workshop in a series of formal continuing education talks that deal with sustaining ecosystems -- the Indiana Forest and Wildlife Continuing Education Series. These workshops are sponsored by the Indiana Society of American Foresters, the Indiana Wildlife Society, The Nature Conservancy, the IDNR Divisions of Forestry & Fish and Wildlife, and the Department of Forestry and Natural Resources, Purdue University. The major theme of this workshop focused on the issues of sustaining forest and wildlife management in karst areas of southern Indiana. According to the registration form, "The karst area of southern Indiana has quite a distribution of species, some being discovered for the first time, while others survive on an ever-decreasing landbase." This set a rather unique stage for the presenters, those who are currently involved with field research in karst areas. Two field trips were conducted: One to capture and identify bats, the other as described in the registration form, "To explore Wyandotte Cave as you never explored a cave before." This workshop was a unique opportunity to meet and discuss karst biota with some of the region's most knowledgeable researchers.

Those who attended were mainly from the Indiana DNR and Indiana representatives of the USDA Forest Service -- familiar names include Ellen Jacquart, Natural Resource Specialist and leader of the HNF/IKC Karst Project for the Hoosier National Forest; Jeff Cummings, Interpretive Naturalist and involved with the IDNR cave permit system based at Harrison-Crawford State Forest (he has since transferred to Spring Mill State Park), and Tammy Tyner, Interpretive Naturalist at McCormick's Creek State Park. Also present were members of the environmentalist group, Heartwood. I was the only caver present who had employment outside of the government sphere, attending as a representative of the HNF/IKC Karst Project. As you can imagine, it was interesting

to have all of us under the same roof! Much valuable knowledge was gained as was the opportunity to improve relations between different groups.

Before providing a synopsis of the meeting, it would be helpful to get an idea of how the biota of caves interrelates:



The cave food web. Arrows indicate the direction of energy flow supplied by food. Components in dashed boxes are derived from outside the cave. (Moore & Sullivan (1997), *Speleology: Caves and the Cave Environment*, p117)

The following is a very general synopsis of what I have gleaned from each presentation:

Eco-regional Planning for the Interior Low Plateau, What is Indiana's Importance? Dr John Shuey, Director of Science, The Nature Conservancy, Indianapolis. In this session, Dr Shuey stressed TNC's philosophy as it relates to Indiana's karst regions. Particularly, that the overall intent of the organization is bio-regionally rather than politically based. Hence, there are no artificial boundaries, just natural ones. Therefore, southern Indiana and the neighboring states form one general area. Also, as far as management is concerned, emphasis is placed not only on preservation but conservation, as

it is more encompassing. There are several "species targets" in Indiana to keep track of, ranging from life forms which are common to rare. TNC has a system for globally ranking the rarity of every species. Rarity ranges from G5, for common species like robins to G1, for species which are known from only one to five sites worldwide. Several cave critters are in the G1 to G3 range. TNC stresses that it is important to use preventive tactics to catch species before they become rare or rarer. Dr Shuey suggests that since water in karst areas comes from many sources, it is important to not only protect under ground environments, but above ground environments as well.

The Biology of Bats: In-depth Review of Indiana and Gray Bats, Dr John Whitaker, Indiana State University, Terre Haute. Dr Whitaker stated that the decline of the bats may lie in the destruction of their habitat -- it's not that there are too many people, it's that their consumption and need for land is contributing to the decline of bat numbers. Therefore, there is a need to protect habitat in order to protect species. Although there is more forest in Indiana now than in the 1960's, the pesticides and pollutants that come with land use have tended to bring down the bat population. (It was interesting to note that Gray and Evening bats are actually more rare in Indiana than Indiana bats!). As far as summer living arrangements are concerned, it has been found that Indiana bats prefer to rest under the loose bark of trees rather than in bat boxes (if an artificial bat roost is to be constructed, it should be made to resemble trees with loose bark, such as hickories). In the winter, they tend to roost clumped together in single-layered masses in caves. Gray bats are the only bats who prefer to live in caves in the summer. Other bat facts include: most bats have just one young per year; the common Pipistrelles usually hibernate solitarily in caves; Big Browns are the most adaptive to encroachment of civilization and hence are the most common bats to be found in and around buildings; and all other bat species have suffered from development.

The Endangered Species Act and the Impacts on Forest Land Management (related to the Indiana bat), Scott Pruitt, U.S. Fish and Wildlife Service, Bloomington. The Endangered Species Act was pursued in 1973 by President Nixon. It permits "use" of a species as long as the use doesn't jeopardize the continued existence of the species. As far as

the Indiana bat is concerned, they require a certain average temperature to roost in the winter, about 8 degrees C. So, careful monitoring of temperature is important. It is thought that the decline of the species may be due to the decline of areas that provide this temperature. A device known as a datalogger can be placed in caves in order to record temperatures in order to determine if the right habitat is present. Also important for the bats continuation is the need for bat-friendly gates, cooperation between those who study them, and the use of artificial shaggy bark for summer resting places where forests have been depleted.

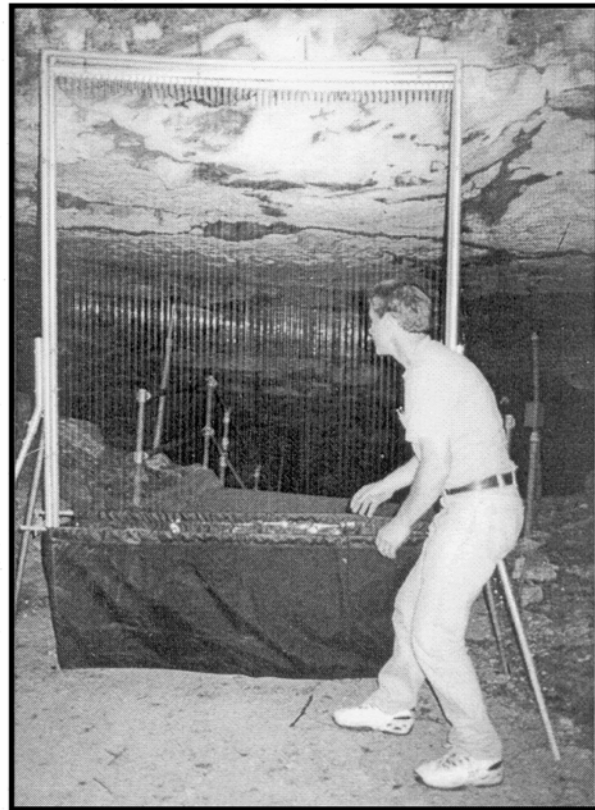
Indiana Bat Habitat Research Results, John MacGregor, US Forest Service, Daniel Boone National Forest, Winchester, KY. John has been involved with this large-scale study for many years. A device known as a spherical densiometer is used to measure the canopy cover of the trees. Since the study is still going on, the results are still coming in.

Bat and Nongame Management Implications for Indiana, Scott Johnson, Nongame Biologist, Indiana DNR, Division of Fish and Wildlife, Bloomington. Scott relates that so far eleven signs have been posted outside of major Indiana bat hibernacula. The intent is to help protect the bats. A device known as a spelogger is occasionally used to count the unauthorized visitation of persons into these caves. Gates are helpful for the bats protection. The best type seems to be the angle iron gate -- consisting of horizontal, flat iron rails placed at an angle and held up by vertical iron bars. To keep the gate from rusting, oil-based paints are suggested (water-based paints such as latex don't work as they cannot adhere to metal in humid cave air). As with gates, the structure of trees in which the bats inhabit is also important -- in summer, and previously mentioned, they prefer to rest under loose bark. Other, more unusual, vertebrate species that live in Indiana caves include the Allegheny Woodrat (just north of the Ohio River) and the occasional Bobcat.

The Blue River Project: Goals and Objectives, Allen Pursell and Dennis McGrath, Project Manager and State Director respectively, The Nature Conservancy, Corydon. The Blue River begins in Washington County and drains from north to south. Along the way, several sinkholes and tributaries drain into it. One such tributary, Indiana Creek, runs underground for about four miles. The river returns to the surface at the largest

spring in Indiana, Harrison Spring. A variety of businesses have been in existence along the Blue Rivers' banks throughout its history. Of notable interest were those of button factories, which collected scores of mussels to be used in the manufacture of buttons for clothing, etc. This had an effect on the ecology by nearly depleting the river of the creatures. Other influences, which occur today as well, include nearby timbering and farming, as they increase sedimentation. Steps are being taken to educate and work with the general public about the use of the area in order to live with it in a more harmonious way. For example, a brochure has been created for general distribution, "Sinkholes, Groundwater, and other Mysteries below your feet in Southern Indiana," made possible by a partnership between The Nature Conservancy, the Indiana Karst Conservancy, Soil and Water Conservation Districts and Partners, the Indiana DNR Divisions of Forestry/Fish and Wildlife, Blue-spring Caverns, Marengo Cave, and the American Cave Conservation Association, Inc.

Once the day programs ended, it was time for the evening field trip to take place -- capturing and identifying bats. The group split into two: Dr Whitaker took about half to the Blue River where a mist net had been strung, and John MacGregor and Scott Johnson took the remainder to the entrance of Wyandotte Cave where a harp-style trap had been set. Both collecting devices, when properly used, are harmless to the creatures. A mist net works when the bat flies directly into it and becomes tangled in the netting. Unfortunately, the bats on the Blue River were rather shy that evening so none were caught. However, the bats at Wyandotte were coming out in force. The harp-style trap worked as it should -- the bats flew into it but they couldn't fly out. As the bats approached the trap, they sensed the first set of vertical piano wires, angled themselves to avoid them, but couldn't right themselves before bouncing into the second set. Hence, they gently fluttered down between the wires and landed in the plastic trough below. Unable to scramble out to fly, they rested until rescued. A large number were collected and placed into wooden/wire mesh collecting boxes for us to observe. The types captured ranged from Pips to Indiana bats, Long-eared bats, Big Browns, etc. Both presenters did an excellent job describing how to tell the various species apart.



Scott Johnson ready to capture the unsuspecting.

The next day started with *Plant Communities Associated with Indiana Karst*, Mike Homoya, Botanist, Indiana DNR Division of Nature Preserves, Indianapolis. There are a variety of plant communities associated with karst -- chert barrens, limestone glades, pit caves, etc. Chert barrens are characterized by areas where limestone is present above and below the ground. They tend to be open and dominated by grasses and wildflowers like prairies, but some of the plant species are unique to this barrens communities. Some typical plants found in these areas include prairie dock (in the aster family), prickly pear cactus, and post oak. Limestone glades are similar to chert barrens, however, they have an even harsher environment since there is more exposed limestone. In the absence of fire, which keeps both barrens and glades open, these areas can become dominated by red cedar. Water hyssops (a form of snapdragon) is a rare aquatic plant found in sinkhole ponds. Filmy fern, is a very tiny fern found associated with moist shady rock overhangs, and could potentially be found in pit caves.

Cave Invertebrates of the Karst Region, Dr Julian Lewis, Consultant, Clarksville, IN.

Dr Lewis is a consultant for The Nature Conservancy. About 25,000 years ago, when glaciers were present in Indiana, certain minute surface creatures started to move underground. Eventually, they lost their pigmentation and sight. Hence, becoming

true cave-dwellers. He uses pitfall traps to capture these little creatures (namely pseudo-scorpions, millipedes, springtails, flies, etc.), the pitfall trap. Simply described, this trap consists of a glass jar loaded with a stinky delight, such as Limburger cheese



A group gathers to observe the recent catch from the harp trap.



John MacGregor identifying a bat.

all photos by Kriste Lindberg

submerged in water, and is placed in the floor of the cave. The creature smells the food and is lured within, not realizing that it can't get out. Since the animals are so small, more than one can collect in a trap at a time. Sometimes a few different species are represented. Many of them are considered to be quite rare or endangered (G1 - G3). Incidentally, Indiana has its own uniquely diverse forms. However, many go undiscovered as more research is needed in order to capture and identify them. In addition, development in karst areas should be kept in check as land use and sewage have a direct impact on the karst micro-fauna. As sewage seeps into caves via leaky septic tanks, etc., oxygen is removed from the water and cave creatures are replaced by sewage creatures, such as bloodworms and bacteria.

Distribution and Status of the Northern Cavefish, Dr William Pearson, Professor of Biology, University of Louisville, Louisville, KY. Cave fish are the top carnivores in the true cave-dwelling biota food chain. They tend to be found in calmer waters, associated with crayfish and snails. There are apparently only 73 known sites where this particular species is found. Did you know that the Northern Cavefish reaches reproductive age at about four to five years of age? At that time, they are approximately 75mm in length. They can grow

larger than that, the longest one known reached 150mm. Some can even live to be 30 or so years old. All this is quite interesting, as is the fact that the anus of this fish is located in its throat!

With that said, it was time for lunch and a trip to Wyandotte Cave to see what type of biota we could spot.

While in the cave, Drs Lewis and Pearson and Allen Pursell led us through the cave to check on their pitfall traps. The little traps do have a characteristic odor and it becomes obvious why so many little creatures are drawn to them. Not only were we treated to observations of micro-fauna, but along the way we also observed several roosting bats, including a "clump" of Indiana Bats.

Overall, this was a delightful workshop, which not only taught us a great deal about the life of karst areas, but also brought together many folks from diverse backgrounds with-in a related field of interest.

If you would like to learn more about the ecology of caves, as well as other cave -- related values -- such as paleontology, recreational use, hydrology, etc. - and become part of a rewarding project, please contact me, Kriste Lindberg, Volunteer Coordinator and Biota Team Leader, HNF/IKC Karst Project, (812) 339-7210.

INDIAN CREEK WORKDAY - SATURDAY, NOVEMBER 7th

To continue the effort started last November, The IKC and The Nature Conservancy are co-organizing a clean-up of an old trash dump along the banks of Indian Creek in Harrison County, just upstream from the Sinks. Those who participated last year know the task ahead. This year we will have two or three large dumpsters and additional volunteers solicited from TNC's membership. The work is not glamorous, but it needs to be done and who better to do it. The property is privately owned, but TNC owns the conservation easement that will protect the creek and buffer zone for perpetuity. Furthermore this easement is likely to be transferred to the IKC since it is related to karst.

The start time and meeting place have not been finalized and will be communicated later. We recommend heavy-duty gloves and boots. Since the dump is on a steep bluff, vertical equipment might also be handy. Rakes, shovels, Trash bags, large heavy-duty trash containers, and pick-up trucks to shuttle the trash to the dumpsters would all be helpful.

Anyone needing more information or directions, please contact Bruce Bowman.

CENTRAL OHIO GROTTO RECEIVES 1998 NSS CONSERVATION AWARD

by Bill Walden

Friday August 7, 1998 -- The Central Ohio Grotto (COG) was awarded the 1998 Group Conservation Award at the 1998 National Speleological Society Convention at the University of the South in Sewanee, Tennessee.

Several of us COGers were seated together at the NSS banquet listening to the awards being given. We were all very shocked when it was announced that the Central Ohio Grotto won this award. We all went up to the platform to receive our award. None of us knew what to say. Andy Franklin was shoved to the microphone. As we returned to our table, Andy spoke and said "We did no more or no less than any grotto should do."

The Grotto's name will be attached to a plaque and sent to us. Hopefully we will have it in time for the September meeting.

Hilary Hopper did e-mail me early this summer to let me know that the Central Ohio Grotto had been nominated for this award. I took this lightly thinking to myself, what had the COG done to deserve being nominated. We did what all NSS grottos should be doing.

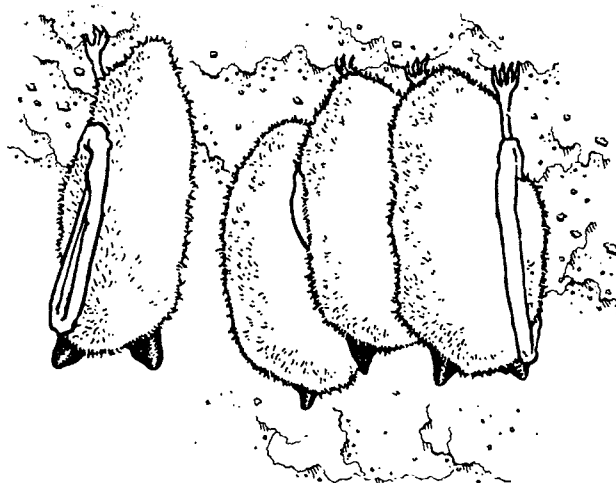
I extend our warmest thanks to the following people for their help with the Dry Cave project:

- o Kathy Welling for her organization, work, and for getting the Indiana Karst Conservancy involved in the Dry Cave project.
- o Keith Dunlap of the Indiana Karst Conservancy for his immense effort in fabricating and installing the gate in Dry Cave.

- o Tom Rea of the Indiana Karst Conservancy for his help with the gate. John Cole for getting the COG started with this project and his continuing support and help.
- o Dick Maxey and Cheryl Early.
- o Darrell Adkins and Alice Woznack.
- o Lacie Braley
- o Karen & Katie Walden
- o Joe Gibson
- o Jon Gardner
- o Jim Blankenship
- o Steve Aspery
- o Doug Burke
- o Chuck Daehnke
- o Don Conover
- o Doug Davis
- o Members of the Ohio Valley Region who helped on the initial clean up of Dry Cave.
- o And to those who helped but whose names I missed.

Dry Cave is located within the Highland Nature Sanctuary in Highland County, Ohio. It is located on Cave Road about one mile past the Seven Caves. Nancy and Larry Henry founded the Highland Nature Sanctuary.

The Group Conservation Award includes a check for \$100.00.



SULLIVAN ACQUISITION STATUS & DONOR'S LIST

compiled by Keith Dunlap

Fund raising for Sullivan Cave continues as we near the \$50,000 mark. To date (09/05/98) we have collected \$45,560 with another \$4000 in pledges made. Our on-line auction is still in progress and we are pursuing a few grants. Once the house is divested and the final purchase price for the property is finalized, we will probably renew our direct solicitation efforts to complete the acquisition funding as quick as possible. Thanks to all who have helped so far.

\$5,000 or more

Central Indiana Grotto
National Speleological Society

\$1,000 to \$4,999

Dick Blenz
Bruce Bowman
Keith Dunlap
Bambi Erwin
Jeff Farr
Kriste Lindberg
Steve Lockwood
Larry Reece
Bob & Phyllis Sergesketter
Tom Sollman
Bill Tozer
Bob Vandeventer
Dick & Sue Vernier
Evansville Metro Grotto
Greater Cincinnati Grotto
Richmond Area Speleological Society
Virginia Karstlands

\$250 to \$999

Robert Armstrong
George Brutchin
Chris Carpenter
Mark Deebel
Samuel Frushour
Hank Huffman & Ellen Jacquart
Steve McKenzie
Jane Miller
Lynn Miller
Donald Peters
Buford Pruitt, Jr
Nadine Radkey
Tom Rea
Bruce Trotter
Dean Wiseman
1997 Fall MVOR
The Cleveland Grotto
Harrison-Crawford Grotto
Southeastern Cave Conservancy

\$100 to \$249

Bruce Barnes
Ted Bice
Amy Branigin
Keith G Calkins
Rane Curl
Bruce & Deb Devore
Scott & Jaime Fee
Joe Gasperi
William Halliday
Tem Hornaday
Glenn Kotnik
Daniel Lucas
Bob Masta
Nick Noe
Mitchell Norris
Ernie Payne
Everett Pulliam
Robert Roundy
Don & June Shofstall
Kevin Strunk
Stan Weinzapfel
Norbert Welsh
Jeff Weston
Kevin Wools
Bloomington Indiana Grotto
Mid-Hoosier Grotto
Northern Indiana Grotto
Paha Sapa Grotto
St Joseph Valley Grotto
Tri-State Grotto
Windy City Grotto

\$50 to \$99

Tom Ahlers
The Boehler Family
Jeff Bray
Carl Brown
Larry & Linda Bundy
Dale Chase
Martin Church
Dave Haun
Gary Napper
Richard Newton
Walter Pirie
Steve Ragsdale
Charles Rex
Gregory Stamp
Rich Whisler
Dayton Underground Grotto

Meramec Valley Grotto
Michigan Interlakes Grotto
MSM Spelunker's Club
Near Normal Grotto
VPI Cave Club

\$5 to \$49

James Adler
James Braswell
Danielle Burden
Barb Capocy
Jeff Cobb
Jeff Cody
Tony Cunningham
Ron Dowell
Bruce Foyer
Ted Frost
Matt Gibson
James Helmbold
Tim Heppner
Robert Jarboe
Kate Johnson
John Koch
Thomas Liddle
Dan McDowell
Jon Miller
Art & Peggy Palmer
Theresa Peterson
Jan Pursley
Steve Ragsdale
Kevin Rasmus
Rusty Riley
Susan & Dave Strickland
John Wilkerson
James Wright
Frederick Grotto
Mark Twain Grotto
Miami Valley Grotto
Western Indiana Grotto

Pledges

Danielle Burden
Tony Cunningham
Larry Mullins
Tom Rea
Bruce Trotter
Kathy Welling
Rich Whisler
Dean Wiseman
Sycamore Land Trust

HOOSIER LANDSCAPES: BLUE RIVER

by John Shuey

The following articles was reprinted from the Summer 98 TNC Indiana Chapter newsletter.

With the establishment of our Blue River Project Office almost three years ago, we expected to begin the long, hard process of addressing many of the issues facing our conservation mission in southern Indiana. Because the critical biodiversity targets of the Blue River System are really three interrelated and intertwined types, we expected that the issues might be difficult to sort out and that progress might be slow at first given its complexity. Well, progress has been anything but slow, and we are pleased to report many successes. Our small on-site staff is headed by Project Manager Allen Pursell, who is assisted by Restoration Specialist Bob Sawtelle; they have been busy and have much to show for their efforts.

The three intertwined biological systems that interest us are: 1) the river itself, which is one of the richest Ohio River tributaries remaining; 2) the underground streams and caves that feed into the river and that support a poorly known assemblage of very rare species; and 3) the more traditional terrestrial plant communities ranging from large blocks of forests to small glade and cliff communities. These upland communities filter the water that feeds regional streams, both above and below the surface.

Here is an update on our significant accomplishments to date.

The River

The Blue River is one of the state's most heavily used recreational rivers, and it is an asset to the local economy. Thus, we have teamed with Cave Country Canoes to sponsor two or three river cleanup days each year. These events offer local residents opportunities to show their support of Blue River, and allow us to directly communicate with the public about its importance.

One of the primary threats to the river is sediment-laden runoff from adjacent lands. So far, more than 90 acres of bottom land forest have been replanted, restoring forests

to more than four miles of riparian habitats along the river. This will help filter runoff before it enters the river, trapping sediments on the land. As we increase these plantings and the trees mature, water quality should improve and the scenic quality of the river will increase. In addition, these new forested areas should improve habitat for the federally endangered Indiana bat. More than thirty-nine percent of the world's Indiana bat population hibernates in the caves of the Blue River, and providing high quality forests along the river for spring foraging is critical following their long winter hibernation.

We are working with the largest city in the watershed, Salem, to improve water quality. When we learned that Salem was in the process of upgrading its waste water treatment plant, we approached them about installing an ultraviolet disinfectant system, rather than the traditional chlorine-based system. Chlorine can be a chronic problem for long-lived aquatic species such as mussels, so removing this potential threat is in the mussels' best interest. The city officials agreed to our proposal, and we will help fund the additional cost to install the UV system later this year.

The Subterranean

The caves of the Blue River support a world-renowned community of cave dwelling species. Thanks to a three-year research effort led by Dr Julian Lewis, we now know just how important this system is. An impressive ninety-three globally imperiled species make their homes in these caves. Dr Lewis has also identified nine critical community types that support these species. They range from cave streams and pools to specialized communities that live only in bat guano.

The caves and rivers face similar threats that mostly revolve around water quality. Allen works closely with county officials on new land-use plans, and ordinances that protect sinkholes across the landscape are likely to be developed soon. More than

continued on page 18...

INDIANA KARST CONSERVANCY TREASURY REPORT

Income/Expense Statement From April 1, 1998 to June 30, 1998

INCOME:

Dues Apportionment and Residuals	506.25	
Donations	715.00	
Dedicated fund transfer	28.00	
Interest	66.23	
		<u>\$1,315.48</u>

EXPENSES:

IKC Update (printing, production, mailing)	190.49	
Membership (postage, meeting notices, etc)	29.19	
Conservation/Management/Education	31.99	
Research grant	800.00	
Sullivan (fund-raising, trail)	102.53	
Misc (website, banking)	70.80	
		<u>(\$1,225.00)</u>

NET OPERATING EXCESS (DEFICIT) THIS PERIOD: \$90.48

Balance Sheet June 30, 1998

ASSETS:

Cash in Checking Account	381.23	
Cash in Savings Account	49040.16	
		<u><u>\$49,421.39</u></u>

LIABILITIES & OPERATING EXCESS:

Hancock Property Maintenance Fund	154.79	
Indiana DNR Nongame Fund	134.00	
Sullivan Aquisition Fund	39220.38	
Hat fund	55.65	
Deferred Dues Fund: 135 members - 1998	1518.75	
13 members - 1999	195.00	
1 members - 2000	15.00	

Previous Operating Excess	8037.34	
Net Excess (Deficit) This Period	90.48	
Current Operating Excess		<u>8127.82</u>

Total Liabilities & Operating Excess \$49,421.39

IKC QUARTERLY MEETING MINUTES

Saturday, June 20, 1998

Bloomington, Indiana

BOARD MEMBERS PRESENT:

James Adams
Bruce Bowman
Bruce Devore
Keith Dunlap
Hank Huffman (proxy for Nick Noe)
Kriste Lindberg
Steve Lockwood
Bruce Silvers (proxy for Bob Sergesketter)
Tom Sollman
Bill Tozer
Bob Vandeventer
Dick Vernier

BOARD MEMBERS ABSENT:

Dave Haun
Tom Rea
Kathy Welling

The June meeting was called to order at 7:12 PM at the IU Geology Building in Bloomington, Indiana, President Bruce Bowman presiding. Two proxies were accepted. The minutes of the Annual Business Meeting were accepted as published in the June *IKC Update*.

Treasurer Keith Dunlap reported that we have \$9,977.61 in the General and Restricted Funds (excluding the Sullivan Fund). Dunlap also reported that the Sullivan Fund contains \$46,283.08 which includes \$38,573.08 in cash and \$7,710.00 in pledges. Money is still coming in from a variety of sources. Bill Tozer will follow-up with the people who have made pledges but haven't made their donations.

Bob Vandeventer's computer raffle to benefit the Sullivan Fund has raised \$1,061.

James Adams spoke about the on-line auction which is currently underway on the IKC website. An ad appeared in the June *NSS News* and a piece is due on the Cavers Digest any time. Bids are currently not "burning up the web."

Dunlap reported on IKC hat sales. There are two styles in this batch. One style has sold out. We started with 47 caps and have 12 baseball-style hats left. Tom Sollman will order 30 more hats. Bruce DeVore moved and Dick Vernier seconded to use the hat sale money for the Sullivan Fund. Motion passed, 11-1-0.

Bowman has prepared a sample grant application inquiry letter to send to possible foundations. Directors were invited to give him feedback on the letter before he sends them out in a week or so. Hank Huffman is preparing an application for a Golden Eagle grant from the Indianapolis Power & Light

Company. He is asking for \$7,000 towards the Sullivan Cave acquisition.

Dunlap brought up the possibility of a solicitation letter to Midwest members of the National Speleological Society. Fifteen hundred letters would cost about \$500 to prepare and mail. Steve Lockwood suggested that we send letters to other grottos beyond the NSS affiliates in and around Indiana who have already received a letter. After discussion, a suggestion was made to mail to all NSS grottos and give them an update on the Sullivan fund raising project. This could be effective but much less expensive. Vandeventer also has an extensive list of recent visitors to the cave that could be included in the mailing. Huffman suggested that we also add people who were active in Indiana caving 20 or 30 years ago. Many people who are now out of caving, still have fond memories of their early adventures in Sullivan Cave. An article for a newspaper to the general public stressing the history of the cave was also suggested.

Adams moved to empower the Sullivan Acquisition Committee to send out solicitation letters as needed as long as expenses do not exceed \$1,000. DeVore seconded. Dunlap proposed a friendly amendment to take funds only from the General Fund. Adams accepted the friendly amendment. Motion failed 2-7-3.

Dunlap moved to authorize the Sullivan Acquisition Committee to spend up to \$200 from the General Fund for fund raising activities until the next meeting. DeVore seconded. Motion passed. 11-0-1.

Dunlap spoke about the possible sale of the house and corner property. There has been very little interest. The realtor's listing contract expires on June 29 and a different direction will probably be sought.

Jeff Cody suggested submitting a more extensive article to the *NSS News*. There was a lot of discussion about that possibility and in presenting a paper at the NSS Convention in August. Perhaps money could also be solicited at the NSS Convention.

The trail improvements done at Under Earth Day look very good. It was a successful event.

Concerning other properties, several projects are in the works but nothing is immediately up and coming.

Dr Julian Lewis has been sampling water in Binkley Cave. The IKC granted him \$200 for the project. Bowman summarized a preliminary report for the membership. The water quality is pretty bad and Lewis suggests that a sewage problem exists.



Kriste Lindberg showed off the final version of the new IKC brochure. Dunlap will handle printing the brochures. The new flyer should be available in a month.

Nick Noe is working on a revision of the display board. Unfortunately, the new board is too large for easy portability. The IKC has \$35 in this project. Noe has offered to buy the unusable board from the IKC. Vandeventer will work with Noe on disposing of the unused board. There was also some discussion on new ideas for a new display.

Shirley Spring Cave: The Bloomington Indiana Grotto has a committee that is working with the City of Bloomington to come up with an appropriate plan for the cave.

Reeves Cave: Access continues with no change in the current management.

Dunlap moved that the IKC sponsor a Fall workday at the Indian Creek Sinks with up to \$500 for dumpster expenses. Vandeventer seconded. Motion passed 11-0-1.

Steve Lockwood updated the attendees on Hoosier National Forest activities. On May 16, the first HNF management plan on Dillon Cave was signed. The next cave management plan will probably be on Elrod Cave at Wesley Chapel Gulf. There are many caves that need more work.

Dunlap asked if there was an interest in the IKC maintaining the trail at Wesley Chapel Gulf. Through a coop agreement, there may be the possibility of recovering some expenses. The membership seemed to favor the project.

The next special reprint (#10) will be "The Swallowholes of the Lost River" by Clyde Malott.

Next meeting will be on September 19 at 5:00 PM at the home of Lockwood in Mitchell, Indiana. Dinner will be at 7:00 PM with the annual dessert bake-off following the meal.

Meeting adjourned at 9:28 PM.

Submitted by James Adams, Secretary.

continued from page 15...

20,000 copies of a brochure explaining sink-hole protection were produced and distributed to landowners. These efforts should help keep contaminated runoff from caves, benefiting many of the rarest species that depend on clean water.

We have also worked with the DNR to protect caves in the project area, including Wyandotte Cave. Owned and managed by the DNR, Wyandotte Cave is biologically one of the richest cave systems in the country. Through an innovative easement, we protected the Sinks of Indian Creek, which literally swallow Indian Creek and divert it through an underground river system to Harrison Springs, more than ten miles away. This easement will eventually be transferred to the Indiana Karst Conservancy, which will safeguard this important site.

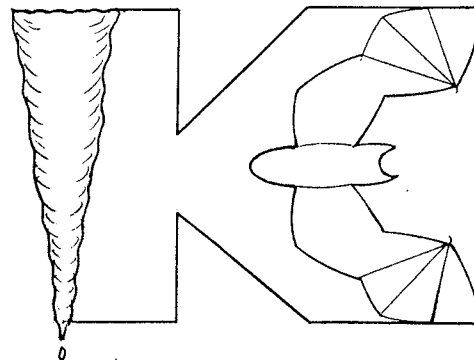
The Uplands

Many traditional sites fall within the project area, and with Allen spearheading our efforts in cooperation with landowners, we have made several key acquisitions. Additions at sites such as Greenbrier Knob

and Wyandotte Cave help protect forests as well as rivers and caves. At Mosquito Creek and Twin Creek Valley, we have added significant tracts of forests to natural areas.

Bob Sawtelle provides the muscle. Restoration focuses on glades, where red cedar has invaded after decades of fire suppression. But Bob has increased glade habitat through prescribed burning and hand clearing. Bob also leads efforts to replant forests and remove exotic honeysuckle near our Three-Way Sedge Sinkhole Swamp Preserve.

Our Blue River staff has made tremendous progress. But much more remains to be done, and with your support we will continue the Blue River's success.



QUARTERLY MEETING & COOKOUT REMINDER

SATURDAY, SEPTEMBER 19th, 5:00 PM

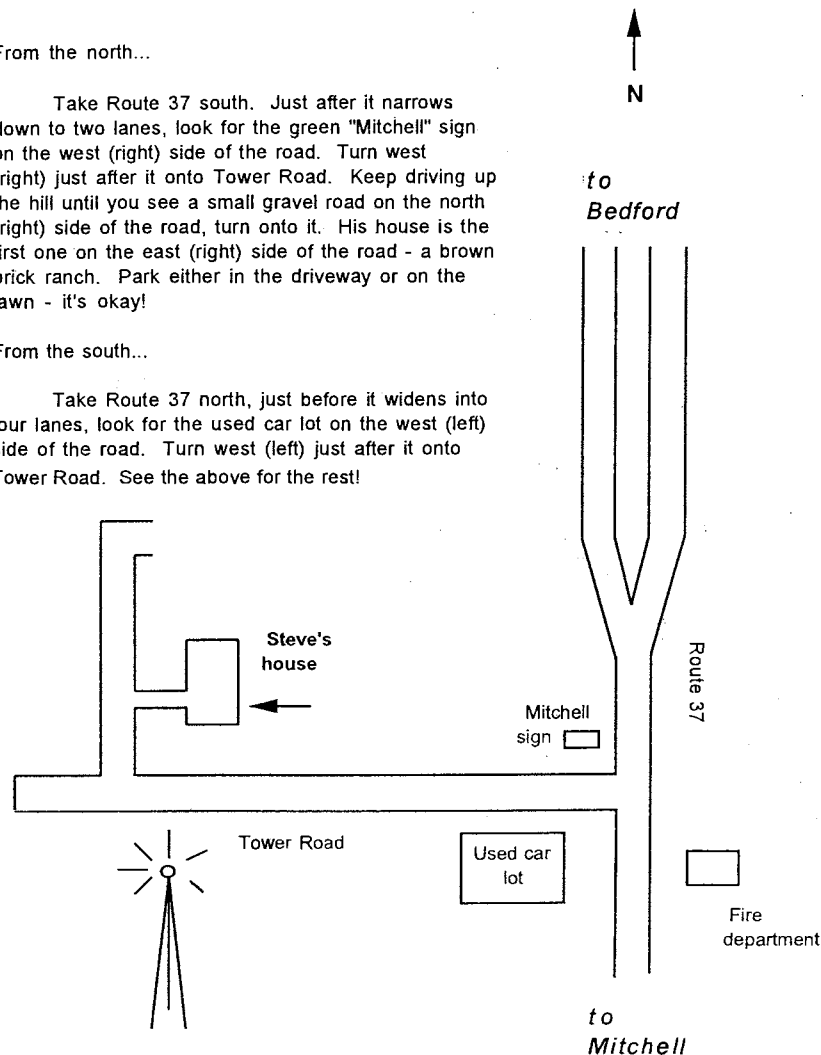
HOME OF STEVE LOCKWOOD, RR 1, BOX 107, 812-849-5766

From the north...

Take Route 37 south. Just after it narrows down to two lanes, look for the green "Mitchell" sign on the west (right) side of the road. Turn west (right) just after it onto Tower Road. Keep driving up the hill until you see a small gravel road on the north (right) side of the road, turn onto it. His house is the first one on the east (right) side of the road - a brown brick ranch. Park either in the driveway or on the lawn - it's okay!

From the south...

Take Route 37 north, just before it widens into four lanes, look for the used car lot on the west (left) side of the road. Turn west (left) just after it onto Tower Road. See the above for the rest!



INDIANA KARST CONSERVANCY, PO BOX 2401, INDIANAPOLIS, IN 46206-2401

I would like to help the IKC protect Indiana's unique caves and other karst features. Enclosed is:

\$ _____ for IKC membership dues at \$15 per year (dues expire March 31st of each year, please pro-rate @ \$1.25/month).

\$ _____ donation to the general IKC fund.

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

_____ I know of an area worthy of protection. Please contact me.

_____ I would like to volunteer to help. Please contact me.

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

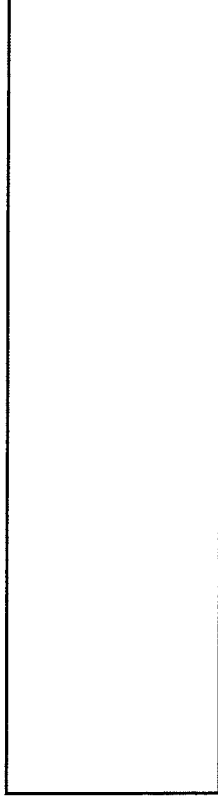
PHONE # _____

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

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

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