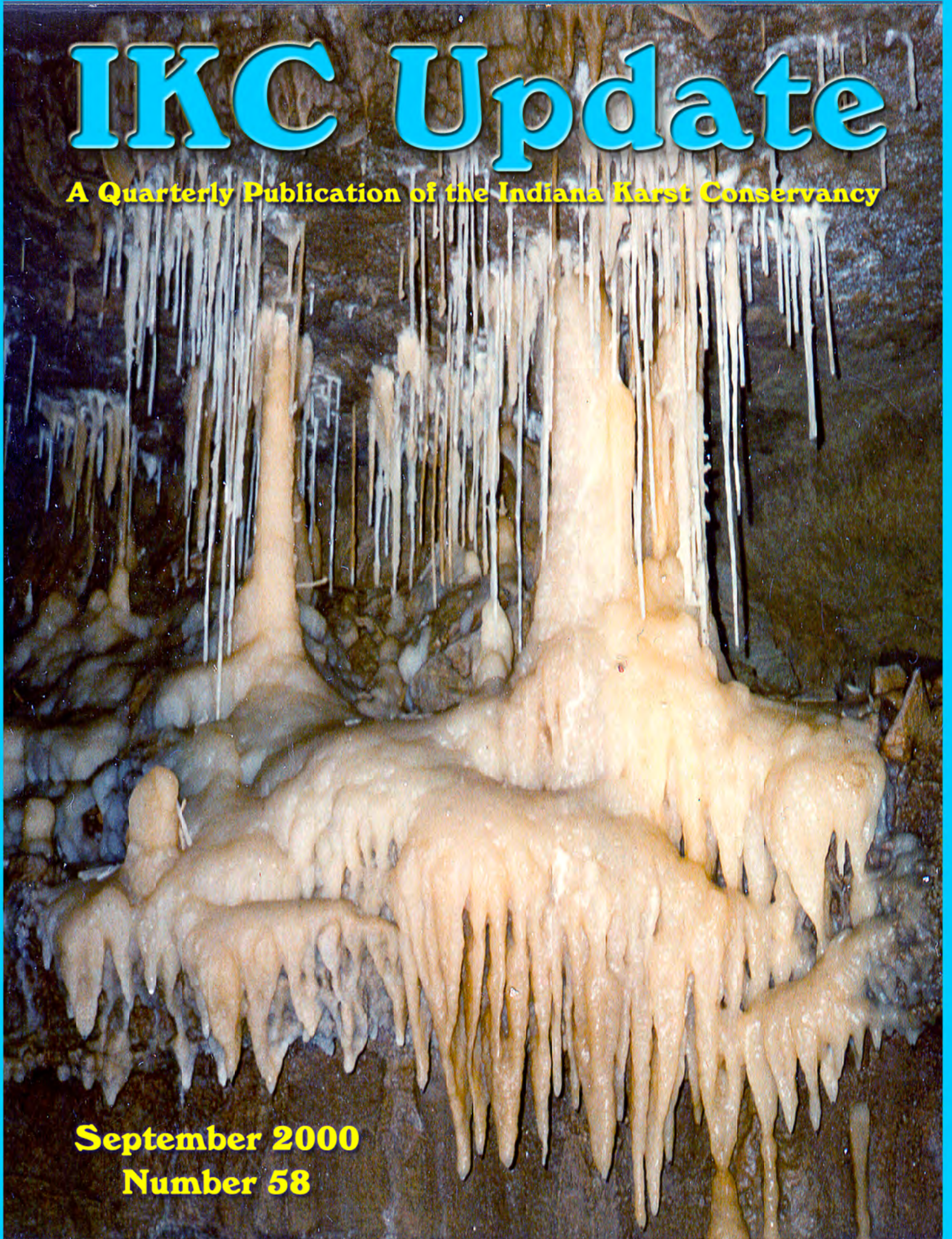


# **IKC Update**

**A Quarterly Publication of the Indiana Karst Conservancy**

**September 2000  
Number 58**



# 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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Cover: Formations in an un-named cave.  
 Photographer unknown.

Newsletter staff: Keith & Bambi Dunlap



# QUARTERLY MEETING & COOKOUT REMINDER

**SATURDAY, SEPTEMBER 23th, 5:00 PM**

**MITCHELL, INDIANA**

**HOME OF STEVE LOCKWOOD, RR 1, BOX 107**

The quarterly meetings are for the elected Board to conduct official business and for our members and other interested persons to have an open forum to talk 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: Brief recaps of last quarter's activities; Sinks of Indian Creek conservation easement steward appointment; Board Member appointment; Sullivan tree project status and funding proposals for 2001; NSS Conservation grant; OVR Conservation project; Land Acquisition Committee activities, HNF inventorying project; Adopt-a-trail proposal; 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 covered-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. Also bring lawn chairs, your swimsuits, and the family. Contact Steve Lockwood or Kriste Lindberg for further details.

Meeting directions: See page 19 for map.

## ACTIVITIES CALENDAR

- 23 SEP = ORANGEVILLE RISE WORKDAY, ORANGE COUNTY (page 4)
- 23 SEP = IKC FALL QUARTERLY MEETING & COOK-OUT (see above)
- 30 SEP = LOST RIVER TOUR, Orleans (see page 5)
- 21 OCT = HNF MEETING & INVENTORY WORKDAY, Bedford (contact Steve Lockwood)
- 04-05 NOV = OVR CONSERVATION PROJECT AT LEONARD SPRINGS PARK (see page 13)
- 14-16 NOV = BAT & MINES TECHNICAL FORUM, St Louis
- 18 NOV = HNF KARST INVENTORY WORKDAY, Mitchell (contact Steve Lockwood)
- 16 DEC = HNF MEETING & INVENTORY WORKDAY, Bedford (contact Steve Lockwood)
- ?? DEC = IKC WINTER QUARTERLY MEETING (date and location TBD)

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...

Can you say, "good timing"? Next week as I write this, September 11 - 15, I will be attending a week-long conference at Indiana University in Bloomington focusing on watershed protection, *Working at a Watershed Level*. Understanding watersheds is integral to being able to work with groundwater, such as that which you find in caves and karst, as they cover specific drainage areas. This five-day conference is brought to us by a host of government and other agencies, including the Indiana Department of Natural Resources, Indiana Department of Environmental Management, Natural Resources Conservation Service, IU, and Purdue University. Topics include why it is important to work with watersheds, biological components and process of watersheds, state/local cooperation in the watershed, a variety of field trips, and of course outreach, education, and motivation. It could not come at a better time as the IKC is really taking off with these efforts.

As you will see elsewhere in this issue, we have been awarded the \$500 grant by the NSS Conservation Grants Committee to purchase the karst/groundwater model we have discussed in previous *Updates*. It is now on order and we should be receiving it towards the end of this month. I will not go into detail about it here, but needless to say, we are thrilled. It will help us greatly in this public education endeavor.

In other happenings, during the NSS Convention in June, I sat on a panel of conservation organizations during one of the sessions. Unofficially, the IKC is looked

upon as one of the "big three", which also included the NSS and Southeastern Cave Conservancy. The smaller cave conservancies and persons from the audience asked many questions about other workshops to further our education efforts, including three more of the Natural Resources Education Center's - Project Wild (focusing on wildlife), Project Learning Tree (emphasizing woods), Hoosier River Watch (monitoring of flowing water), and of course Project Underground (cave and karst conservation). All of these topics are interrelated and key to understanding the big picture of land stewardship and helping to teach about it. It is important so present and future generations can better understand how all work together and why it is important to take care of them. As a matter of fact, the coordinator of Project Wild and I are working on a collaboration to teach a course on bats!

The folks at the NREC were so taken by our efforts with Project Underground that they have asked me to be part of a roundtable discussion of state agencies focusing on environmental education and also present it at the Environmental Education Association of Indiana's annual conference in November. I will keep you up-to-date with these efforts as they progress...

If you would like to be part of the IKC education initiative, just let me know!

*Kriste Lindberg*

Hoosier River Watch workshop, one of several educational programs Kriste Lindberg participated in this summer.



## NEWS BRIEFS...

- ❑ At the September IKC Quarterly meeting (see page 3), two appointments by the Executive Board will be made. First will be the appointment of a Director's position vacated by Ronnie Burns. The new Director will serve until the next election where he/she will have the option to run for re-election. The responsibilities include being active in the IKC and attending the five meetings held each year. The other position to be appointed is the patron/steward to oversee the Indian Creek Conservation Easement. The responsibilities include making at least semi-annual visits to the property and making an annual written report to the Board. If you are interested in either of these positions, be sure to contact Kriste Lindberg prior to the September 23rd meeting and/or attend the meeting.
- ❑ September 30th is the last opportunity this year to participate in Bob Armstrong's Lost River tour. From the headwaters to a full river, from its subterranean pirating to its resurgence at the True Rise, and many stops in between, the caravan tour with Bob's unique interpretive dialogue should not be missed. You really haven't experienced the Lost River until you've experienced it with Bob. The tour is free, but donations to the Lost River Conservation Association are always appreciated. Reservations are not required, just be at the SE corner of the Orleans town square by 7:45 AM. For more information or questions, contact Bob at (317) 926-4266.
- ❑ Last month, the Indiana Cave Survey and the Indiana Geological Survey finalized an information sharing agreement which should facilitate cave and karst protection. The Memorandum of Understanding between the two organizations lays the foundation for the Geological Survey to have direct access to the cave database maintained by the Cave Survey. The Geological Survey will then be better equipped to advise their clients (agencies, land use planners, developers, to name a few) of activities which may impact known caves or are being proposed for high density karst areas. The MOU was not entered into lightly, as confidentiality of cave information is paramount to protect them, but it has also become clear that those who are responsible for protecting cave resources can not do so if they are not informed and aware of them in the first place.
- ❑ In July, the IKC was notified that it had been awarded a \$500 conservation grant from the National Speleological Society. The grant will be used to fund the purchase of a karst groundwater model to be used in our educational programs. The "ant farm" type display, clearly illustrates the differences between groundwater movement in karst areas versus more traditional landforms. Elementary school students, local government land planners, and state agency environmental personnel alike will easily be able to better understand the concept of karst and why special considerations are sometimes necessary. The karst model is being constructed by Biological System Engineering Department of the University of Nebraska.
- ❑ In late June, it was announced that the former Jefferson Proving Ground will officially become the Big Oaks National Wildlife Refuge to be managed by the US Fish & Wildlife Service. This contiguous tract of land in Jefferson, Jennings, and Ripley counties will consist of 50,000 acres, making it the largest refuge in central Midwest. The biological diversity is outstanding. The terrain varies from mature forests and open grasslands, to down cut stream channels and active karst. Thirty-two caves with over 50 entrances have been located in the past five years. Access to much of the refuge will be highly restricted since the former DoD property was used for testing munitions and it is estimated that over 1.5 million rounds of unexploded ordnance still remain. Partially as a result of these restrictions, the refuge will play an extremely important role to a number of endangered and threatened species, left to be undisturbed in their own wonderland.
- ❑ On July 8th, a number of volunteers gathered on the Hancock Property for the IKC's annual workday. Accomplishments were typical: walking the trails and Spicer Lane to pick up trash, weed cutting around signs, a downed-tree removal on the lane to Coon, and checking



of the entrances of the caves on the property. We also greased the gate on nearby Wayne's Cave and picked up trash along Gardner Road. Afterwards we hiked the loop trail at Leonard Springs Nature Park. Participants included Bill Baus, Bruce Bowman, Charles Brema, Bill Bunting, Patti Cummings, Bruce Devore, Bambi Dunlap, Keith Dunlap, Don Ingle, Kriste Lindberg, Steve Lockwood, Russ Pusilo, Bob Sergesketter, Phyllis Sergesketter, Dick Vernier, Sue Vernier, and Nathan Vogt.

- ❑ As part of Cave Capers, the Central Indiana Grotto several years ago started presenting two annual awards, one is presented a cave owner who has a good history of being friendly to cavers and/or has demonstrated outstanding stewardship towards their cave. The second award goes to a caver or contributor within the caving community. The 2000 cave-owner award went to Dan Starr of the Scenic Hill Christian Youth Camp (Eversole and Coon caves in Lawrence County). The caver award was presented to Bob Armstrong for his long term commitment towards the exploration, protection, and education of cave and karst.
- ❑ At the NSS Convention, the IKC acquired a video entitled *Cave Conservation and Ethics*. The twelve minute video is an excellent production focused on the concept of "leave no trace". Basically, it is a higher level of conservation than many of us are accustomed to, but one which we need to adopt and promote. If you would like to borrow this video, contact Keith Dunlap (see page 2).
- ❑ Each year, the IKC enters its newsletter covers in the NSS Graphic Arts salon held during the NSS Convention. This year two of our four 1999 covers won Honorable Mention ribbons. The winning covers were March: photo by Bruce Trotter of Jerry Walker filling out an ICS report form at Mossy Hole Cave in Crane, layout by James Adams; and September: photographer unknown of a salamander on a formation, layout by Keith Dunlap. Just as a reminder, the editor is always looking for interesting cave/karst photos, preferably Indiana related, for covers shots.
- ❑ As a reminder, the IKC still has hats for sale. The khaki/drab ball caps have the IKC logo embroidered on the front along with the words "Indiana Karst Conservancy". These hats have been very popular and all the proceeds go to our Land Acquisition Fund. The price is just \$10, plus \$2 for postage. Send your request to the IKC mailing address or contact Keith Dunlap (see page 2).
- ❑ Individual donations are always appreciated and our membership has been quite generous in the past. The IKC Board also attempts to maximize our financial resources from other opportunities including applying for specific grants, federal and state agency cost-share programs, and donations from private organizations and corporations. In addition to the \$500 grant from the NSS, this quarter we also received a \$250 donation from General Motors.
- ❑ One new member has joined the IKC in the past quarter. Welcome Monica Taylor (369). The IKC membership now stands at 168.

## **ORANGEVILLE RISE WORKDAY SEPTEMBER 23rd, 1 PM**

This is our second workday at this property since we took ownership. The main project for the day will be to remove the old Nature Conservancy routed sign and posts (old telephone poles) and install our new routed sign and posts. We also plan to continue searching for boundary pins using metal detectors. And of course we will clean up any trash on the property. If you need directions to the property, contact Steve Lockwood.

Also, if there is extra time, Bob Armstrong has volunteered to take those interested over to Stein Swallow-hole, the first of the three main swallow-holes on the Lost River.

## ST JOSEPH VALLEY GROTTO SPRING MILL PROJECT

by Dave Tibbets

### Hypothetical conversation:

Time: April 12, 1898

Place: Office of Dr Carl Eigenmann, Indiana University

Student: Dr Eigenmann, now that you have shown the blindness of *Amblyopsis spelaea* is genetically inherited, shouldn't we remove the concrete ponds we built to study them?

Dr Eigenmann: Shhh! I told the dean that we built them as wading pools for his grandchildren. Since I'm headed for California, by the time he discovers what they really are, they'll be his headache! Besides, I'm an ichthyologist, not a demolition man. Anyway, those concrete tubs are way out in the woods at the bottom of a ravine. Nobody will ever even know that they're there.

### Fast forward approximately 102 years:

Bill and Kevin Kulwicki and Dave Tibbets visited Spring Mill State Park on April 2. As they passed some time at the nature center with Naturalist Jeff Cummings, Jeff brought up an idea which had been germinating in his ever resourceful cranium. The Eigenmann fish tanks had become almost invisible, becoming filled with debris over the past century. He wondered whether the SJVG would be interested in removing this stuff to bring the concrete ponds back into view. The three cavers were agreeable, and decided to bring this idea before the grotto.

At the grotto meeting on April 13 Bill presented the project to the grotto which voted to accept it. Dave Tibbets (who was unfortunate enough to be absent from the meeting) was appointed SJVG/DNR liaison.

Dave made arrangements with grotto members and Jeff for the date of July 8, and Jeff secured the necessary permission, since the project would be located at least partly within a nature preserve. A through trip of the Bronson-Donaldson caves was offered as an incentive/reward for completing the project.

July 8 dawned sunny and warm. Fourteen of the sixteen SJVGers camped at Martin State Forest loaded up with gear for the work day and the cave trip and headed for Spring Mill. Dave Schang and Fofu Gonzalez opted for a day of surveying in EOC.

After getting organized at the nature center Jeff introduced the project to the cavers. Instructions were given and the group headed for the stream bed below the entrance to Donaldson Cave. The tops of the fish tank walls were just visible above the rubble. The group began moving things from the inside of the tanks to outside of the tanks.

It quickly became apparent that hands alone were not going to be enough to take care of this job, so Jeff and Doug Fitzgerald raided the Spring Mill maintenance barn for shovels, rakes and a pick. Rocks began moving, sweat began running, mud and water began splashing to a chorus of *Oh don't you know ... that's the sound of the men ... working on the chain-gaaaaang.....*

Curious park visitors stopped to inquire what was going on as they made their way to Donaldson Cave and came upon our crew hard at work. After various comments about being nonviolent offenders, paying our debts to society, warning that this is what happens to those who litter in the park, the truth was told, probably forty times or so. It was a rare group of visitors that did not stop to satisfy their curiosity.

During a rest break discussion, permission was granted to begin our cave trip at an earlier time, since it became apparent that



The Northern cavefish, Spring Mill resident.



we would be finished well before the planned time of 7 PM. Barry Welling was quickly appointed trip leader since he was the only one who had done the trip before.

After about three hours of moving rocks and mud the end of the work was in sight. Also, the original water inlet was uncovered and Burnis Piper and Bill and Kevin Kulwicki modified the stream bed so that water again began to flow into the tanks.

Trae and Lori Spires, Mark Deebel, and Kim DeCero finished work on the lowest tank while Ted Bice, Gary Maloney, and Sam Russell completed the middle one. Sherry Sloan threw a few more handfuls of mud out of the upper tank until it met her satisfaction. The tanks looked much like they must have in the 1890's.

As the group shouldered the tools and began the long march up the steps, a listener could hear the whistled strains of *Heigh Ho, Heigh Ho* from *Snow White*. It was a happy group that returned the tools to their storage place.

The work crew retreated to Mitchell for some nourishment before tackling the Bronson-Donaldson trip. It was the consensus of this group that the grotto ought to look into making a work day at Spring Mill and annual event. That concept will have to be explored in the near future.

So it was back to the park for the cave trip. We parked in the Donaldson Cave parking area, changed clothes, grabbed our gear and piled into Gary's pickup (keeping a low profile) as we headed for the Bronson/Twin caves parking area.

The teen couple who had found seclusion on the bench at the Bronson entrance didn't know what to do when fourteen cavers in various stages of undress suddenly showed up and began gearing up for the cave trip. The kids just sat quietly, hoping these strange people would soon go away.

As we entered the cave we found a waist deep pool in which we could cool off while waiting for everyone to get inside. Mark, being the last one in, decided to entertain us by tripping and going fully submerged right in the middle of the group.

Barry led the group through the cave. It was an interesting stream passage with little in the way of formations and not much variation in wall and ceiling height. The trip was mostly wading, never knowing whether

the next step might be into deep water or onto a very slippery rock. The cave has one big room where we paused for a short rest before pushing on.

Past the big room there was a near drowning as Dave's boots and clothes proved to be too much for his poor swimming ability. Barry came to the rescue, helping him to a nearby wall for some handholds. Near the Donaldson entrance, Gary stepped into an ankle deep pool which turned out to be about chest deep. Two groups of teenagers were encountered. One group was barefoot (for traction!) and had only one flashlight. They were encouraged to exit with or ahead of us and we attempted to inform them about safe caving procedures.

The riffles, waterfall, and narrow channel provided a fitting exit into warm weather and sunlight. As we walked back toward the stairs for one last climb we passed our morning's project and admired the newly restored fish tanks.

As the sun began to set in the west it seemed to draw us with it; back to Martin for a meal, a fire, lots of good stories and some refreshing beverages. Life is good!



SJVG members cleaning out the historic fish tanks used by Dr Eigenmann to study *Amblyopsis spelaea* in the late 1800s.



## SPRING MILL STATE PARK'S ELUSIVE UNDERGROUND RESIDENT: THE NORTHERN CAVEFISH

by John Roche

The northern cavefish, *Amblyopsis spelaea*, is an unusual species living in underground cave streams in the karst regions of southern Indiana and west-central Kentucky. It is one of six species of cavefishes (members of the family Amblyopsidae) in North America. Pale and sightless, they live in the dark of underground streams where protective pigmentation and visual abilities are unnecessary. The northern cavefish is a predator, opportunistically preying upon invertebrates, and even small vertebrates, that live in, or wash into, their underground stream habitats.

The range of the northern cavefish extends from Kentucky's Mammoth Caves National Park in the south to Indiana's White River in the north. There are reliable sightings of the northern cavefish from Lawrence, Orange, Washington, Crawford, and Harrison Counties in Indiana, as well as five counties in Kentucky. This relatively limited range, which caused Indiana to list the species as state endangered and Kentucky to list the species as of special concern, makes it intermediate in distribution in comparison with other members of its family.

There are confirmed sightings of *A. spelaea* in 65 sites, 44 of those in Indiana. Conversely, the Alabama cavefish (*Spenplatyrhinus poulsoni*) is found in only one cave (it is listed as federally endangered) and the Ozark cavefish (*Amblyopsis rosaea*) is found in only 27 caves (it is listed as federally threatened). On the other hand, *A. spelaea*'s distribution is not nearly as extensive as that of the other three members of the family; the spring cavefish (*Chologaster agassizi*), the swampfish (*Chnlogastercornuta*), and the southern cavefish (*Typhlichthys subterraneus*) all have wide distributions and are thought to have secure populations.

Within the northern cavefish's limited distribution, fairly robust numbers have been observed in some sites. In a 1993-1994 survey of eight sites in Indiana and 17 sites in Kentucky, William Pearson and Charles Boston of the University of Louisville counted 994 individual fish. Pearson and Boston extrapolated from these numbers to estimate that there was a minimum of 5,602 individual fish in the two states. The largest con-

firmed populations in Indiana are in two interconnected caves in Spring Mill State Park in Lawrence County: Donaldson Cave and Upper Twin Cave. In recent surveys by Pearson and Boston, 117 fish were counted in Donaldson Cave and 414 fish were counted in Upper Twin Cave. In Kentucky, the largest confirmed populations occur in the following: (1) Webster's Cave (162 fish counted) in Breckinridge County; (2) Penitentiary Cave (515 fish counted) in Breckinridge County; and (3) the caves of Mammoth Caves National Park (a total of 136 fish counted) in Edmonson County.

These are relatively substantial numbers, but *A. spelaea*, which depends on underground streams with stable conditions and a steady inflow of organic nutrients, is still vulnerable to changes in water quality. The fish's limited distribution, and its low reproductive rate, magnify the impact this vulnerability could have on the stability of the species.

In Spring Mill State Park, there have been reports of health problems in *A. spelaea* that may have resulted from chemical and biological agents entering the park's underground streams. Some fish in Donaldson Cave have been observed with a disease called broken-back syndrome, which may result from water-borne chemicals, perhaps pesticides. In addition, some fish in Donaldson Cave also were observed with fin rot, a bacterial infection that seems to be triggered by organic pollutants. These health problems highlight the importance of studying water quality within the waters of Indiana's karst region.

At present, members of the IGS, in cooperation with a number of other state and federal agencies, are conducting a study on the extent to which chemical and biological agents are entering waters in Spring Mill State Park. The results of this report will assist state officials, park employees, and local landowners to limit the entry of deleterious materials into the habitat of the northern cavefish in Spring Mill State Park.

*Reprinted with permission from the Fall 1999 Geo-News, a publication of the Indiana Geological Survey.*

## IKC/DNR SECURE ABANDON MINES FOR BATS - YEAR 2

text by Keith Dunlap, photos by Mark Stacy

Last year the IKC, in cooperation with the Indiana DNR, initiated a bat habitat conservation project. The result were seven bat gates placed on abandoned coal mine entrances which would otherwise have been permanently closed by other means. Securing these entrances with steel gates rather than rock and concrete allow bats to continue to use the caves for hibernation, while at the same time significantly reduces the human liabilities the open mines presented. The 1999 project enlisted 23 different IKC volunteers over two weekends, expending a total of 550 man-hours. In return for our efforts, expertise, and equipment; the DNR reasonably compensated the IKC (this allowed us to install the driveway at the Sullivan Property without having to use any general funds).

Because all involved with the 1999 project were pleased with the outcome, the DNR solicited our assistance again. In November, Mark Stacy showed Keith Dunlap, Bambi Dunlap and Kriste Lindberg four more potential sites. From this, with input from the Executive Board, the IKC prepared a work proposal to construct five bat gates at three sites, requiring two full weekends. The proposal was approved by the DNR in March and the wheels started turning to get volunteers, equipment, and material ready for year two.

The first weekend of activity was April 29/30 in Parke County. The first work site was in Turkey Run State Park, a coal mine very familiar to many along Trail #4. The park had attempted closure of this 20-foot wide by 3-foot high mine entrance in the past with boards and wire fencing, but it was often



Using teamwork to carry the 300 lb base plate.

breached by curious visitors. Furthermore when the fencing was intact, it would prevent the bats from entering the mine....basically the worse of both conditions, unsecure for humans and inaccessible to the bats.

The weather for the day was perfect and we had more than enough labor with 27 IKC volunteers showing up (more than was needed). While the mine is located in the middle of the park, Trail 8 allowed material and equipment to be driven to within 100 yards of the work site, although we did have to carry everything down a rather steep slope from that point to reach the entrance.

The first order of business in the actual construction process was to trench the floor of the entrance until we hit rock. This provides a solid base for the gate and prevents the gate from being breached by someone digging un-



The old fence "gate" (left) did not let bats into the mine but was easily and often breached. The new gate (right) will be much more secure while allowing bats to use the cave. Note interpretive sign mounted on right end of gate.

der it. Because of the way the gate is constructed with equally spaced horizontal bars, it is important to place the 6" angle-iron base (sill) plate properly relative to the ceiling so that the top bar comes out right (not too much or too little space). For this gate, it was easier said than done as there ended up being a large rock bump in the floor that did not want to cooperate with placing the base plate at the elevation we wanted it. Finally after much pick work reminiscent of how the original miners must have toiled, and some selective trimming on the flange of the base plate, the plate was properly positioned and the "hard work" was done.

The horizontal base were attached three vertical columns which are also pinned to the ceiling. To the columns are attached brackets upon which the 4-inch angle-iron bars sit.

With special spacer jigs which temporarily support each horizontal bar until it is welded in place, the construction of the gate turns



Measuring for the next horizontal bar during construction of the bat gate at Turkey Run State Park.

out to be very simple and relatively quick, starting from the bottom and systematically working your way to the ceiling.

Adjacent to the main entrance was a smaller hole which was not really enterable, but was intriguing enough to encourage digging to gain access to the mine. Thus while the main gate was being constructed, several volunteers (primarily Bruce Trotter and Ray Sheldon) worked to construct a wire mesh grate which would continue to allow airflow, but prevent anyone from entering the secondary entrance.

By late afternoon, all the metal work was completed and the "paint crew" (supervised by Bambi Dunlap) started their cleaning and priming process. Concurrently, several volunteers went over to the other work site (just

north of Rockville) to off-load steel and started trenching for the base plate, just to get a jump on the next day's activities.

While some volunteers had to leave Saturday evening, most stayed and camped at Turkey Run courtesy of the DNR.

Sunday morning we got started around 9 AM and thanks to the trench work done the day before, we were ready to drop in the base plate in short order. This entrance required a gate 10-foot wide and 6-foot high. It was quite "regular" and construction was straightforward, prompting Tom Sollman to coin the phrase that it was a "P-O-G", translated to mean "plain old gate". With ample volunteers, we finished the iron work by 1 PM.

Earlier in the day, the painting crew had applied the top coat on the Turkey Run gate and were now ready to clean and prime this second gate. Most of the volunteers got an early start home while a few of us stayed until the primer dried and the top coat could be applied, finishing up our committed work at the first two sites.

On May 20/21 we completed our second weekend of effort, this time in Greene County just east of Bloomfield. The planned construction for Saturday was going to be quite a challenge. Not only was the logistics of getting the steel down to the entrance going to be difficult (everything had to be lowered over a 25-foot cliff outcrop), but the mine entrance itself was big! Basically, the entrance was in a semi-circular sandstone shelter that had been completely excavated at one coal-containing strata. The length of the gate would have to be almost 100 feet long, but rather than try to construct a bat gate the full length of the opening, it was decided to construct two 16-foot gates at the tallest spots, and restrict access to the rest of the opening



Bob Zatarski (welding) and Gene Pelter finish the construction of the mine gate located near Rockville.





The Greene County worksite was at the base of this large sandstone shelter. All materials had to be lowered by rope or carried down the ladder.

using framed wire-mesh pinned to the rock.

Twenty volunteers turned out for Saturday's "fun". With so much steel to place, we had obtained a second gas-powered welder and a separate generator to run the drill (generally we run everything off of a single welder/generator). We also set up two torches, electing to cut most of the steel at the parking area rather than at the entrance to reduce confusion...this allowed us to lower the pre-cut steel as needed, but also slowed the process as communication up and down the cliff face was difficult, especially when all three welders/generators were running.

With two teams working from each end towards the center and a surface team cutting, transporting, and lowering steel, everyone stayed busy! The two bat gates went in pretty smoothly, but the wire-mesh construction was proving to be difficult. First a trench


had to be dug, then measurements for the frame taken and communicated to those above. The steel was cut to length, then transported down, welded into place, and holes drilled into the rock for the one-inch pins to attach the frame to the walls. Once the frame was in place, the wire-mesh had to be cut to size and welded to the frame. The progressed in roughly 4-foot lengths until the two teams met in the middle. Concurrently, the paint crew was cleaning and priming as fast as they could.

We knew going in, this entrance was going to be very difficult and it proved us right. It was nearly dark by the time we finished and got all the equipment loaded up. The day had been very physically and mentally taxing but the worst was now behind us. There was one more small entrance at this site located about 200-feet down the valley to be gated, but it would be a piece of cake to complete on Sunday even with a small crew.

That night, some people camped at the Sullivan Property while others stayed in Bloomington at Kriste Lindberg's condo.

Ten volunteers returned to finish up the last gate and get everything painted. It took less than three hours from start to finish to secure the 8-foot wide by 3-foot high opening. By mid-afternoon we were done painting and heading home.

I would like to thank everyone who helped on this project this year. There were 37 different volunteers, many who helped both weekend. All total, we expended 750 man-hours in constructing the five gates. Participants included: Stephanie Baumann, Bruce Bowman, Barb Capocy, Terry Clark, Kim

...continued on page 15 



A partial panoramic view of the 98-foot wide semi-circular gate constructed in the sandstone shelter. Two 16-foot sections (left and right ends) used horizontal angle-iron construction to allow bat use. The remaining entrance openings were secured with framed expanded metal mesh pinned to the walls.

## LEONARD SPRINGS NATURE PARK UPDATE

by Kriste Lindberg

Things are really coming together at Leonard Springs Nature Park.

We are gaining more and more support and making a real difference when it comes to cave and karst management of this 85 acre nature park. For example, we have been busy covering the mile-long trail with woodchips in order to help control erosion, working with area botanical experts including Ellen Jacquart of TNC and Jon Behrman and Tammy Tyner of EcoLogic to eradicate invasive plants and replace them with natives, coordinating with local grottos to come up with a comprehensive cave management plan, monitoring of water quality issues, strengthening our outreach/education efforts (see Ramblings on page 4) and of course, continuation of cleanup efforts.

We are operating under the, "If you don't use it, you lose it" philosophy. That is, we believe that people will take better care of things if they understand their importance by seeing it for themselves, in action. As the more true-to-life an experience is, the more likely someone will benefit from it. Therefore, we are using a hands-on approach here, focusing on the wise use of the resources, including foremost, their conservation.

Over the summer, we held a few more trail days and various local organizations came to us to seek volunteer opportunities, including a group of international students from Indiana University and IU's Collins Living Learning Center. These folks had a great time helping with the trail and erosion control techniques. I'm sure we will see some of them again.

Also, a science teacher from Bloomington's Harmony School, his high school kids, and I are working on a Hoosier River Watch collaboration. The park is part of a bigger picture of drainage systems in the area and we are starting to focus on watersheds and other components that comprise the whole. We are starting to monitor Shirley Springs and Leonard Springs. In addition, they will be helping us do some light cleaning of the grounds. This promises to be a win/win for us and the community.

Finally, on November 4 - 5, the Ohio Valley Region will be doing their Conservation Project 2000 at LSNP. We will be focusing on removing trash from the hillside, control-

ling erosion around the caves, and interpretation. Camping will be at the nearby Monroe County Fairgrounds, thanks to a cooperative agreement I was able to reach with the Fair Board.

LSNP has been a real study in inter-agency/volunteer coordination. There is so much information to share that I have been given the go-ahead to write a little booklet on the evolution of the nature park.

If you would like to be part of the above mentioned efforts, just let me know!



Volunteer from IU's Collins Living Learning Center working on spreading woodchips on loop trail at Leonard Springs Nature Park.

photo by Kriste Lindberg

## HNF/IKC KARST INVENTORY PROJECT UPDATE

by Kriste Lindberg

Over the last three months, we've been busy with working on the overall forest plan, special areas assessments and management, and strengthening cave biota inventories. As a matter of fact, over the summer Dr Julian "Jerry" Lewis was awarded a contract to study biota in the HNF caves. The cave location and inventory work we have done over the past ten years will be a real resource for him to proceed with his work (ie, he can concentrate on doing the real science rather than expending effort to locate the caves and he can also focus on the caves with the highest potential for biological diversity). Over the next year, HNF/IKC volunteers expect to assist him as he visits some 30 to 50 caves on the forest. Last month during our field-work day, we accompanied him to inventory Dillon Cave. This month we will be working in the Springs Valley area near Paoli

If you haven't visited the HNF website yet, we invite you to do so ([www.fs.fed.us/r9/hoosier](http://www.fs.fed.us/r9/hoosier)). It is a great resource for keeping up with current forest management activities and proposed projects. You will also find a nice section on Wesley Chapel Gulf with some photos by yours truly (go to [www.fs.fed.us/r9/hoosier/docs/wesley\\_chapel.htm](http://www.fs.fed.us/r9/hoosier/docs/wesley_chapel.htm)).

Also related to Wesley Chapel Gulf, the HNF has recently given the go-ahead to a university professor to take core samples of the gulf floor (they consulted with us, the Lost River Conservation Association, and others first) to gain more insight on the

gulf's formation. More info on that as the data becomes available.

Also, while you are browsing the HNF site, you will see the HNF's logo. It consists of a tree with a "root structure" which runs to the

Indiana Karst Conservancy



Hoosier National Forest

### *"Partners in karst conservation"*

left. It just happens to line up perfectly with the IKC's logo, which has a stream coming out of a cave (the "C" in IKC) which runs to the right. Use your imagination to put those two together and you have one, nice compound logo. As a matter of fact, that's what we have done. Last month, we were given the go-ahead to order more volunteer t-shirts for the project and come up with this design. So, I consulted my graphics partner and fellow IKC board member, Bob "Mr Technology" Vandeventer to work it. We developed the one mentioned above. We think you'll like it. It will even feature the true colors of the logo, including the red and blue of the IKC logo and the green of the HNF logo. We also hope the t-shirt will spur more interest in the program. Of course, you'll have to show up to the workdays to get one!

Dr Jerry Lewis looking for "bugs" in Dillon Cave as part of a HNF biota study. photo by Kriste Lindberg



## TRAPDOOR CAVE GRAFFITI REMOVAL

by Chris Kollman

On Wednesday, May 4th, Rob Rennewanz and I headed down to Trapdoor after work to catalog the graffiti we were to deal with at Trapdoor on Saturday.

Well, Saturday started for me just as any other trip does. I live about 2 1/2 hours north of Monroe County and, of course, I left later than expected. The cleanup was scheduled to begin at 9 AM but after the late start and the traffic jam on SR 37, Amber and I finally arrived at about 9:45 AM, late as usual. Rob Jarboe and his group were already at the site and had gone down to Trapdoor Cave to get ready to rock. Amber and I headed down to the cave to hook up with them.

After finding the group in the cave, we sent several sealed one gallon buckets of clean water down an assembly line into the cave. This was a very good way to get the water to the cave and the buckets were easy to move from spot to spot. Sponges were used to transport the water to the wall/ceiling and small brass brushes were used to scrub. This worked VERY well.

I wanted to begin the day by giving Dick Blenz's kiosk a coat of paint and replacing a support post that someone had hit with their car. Amber, Robert Jarboe, and Tommy Jarboe came up from the cave to help out while Michael Kimberlin, William Royer, Linda Royer, Patrick Daniels, Jenny Jarboe, and Rachel Jones stayed in Trapdoor to clean up trash and start the graffiti removal.

We began working on the kiosk at about 10:30. We removed all the old signs (to be replaced with new ones later). All the old tacks and staples were removed and the old

paint was lightly scraped. Rob was the designated "poison ivy removal guy" (hope the itching stops soon!). Jamie Winner arrived about that time to help with the effort. The old 4x4 post was removed fairly easily and a new one donated by McCords Do-It Best Lumber Center was installed in concrete. Everyone began helping with the paint. We used Sherwin-Williams A-100 flat latex which is a good quality paint. We completed the repairs at about 2 PM. As we finished the group from the cave came up for lunch and reported that work in the cave was going well.

After lunch, "shift two" headed down to Trapdoor to work on the graffiti. Robert, Patrick, Rachel, Amber, Jamie, and myself made great progress in the upper trunk passage of the cave. The graffiti came off well with the clean water and brass brushes. We were planning to leave the cave at about 6 PM but things were going so well we stayed until around 8 PM before unloading all the buckets, brushes, and stuff from the cave. Damon Hall and "Red" helped us transport the buckets back to the truck.

For the day we got the kiosk repaired and much of the upper trunk passage at Trapdoor cave cleaned of graffiti. There is still more to be done and we hope to have a return trip planned to finish the job soon.

Just a little side note: On a trip, June 3rd, I noticed that someone had already done some vandalism to the sign-in station. Quite a shame I'd say!

*[Editor's note: Visit [www.angelfire.com/in3/caving/trapclean.html](http://www.angelfire.com/in3/caving/trapclean.html) for related photos.]*

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Continued from page 13...

DeCero, Bruce Devore, Bambi Dunlap, Keith Dunlap, Dave Haun, Kriste Lindberg, Steve Lockwood, Nick Noe, Gene Pelter Jr, Jennifer Pelter, Tom Rea, Cindy Rothrock, Tom Rothrock, Bob Sergesketter, Phyllis Sergesketter, Beth Sheldon, Ray Sheldon, Robert Sollman, Tom Sollman, Steve Taylor, Rob Thomas, Bill Tozer, Bruce Trotter, Greg Tucker, Wayne Tucker, Bob Vandeventer, Dick Vernier, Sue Vernier, Steve Weinzapfel,

Barry Welling, Kathy Welling, Jamie Winner, and Bob Zatarski.

The DNR (Mark Stacy specifically) has been very impressed with our volunteerism, professionalism, skills, and cost-effectiveness over the past two years. The compensation the IKC earned this year will help to fund partially some of our other conservation initiatives, hopefully including another land acquisition project. Finally, I hope the bats are happier too, having a safe and secure place to hibernate.

**INDIANA KARST CONSERVANCY TREASURY REPORT**

**Income/Expense Statement  
From April 1, 2000 to June 30, 2000**

**INCOME:**

Dues Apportionment and Residuals	607.50	
Donations	138.16	
Acquisition Fund	40.00	
DNR gate project	6625.00	
IGS publication	132.00	
Interest	122.73	
	<u>          </u>	\$7,665.39

**EXPENSES:**

IKC Update (printing, production, mailing)	151.79	
Membership (postage, meeting notices, etc)	43.75	
Conservation/Management/Education	292.60	
DNR gate project	1829.55	
Business (permits, bank fees, postage, etc)	65.72	
Transfer to restricted funds	185.16	
	<u>          </u>	(\$2,568.57)

**NET OPERATING EXCESS (DEFICIT) THIS PERIOD:**            \$5,096.82

**Balance Sheet  
June 30, 2000**

**ASSETS:**

Cash in Checking Account	3529.35	
Cash in Savings Account	10590.09	
Accounts Receivable (DNR gates)	6625.00	
Sullivan Property	72000.00	
Orangeville Rise Property	7000.00	
Indian Creek Conservation Easement (see note1)	13.16	
	<u>          </u>	<u>\$99,757.60</u>

**LIABILITIES & OPERATING EXCESS:**

Hancock Property Maintenance Fund	100.22	
Indiana DNR Nongame Fund	120.00	
Land Acquisition Restricted Fund	1615.00	
Deferred Dues Restricited Fund	2317.50	
IGS Booklet Fund	132.00	
Hat Fund (excluding 4 hats in inventory)	251.76	

Previous Operating Excess	11111.14	
Net Excess (Deficit) This Period	<u>5096.82</u>	
Current Operating Excess	16207.96	
Real estate liquidity	<u>79013.16</u>	

**Total Liabilities & Operating Excess**            \$99,757.60

**NOTE:**

1) Conservation Easement valued at \$1/acre



# IKC SUMMER DIRECTOR'S MEETING MINUTES

Saturday, July 8, 2000

Bloomington, Indiana

## BOARD MEMBERS PRESENT:

Kriste Lindberg (President)  
 Bruce Bowman (Secretary)  
 Keith Dunlap (Treasurer)  
 James Adams  
 Bruce Devore  
 Bambi Dunlap  
 Steve Lockwood  
 Tom Rea  
 Bob Sergesketter  
 Richard Vernier  
 Bill Tozer  
 Bob Vandeventer

## BOARD MEMBERS ABSENT:

Ronnie Burns  
 Nick Noe  
 Tom Sollman

The meeting was called to order at 7:06 PM in Room 143 of the Geology Building on the IU campus. President Kriste Lindberg presiding. Lindberg distributed complimentary copies of the Spring Mill and Lost River drainage study report, an open-file publication of the Indiana Geological Survey. Thanks to some anonymous donors for helping fund these documents, and to the IGS for giving us a substantial discount.

Introductions were made. Minutes for the annual business meeting were accepted as posted in the *IKC Update*.

K Dunlap reported total assets of \$99,757.60, including property. Cash assets are \$20,744.44, of which \$16,207.96 is in the general fund and \$4,536.48 in restricted funds (new record).

Bowman noted that the Sinks of Indian Creek easement transfer has been completed. Only one person has expressed interest in being property steward, but notification was only recently made to the membership. A decision on who to serve in this capacity was deferred until the fall meeting.

K Dunlap noted that a significant cave has been purchased by The Nature Conservancy. The cave is one of three known sites of an endangered beetle, and one Indiana bat has been observed in the cave. It is also adjacent to an existing TNC nature preserve. A portion of the property will be subdivided and sold. The IKC will assist in establishing management policies. Adams moved that the IKC donate \$1000 to TNC to demonstrate our appreciation for their acquisition of another significant karst property. Lockwood seconded. Motion passed 12-0.

K Dunlap gave an update on activities at Sullivan Cave. Four hundred trees were planted on April 1 and are all doing well. Under-Earth Day also occurred and a report is in the *Update*. There were some initial misunderstandings with the dumpster payment, but these have been worked out to everyone's satisfaction. Anmar Mirza also noted that the NCRC held a mock rescue at Sullivan on June 11 and the training was successful. The NCRC central region will make a small donation. There have been many trips to Sullivan and the directorship expressed their appreciation for the tireless work of the cave patron.

Lockwood gave an update on activities at Orangeville Rise. Signs are ready and will be installed prior to the fall meeting. Investigation of a property survey continues to be pursued. We will also follow up on contacting the Orange County highway department.

President Lindberg noted that a new coalition is being formed to address invasive, non-native plants in Indiana. Current activities are restricted to public education.

K Dunlap gave an update on the gating of abandoned coal mines. Volunteerism was overwhelming, with a number of people who have constructed enough similar gates so things proceed very quickly without a great deal of supervision. The DNR Division of Mine Reclamation is very pleased with the work we've done. The IKC netted roughly \$4800 on the recent project, putting us in position to move quickly on future land acquisition efforts. The Bureau of Surface Mines is also impressed and plans to put something in their web pages about our continued partnership with the DNR. There will be other, similar opportunities in the future.

B Dunlap noted that the Hancock property workday went well. There was a good turn-out of helpers, and very little trash was found compared to previous years. A knotted rope of questionable strength was removed from the Coon Cave entrance. We still need to re-paint the letters in the sign at Waynes Cave.

Afterwards, the group took a hike at Leonard Springs Nature Preserve. Lindberg noted that the city of Bloomington is offering the trail for the IKC to adopt and manage. A decision on this matter was deferred until such time that the city can give us a better idea of what their expectations are. The city also asked if we would be interested in gating



Shirley Springs Cave. A spelogger is in the cave and there have been no unauthorized visitations noted yet. No motion. The Ohio Valley Region will hold a workday at LSNP on November 4-5.

Lockwood reported four more potential caves on Hoosier National Forest property, which would bring the total to 116 caves. Feedback on Special Areas amendment is being reviewed. A Notice of Intent for the overall forest plan will be published in September. Some field work was done to view entrances of the Gardner kaolinite mines. The IKC has given feedback on how to manage these mine entrances. A T-shirt will be designed for the Hoosier Forest karst project. Dr Julian Lewis has been contracted to do an additional biological study of the caves on HNF property. Finally, there is a proposal to take core samples of the alluvium on the floor of Wesley Chapel Gulf. The board expressed no concerns about this plan.

President Lindberg reported that board member Ronnie Burns has resigned his position. Candidates to replace him on the board will be solicited.

The annual report for Suicide Cave is overdue. The leasing agreement with the landowner requires a report.

Adams is looking for someone to lead a grotto trip to Shiloh Cave the second weekend of September.

IKC membership is at an all-time high of 182 individual and organizational members. The Sycamore Land Trust shares some interests with the IKC, but neither organization is a member of the other. K Dunlap agreed to pursue a newsletter exchange. In addition, the IKC's membership in the Hoosier Environmental Council is up for renewal. K Dunlap moved to renew HEC membership at \$100. Several seconds. Motion passed 12-0.

The IKC educational display needs to be upgraded. The brochure could also be improved. Several options were discussed. Adams agreed to investigate both issues. There is some interest in reprinting the sinkhole flyer.

K Dunlap noted there are only four IKC hats available for sale. More can be sold at Cave Capers. Adams suggested buying T-shirts instead. K Dunlap noted that could conflict with sale of CIG Capers T-shirts. K Dunlap moved that we purchase 30 more khaki baseball hats, contingent on the ability to get them prior to Capers. B Dunlap seconded. Passed 11-0-1. Tozer noted that the IKC logo is not trademarked. Bowman will follow up on what work and benefits would result from doing so.

At the NSS Convention, the IKC won honorable

mention on the March and September 1999 newsletter covers in the Graphic Arts Salon.

An outfitter has been using Shaft Cave for vertical practice (with permits). In the President's absence, the Secretary notified them that they meet the IKC's definition of cave-for-pay and cannot use our caves for training anymore. They were encouraged to come to the meeting and appeal the decision, but no one representing the organization was in attendance. The decision will stand and the situation will continue to be monitored. The webmaster will also place a list of people/organizations in the restricted area who are not allowed in IKC-managed caves. This will help cave patrons screen permit applications.

Anmar Mirza noted it can be difficult to gain entry to a gated cave when a rescue is necessary. The IKC manages several such caves. The IKC should have rescue plans for each cave they manage. It would also be helpful for rescue personnel to have duplicate keys to be used for rescue purposes only. This may be difficult to do for Shiloh, since the quarry provides the keys to the gate. K Dunlap moved that rescue personnel be provided a key to each cave, with the understanding that they will be used only for rescue purposes. Adams offered the amendment that patron contact information also be offered. Both motions failed for lack of a second. Rea moved that the President appoint a rescue coordinator for the IKC. Devore seconded. Motion passed 11-1. The President offered the position to Mirza, who accepted. Rea moved that the rescue coordinator be provided keys and/or information necessary for access to IKC-managed caves. Devore seconded. Motion passed 11-0-1. Mirza agreed to draft rescue plans for each of the caves. Patrons should contact the new liaison and provide appropriate information.

Bob Armstrong (Lost River Conservation Association) noted that some Lost River properties could come up for sale soon. K Dunlap will work with LRCA to monitor the situation. The IKC was thanked for the work we have done with other Lost River features.

The forest service distributed a video on *Cave Conservation and Ethics*. The IKC obtained a copy at the NSS Convention.

Next meeting: Saturday, September 23, 5 PM at the Lockwood residence in Mitchell (tentatively). Picnic afterwards. The new sign at the Orangeville Rise will be erected the same day at 1 PM.

Meeting adjourned at 9:54.

Submitted by Bruce Bowman, IKC Secretary

# QUARTERLY MEETING & COOKOUT REMINDER

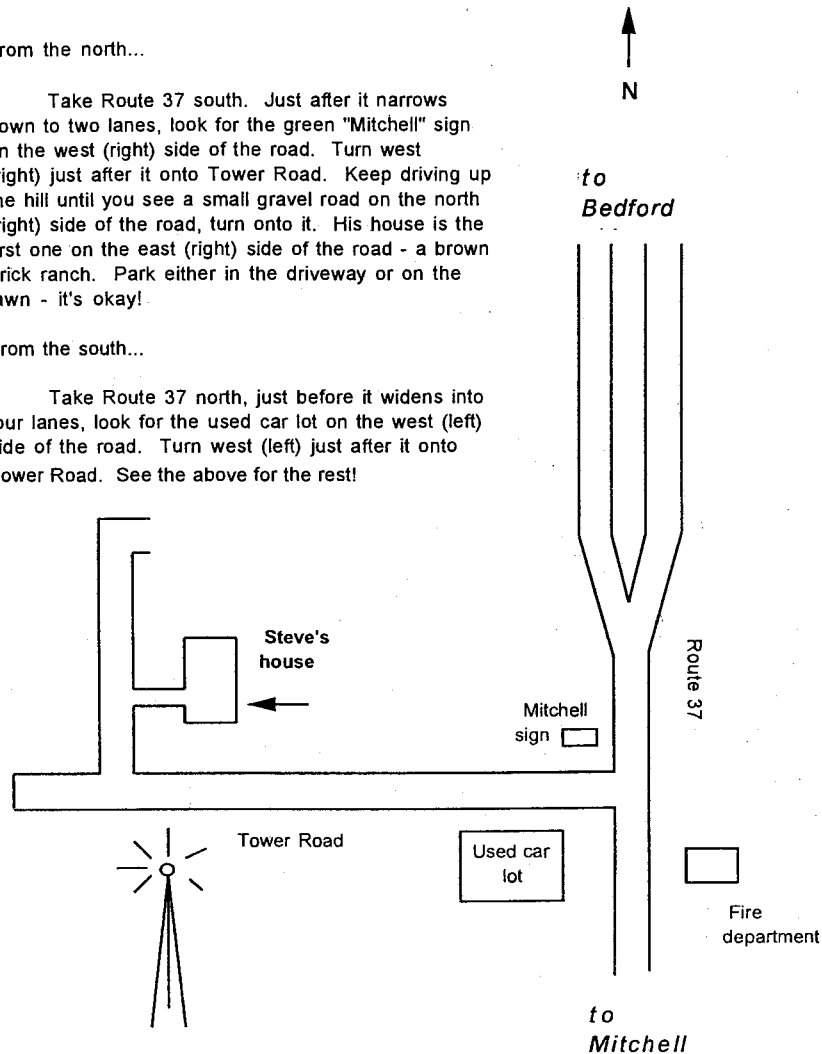
**SATURDAY, SEPTEMBER 23rd, 5:00 PM**  
**HOME OF STEVE LOCKWOOD, RR 1, BOX 107, 812-849-5766**

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**

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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.

