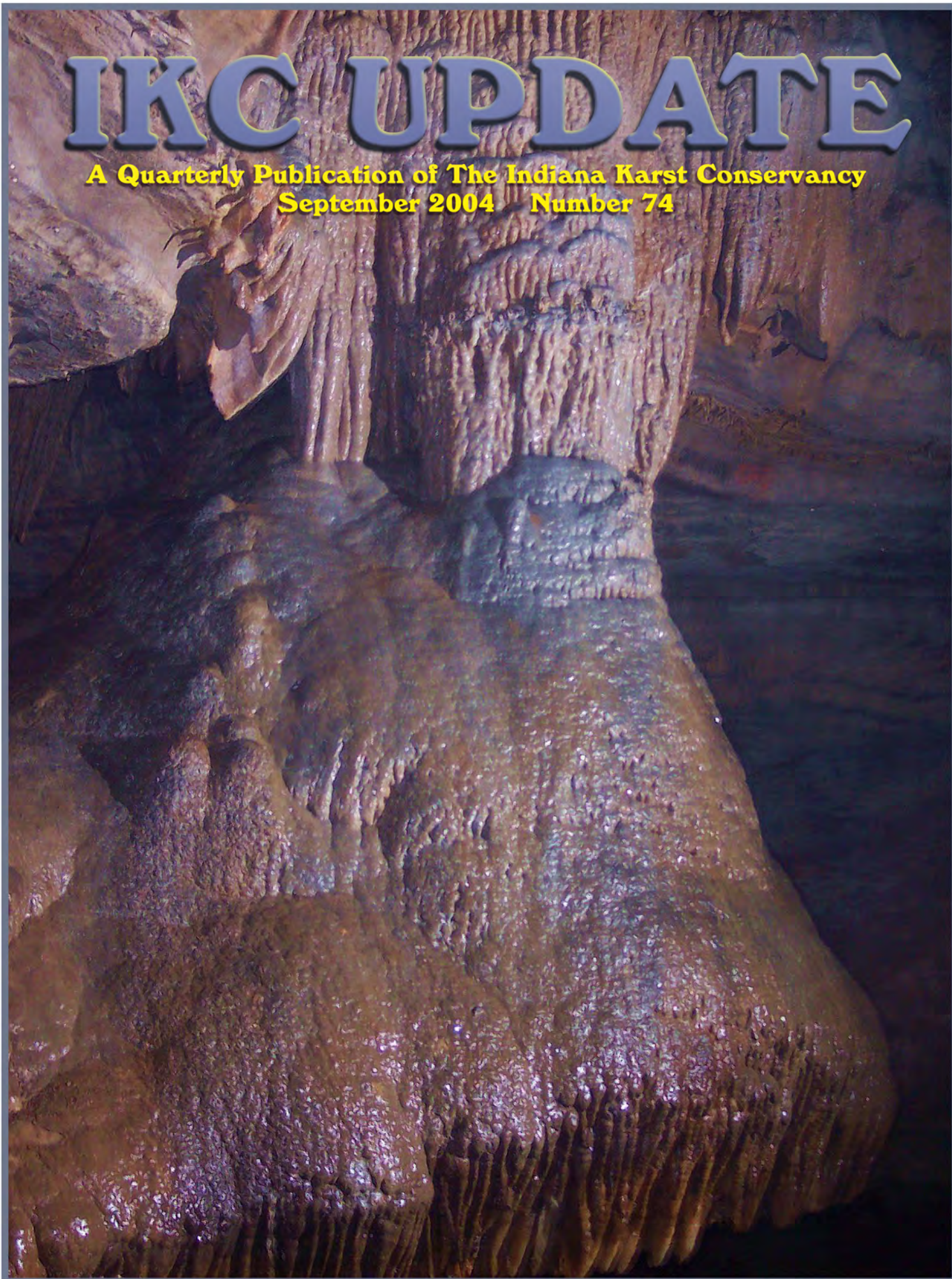


IKC UPDATE

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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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*grottos with liaison agreements
**grottos with agreements pending

QUARTERLY MEETING/COOK-OUT REMINDER

SATURDAY, SEPTEMBER 25th, 1:00 PM

CLOVERDALE, INDIANA

Property of Tom Rea, 8677 South State Road 243

The quarterly meetings are for the elected Board to conduct 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; Treasurer's report; Grotto Liaison Agreement status; proposal for a documentary/educational video; Education/Outreach report; Wayne Cave Preserve topics; Sullivan Cave Preserve topics; and more!

Following the business meeting will be the annual pitch-in cookout (starting around 5 PM). This year it will be a joint activity with the Central Indiana Grotto. The IKC/CIG 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 competitive dessert contest (13th annual). Bring an entry or enjoy sampling and selecting the winners. **Please bring lawn chairs, and the family, too.** Contact Kathy Welling for further details. NOTE: Those not wanting to drive home Saturday night are welcome to stay and camp.

Meeting directions: From I-70, exit onto SR 243 (exit 37). Turn north and go approximately 1/4 mile. Turn into the first driveway (8677) north of the small stream crossing. Proceed up the driveway to the open field on the right. The meeting will either be under the tent in the field, or just east in one of Tom's buildings. See map on page 21.

ACTIVITIES CALENDAR

- 25 SEP = IKC QUARTERLY MEETING/COOK-OUT (see above)
- 25 SEP = LOST RIVER TOUR, Orleans (see page 5)
- 22-23 OCT = GEOFEST3 (Gem, Fossil, Mineral show), Indianapolis
- 23 OCT = HNF/IKC COMMITTEE MEETING, contact Steve Lockwood
- 27-29 OCT = MIDWEST GROUND WATER CONFERENCE, Bloomington
- 16-18 NOV = INDIANA BAT & COAL MINING FORUM, Louisville (see page 5)
- ?? DEC = WINTER QUARTERLY MEETING (date and location TBD)

For more information on the Indiana Karst Conservancy, visit our web site at <http://www.ikc.caves.org> 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 much appreciated 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...

"One of the penalties of an ecological education is that one lives alone in a world of wounds"

-- Aldo Leopold, A Sand County Almanac



"Ocean fish populations plummet — stocks of large predatory fish have declined by 90 percent since industrial fishing began in the mid-1950's..." Discover, January 2004

"... the administration wants quick action: it has directed federal managers to remove regulatory obstacles to oil and gas development along the (Rocky Mountain) Front, ...Concern for wildlife and its habitat is no longer a priority." National Wildlife, August / September 2004

"But until enough citizens who are voters care, then these special interests will be able to block any meaningful policy change. It's as simple as that... Are we going to have significant climate change and all its consequences, or are we going to try to do something early on? Right now I don't think we're going to act soon enough without significant degradation of our environment. I hope I'm wrong." Senator John McCain (R-Arizona) speaking of his failed attempt at a bipartisan (with Joseph Lieberman D-Connecticut) workable bill on climate change, OnEarth, Spring 2004

Just some samples from the pile on my office floor. It's a bit depressing. As an engineer, I know that we have no hope of manufacturing the clean air and water we need to sustain our population; instead we must rely on natural systems to do the heavy lifting. Unfortunately, the world is just too complex to allow us to predict how many species we can kill off and how much pollution we can dump before the Big Machine starts to falter.

We, the IKC, don't get involved in politics; as a 501c3 organization we can't. If we did, then your contributions would no longer be tax deductible; and you might choose not to be so generous the next time. Instead, the IKC has chosen to emulate The Nature Con-

servancy; and while we certainly can't match their budget and scope, we've been able to do a first rate job with what we have.

You, on the other hand, as individuals can and should get involved in the politics. Most of the big problems that are on the horizon will, unfortunately, require some sort of legislative action and a willingness to enforce the regulations. I can hear the groans now, "Not more onerous regulations!" That's what you've been taught to say by talk radio and the cable TV news shows. I've had the opportunity to see some of the 'onerous regulations' from both sides. Having worked for a large corporation and having seen the way things are done at the bottom, middle and near the top - I can say it works like this: Businesses are neither moral nor immoral; they make decisions based on survival. Profitability in the face of competition and changing conditions determines survival. It's as simple as that. If, for example, and this is strictly hypothetical, you are in an industry that uses plating processes as a part of your manufacturing; then you use some very poisonous solutions. What to do with those solutions when they become contaminated or depleted? The cheapest thing to do is to dump them in the sinkhole out back. Without 'onerous regulations' that's what would happen. "Can't be!" you say, "Businesses would never stoop that low!" Suppose you're the plating line supervisor barely making enough to support your family; now picture the MBA CFO calculating that with present costs and with competition driving the prices down there will be a net loss next year. An order comes down - "All departments will reduce expenses by 20%, if this isn't met then there will be layoffs! Supervisor's performance reviews will be based on meeting this target. No arguments, just do it!" Now remember, there's no regulation (in this hypothetical case) against dumping the solutions on your property and there's still that sinkhole out back. Costs to have a reputable certified hazardous waste hauler take those barrels of cyanide bath off your hands are almost 20% of your budget. You've heard from a reputable source that the competition has its own sinkhole. And of course, everybody knows that water cleans itself underground and comes out pure as "spring water". You haven't seen the IKC's karst groundwater (ant farm) demonstra-



tion; the one where the pollutant dumped in a sinkhole comes up the neighbor's well pipe. It must be okay, otherwise it would be illegal, right? The CFO, conveniently, can later say that he was "horrificed" to find out what happened. One man's "onerous regulation" is another's lifesaver.

What can you do?

1) Become involved. Learn the issues and where your elected representatives and the opposing candidates stand on them. It's tough to do. Politicians tend not to take clear stands, particularly when they are running for office; but you can get a pretty good idea from the news and from voting records (available from various sources on the web). They and the talk shows will try to convince you that you really care about same-sex marriage or some such topic rather than about leaving a working world to your grandkids - you decide what's important. Pick somebody who will listen to you even if you don't agree with everything they stand for. You are the leader when it comes to saving natural systems; big money and politics

are almost invariably on the other side. You may even want to make a campaign contribution. In the real world this gives you more of a tendency to be heard by the candidate.

2) VOTE! If nothing else, it gives you the moral right to complain about the results.

3) Let the winner know what you want them to do. Write your congressman, senator, president - believe it or not, they want to hear from you. Hand written letters are great; petitions and mass mailings have much less credibility. Don't be a crank! Keep your letter short and on target, be respectful and make it personal with related personal experiences. When they do what you want, thank them. When they don't, let them know (respectfully) that you disagree.

If all else fails, Sears sells a nice counter-top water distillation unit that removes most nasty chemicals and bugs. I know, I've got one.

Richard Vernier

NEWS BRIEFS...

- ❑ Bob Armstrong and Dee Slater of the Lost River Conservation Association will be conducting their last guided tour of the Lost River area on September 25th. The auto/hiking tour covers the river from the east at its head waters in Washington County, through Orange County to its disappearance near Orleans, and on to its rise near Orangeville. The orientation lecture starts at 7:40 AM at the southeast corner of the square in Orleans and will depart promptly at 8 AM. Reservations are not required. Tours will go, *especially* if it rains. There will be some moderate hiking so sturdy footwear and long pants/sleeves are strongly recommended. The tour is free, but a small donation is suggested for the optional printed handouts. This is a must-do tour, if you are interested in Indiana karst. For more information, contact Dee at (317) 253-6951.
- ❑ The US Office of Surface Mining is sponsoring its third forum on bats and mines on November 16-18th in Louisville, Kentucky. This time the topic will be specific to the Indiana bat and how mine properties can be enhanced to provide appropriate habitat for this endangered species. The first day of the forum basically provides for an in depth review of the Indiana bat including their life cycle, preferred habitat, and population status. The second day looks at the regulatory aspects from the agencies and industry perspectives. The final day is spent looking at "case studies" of successful habitat enhancement projects. Complete details of this conference can be found at www.mcrcc.osmre.gov/bats.
- ❑ As was mentioned in the last *IKC Update*, on Memorial Day weekend a tornado hit the town of Marengo, including several properties owned by Gordon Smith, owner of Marengo Caverns. While none of his buildings received damage and the cave tours resumed within a few days, the campground and cabin area lost most of their trees (planted by Gordon approximately 30 years ago). To show appreciation for everything Gordon has done for the caving community over the years, during Cave Capers (held this year at the nearby Crawford Coun-

(continued on page 12)

WAYNE CAVE PRESERVE

by Keith Dunlap

It has been about fourteen months since the IKC acquired the entrance to Wayne Cave along with 20-acres of mostly wooded property. Most of the first year of ownership was consumed with grant writing and other direct fund-raising, enrolling the property in the Classified Forest Program to provide property tax relief, deciding upon and writing the preserve's management plan (cave and surface), selecting the preserve's management team (Tom and Robert Sollman), and many other less glamorous tasks.

On June 19th, we initiated the second phase of ownership, in that we started to implement some of the physical improvements to the property called out in the management plan. The biggest deficiency with the property was the lack of proper parking. Previously, the only place to park was right along Gardner Road (on an adjacent landowner) and then there was only room for two or three vehicles. It was often muddy and the landowner attributed the trash that would accumulate there to be from the cavers (ignoring the fact that trash accumulated all along Gardner Road from liter bugs driving by). So establishing off-street parking was a priority. Not only will it be safer and less conspicuous, but it will allow us to be better neighbors in that the cavers will not be trying to change their clothes right along a public road or disturbing neighbors if exiting late at night. More parking will also eliminate the logistics of larger groups visiting the cave, requiring the cavers to be shuttled from some other parking spot.

The logical spot for a parking area was in

the ridge-top clearing that was created several years ago when the property was logged. The quarter-acre clearing was fairly level and more than large enough. The bad part about the location was that the existing "driveway" from Gardner Road to the clearing was uphill and poorly drained. Runoff from the ridge ponded in the driveway making it un-usable for much of the year. Major reconstruction with attention to the drainage would be required.

As luck would have it, it rained heavily the night before our first workday. This made for messy work conditions, but we had already made arrangements for the equipment and volunteers, so we did what we could. The first order of business was to replace the existing culvert along Gardner Road. It was pretty well rusted out, too short, and too shallow (the top of the culvert was exposed). Most of the effort to replace the culvert was done manually with shovels and picks to lower the new culvert about a foot deeper.

The next order of business was to start grading the driveway, cutting shoulder ditches along the edge of the drive flipping the extra dirt towards the center to build up the drive surface elevation. This work was done with a 25-horsepower four-wheel drive tractor with a six-foot blade. Because it was so muddy, progress was slow, but continual working of the dirt helped to dry it out. So by the end of the day, a reasonable base was established. Two drainage cut-off swales were also created to direct runoff away from the driveway and into the woods. Finally, The perimeter of the 40-foot by 80-foot parking area was staked out and graded.

On the following day, the work continued as it was decided to hand dig a trough along the south side of the lower section of the driveway to better capture and drain the run-off from hillside. We also re-graded the driveway having had another day to dry out. Up in the parking area, we started addressing the "root piles" that existed on the perimeter of the clearing. These piles were created when the opening was bulldozed for the log staging area. Using the four-wheel drive tractor with blade, the Sollman's tractor with chain, chain saws, and much manual labor, we pulled out all of the brush and



Spreading stone on the parking area in the clearing.





The “driveway” at the Wayne Cave Preserve before construction started (June 19th).



The upgraded driveway and gate after four workdays of effort (August 28th).

re-leveled all of the dirt. The brush was piled in the center of the clearing which will be burned later. The final task of the day was to spread grass seed and hand rake it in on all of the disturbed areas. Participants on this first weekend included Bill Baus, Bruce Devore, Keith Dunlap, Don Ingle, Steve Lockwood, Bob Sergesketter, Robert and Tom Sollman, Mark Sparks, Bill Tozer, and Dick and Sue Vernier.

On June 23rd, Bob Vandeventer supervised the spreading of the #2 stone. It had rained the night before which softened up the road. We were hoping the truck drivers would spread the stone while backing up, thus putting down a base for them to run over, but they had other plans. The first two loads were dumped without incident. The third tri-axle cut up the lower driveway coming in and after dumping his load in the parking area, got stuck on the way out. This not only rutted up the driveway, but also prevented the remaining loads from being dumped until we re-graded things.

Workday number three was on June 26th. Stone was graded into the ruts and leveled out else where. The main focus of this workday however was to install the driveway gate. Eight foot long post were sunk and concreted in place and the gate was hung and leveled. Three sections of wooden fence were then constructed to prevent people from driving around the gate and give the property a more "occupied" look. More manual work was also done on the ditch along the lower section of the driveway. Volunteers who helped that day include Bill Baus, Keith Dunlap, Tem Hornaday, Mark Kraus, Shawn Lewis, Bob Sergesketter, and Tom and Robert Sollman.

July and the first part of August was pretty much a wash with several heavy rains keeping us from ordering more crushed stone. Finally on the 17th, with the threat of another rain forecasted, Bob Vandeventer supervised the spreading of four more loads, for a total of 140 tons on the driveway and parking area.

The final workday for the summer was on August 28th. With the use of the tractor and blade, the new stone was graded and leveled. Because of the previous heavy rains, the ditch along the lower driveway was eroding so it was decided to dig it a little deeper, install 80 feet of perforated drainage tile, then back-fill the ditch with course rock. We also gave the gate a second coat of paint and sowed 50 pounds of grass seed. Worker-bees

included Keith Dunlap, Dwight Hazen, Don Ingle, Tom and Robert Sollman, Bob Vandeventer, and Dick and Sue Vernier.

There are still a number of projects to be completed. After the new stone is given a chance to settle and work in, we plan to top the driveway off with several loads of finer stone (probably next year). Up in the parking area, we also have more root piles drag out and level and the large brush pile to burn. Finally, one or two camping sites need to be designated and the trail to the cave entrance needs to be established and improved.

Thus far we have expended almost 300 man-hours and spent approximately \$2000 in material. Had we contracted this driveway and parking lot work out, it easily would have cost us over \$10,000 and not been done to the level of care and detail we put into it. We have a very good beginning to making the property more accessible for those going caving or just needing a primitive but secure place in the Bloomington area to camp.

A special thanks should go to Tom Rea for donating the driveway gate and to Tom Rothrock for loaning us the 4-wheel drive tractor and blade. And a very special thanks to Property Managers Tom and Robert Sollman for organizing and supervising all of the projects.



Property Managers Robert (supervising) and Tom Sollman working to install the driveway gate posts.



Grading the stone and installing the drainage tile along the edge of the driveway.



Looking uphill at the new driveway from Gardner Road.



Standing at the north end of the parking area looking down hill towards Gardner Road.

WESTERN KENTUCKY UNIVERSITY CAVE ECOLOGY CLASS

by Patty Ruback

Through Western Kentucky University's Center of Cave and Karst Studies, I attended an intensive week-long Cave Ecology workshop. The week started with a 7-hour trip from Chicago to Hamilton Valley in Mammoth Cave National Park. The accommodations at Hamilton Valley were nice and cheap (\$8/night). I shared a bunkhouse with two other girls in my class and we had access to a large meeting house which provided classrooms, kitchen facilities, showers, and a porch overlooking some beautiful country. At night, we could hear calls from Great Horned Owls and frogs, and we enjoyed the variety of beautiful insects congregating around the light fixtures.

The workshop began on Sunday night with a general orientation to the program along with safety and conservation procedures. Following this orientation, my ecology group met for introductions and to begin our lessons. Dr Horton Hobbs, Professor of Biology at Wittenberg University, and Rick Olson, Ecologist at Mammoth Cave National Park, collectively developed and instructed the course. The week included some classroom discussion, but was mostly field oriented.

Monday, June 21, 2004

After a half day of classroom instruction, we departed for Mammoth Cave. We entered through the historic entrance (the main entrance) and stopped to comment on the installed bat gate with plexiglass running along the bottom half. Apparently, the plexiglass was installed to help regulate the air flow into the cave after an incident in 1994 when part of the ceiling dropped near the commercial tour route. It was believed to be a repercussion of increased airflow through the enlarged historic entrance.

Next, we proceeded to Wandering Willie's Spring where we had our first encounter with cave fauna. We all crowded around a small isolated drip pool to catch our first glimpse of a cave cricket (*Hadenoeus subterraneus*) and isopods (*Caecidotea spp.*). We continued down to River Styx where we found springtails (*Arrhopalites pygmaeus*), beetles (*Neapheops tellkampfi*), and mites (*Rhagidia cavernarum*) feeding on organic matter left on the walls from flood water. We also had the opportunity to observe researchers collecting young or larval fish as a part of their study on the influx of surface fish (i.e. blue gills,

spotted bass, etc) as a result of flow reversals. We then proceeded down to Richardson Spring, which was an 8-inch deep man-made drip pool (1.5m x 1m). We found a number of creatures, including amphipods (*Stygobromus spp*) and flatworms (*Sphalloplana spp*). We were really getting into this underground "bio" search.

Down Gothic Avenue near the Blacksmith Shop, we observed lots of bat stains on the wall. We could only imagine that once upon a time thousands of bats used these chambers for their roosting needs. Now, only these stains, a preserved body of a red bat (*Lasiurus borealis*), and few skeletons remain. At the Devil's Cooling Tub, which appeared to be a long-lived, first order stream with a consistent flow, we found a large number of isopods and a flatworm. Within 20 feet of the pool we found a large number of *Neapheops* beetles and a few cave crickets.

Tuesday, June 22, 2004

We started out at Three Springs which is a location of resurgence into the Flint Ridge Cave System. Here, we found a damselfly (*Odonata*) larva under a rock in the stream, which was a good indication of a healthy water system. On the way to White's Cave, we saw something pretty bizarre. Beavertail cactus was growing on the limestone bedrock in a clearing. White's Cave would turn out to be quite active with life.

In the Twilight Zone area where the opening of the cave can still be seen, we found pseudoscorpions (*Kleptothonius cerberus*), *Helicadisca* snail, a spider with an egg sac (*Meta ovalis*), a beetle (*Ptomophagus hirtus*), cave salamander (*Eurycea lucifuga*), amphipods, and lots of cave crickets and guano. The cricket guano is a main contributor of nutrients which the other animals are feeding off of. In the Dark Zone, we found more cave crickets, bristletail (*Litocampa cookie*), two different species of millipede (*Scoterpes copei*) and (*Antriadesmus fragilis*), two unknown spiders, a blind "daddy-long-leg" (*Phalangodes armata*), *Meta* spider, a snail (*Carychium stygius*), camel cricket (*Ceuthophilus stygius*), and *Belba* mite.

Next we went to Long Cave, which is a known Indiana bat (*Myotis sodalis*) hibernacula during the winter months. Within the Twilight Zone, we found springtails, bris-



tle tail, cave crickets, and *Neapthenops* beetles. Cave crickets go outside to feed every two weeks or so and then come back in to live, bringing a source of allochthonous material for other organisms to survive on. They can store 200-300% of their body weight in their crops and experience classic troglomorphy, having lengthened appendages and heightened sense of smell. In addition to bringing in food, cricket eggs provide a source of food for *Neapthenops* beetles.

In the dark zone, we looked in and around a trough collecting slow dripping water from the epikarst. Our survey reported 15 amphipods, *Neapthenops* beetle and pupae, *Pseudanophthalmus* beetle, springtail, *Carychium* snail, a small troglobitic spider (*Anthrobia monmouthi*) in a wood pile, six *Heleomyzid* flies on the wall, and an Eastern pipistrelle bat (*Pipistrellus subflavis*). We also could not help noticing the fossils on the ceiling, which included crinoid stems, gastropods and horn coral.

Wednesday, June 23, 2004

We went back to Mammoth Cave, through the Carmichael Entrance, to make our way down to Mystic River in search of the endangered Kentucky cave shrimp (*Palaemonas ganteri*). It was great to actually get to do some strenuous caving. There were a few "scary" spots along the way, which required some split-like maneuvers to conquer a few ledges, and some crawls and bouldering. Down Emily Avenue, we found two bristletails, five amphipods, elytra (exoskeleton) from beetles, and cave crickets. After about an hour of hiking, we reached the Mystic River. This underground river was pretty low and slow moving, but the mud on the walls showed us that this river could get quite high. We found a blind cave crayfish (*Orconectes pellucidus*), isopods, amphipods, both the Northern cave fish (*Amblyopsis spelaea*) and Southern cave fish (*Typhlichthys subterraneus*), and the anticipated Kentucky cave shrimp.

Thursday, June 24, 2004

One of the requirements for completing this workshop was to develop a hypothesis to test. One of the questions posed was to look at Dogwood and Adwell caves and conduct a comparison study on selected abiotic and biotic conditions. Dogwood and Adwell caves (located in the Lower Hamilton Valley, Hart County, KY) were relatively similar in length (250-300ft), but Dogwood Cave exhibited a steeper entrance incline and overall

profile inclination. Dogwood Cave also had a waterfall at the back of the surveyed portion of the cave, while Adwell's input of water was mostly from epikarstic drips. Therefore, it was proposed that Dogwood Cave acted as a "cold trap" relative to Adwell Cave. In order to test this, we needed to place dataloggers throughout each cave to record at least 24 hours worth of temperature, humidity, and light sensitivity data. We obtained plan and profile views of both caves from the Survey and Cartography Course being offered at the same time. In addition to placing the dataloggers, we conducted a vegetative survey outside the cave and quickly inventoried the biota inside the cave to get an idea of what would be in store for tomorrow.

Later that day, we went back to the Niagara Falls section of Mammoth Cave. We entered the cave through a turnstile entrance, which was placed to seal off that man-made entrance and reestablish the natural air flow condition. The speleothems in this area were very green from the fluorescent lightening and we found booklice living on this light flora. The management staff is currently experimenting with different types of lights to try to minimize the growth of this type of flora.

Friday, June 25, 2004

We set up a fiberglass survey tape from the entrance to the back of each cave. This allowed us to systematically inventory the biota at ten foot intervals. Collectively, we recorded 6010 organisms (2558 in Adwell and 3452 in Dogwood). In Adwell Cave, we observed 38 different species and 42 species in Dogwood Cave. We found that there was a significant difference in the stygobitic (aquatic) faunal diversity between the caves (4:1 ratio of Adwell to Dogwood). However, the frequency of troglobitic fauna was similar in both caves. The cave cricket was the dominant species observed during our biological inventory. However, there was a significant difference between cricket populations in the two caves (6:1 ratio of Dogwood to Adwell). The number of overall individuals recorded was largely influenced by the abundance of crickets at these locations (both the crickets themselves and the cricket guano dependent community).

The dataloggers showed that Dogwood Cave was warmer than Adwell Cave, thus rejecting our hypothesis that Dogwood acts more effectively as a cold trap than Adwell. However, due to restricted observation time (24 hour period), results may not completely

represent longer spatial and temporal cave conditions and populations.

Saturday, June 26, 2004

The final exercise was to present our study to an audience using Microsoft PowerPoint. The group's dynamic relationship really paid off with the speedy, organized creation of this presentation. By the afternoon, we had compiled and analyzed our data, and we presented it to the small audience.

Overall, I was very pleased with this workshop. In addition to the classroom lecture and field experience, we received sup-

plemental reference material in a large binder. However, the most important lesson that I learned from Dr Hobbs and Rick Olson was to "open our eyes" during caving. We encountered 67 species during this week-long course, and most of them were new to me. With that said, I could not help thinking about how fragile cave environments are, from a biological point of view. The bat stains on the wall, down Gothic Avenue in Mammoth Cave, was a perfect example. What happened to these bats? Was this decline a result of human negligence or exploitation?

Continued from page 5...

ty fairgrounds) a number of cavers volunteered to help clean up the devastation. It was still too muddy to work on the downed trees, so the group mostly worked on cleaning up blown debris out of the standing woods. Three to four pickup loads were bagged and hauled off. Participants included Ken Alwin, Larry Bundy, Linda Bundy, Angie LeClerc, David LeClerc, Keith Dunlap, Mike Lorance, Bart Nott, Robert Sollman, Tom Sollman, Bob Vandeventer, Dick Vernier, Sue Vernier, and Barry Welling.

- ❑ At this year's NSS Convention in Marquette, Michigan, Indiana cavers and organizations were well represented (from BOG members, to convention volunteers, to photo salon contributors). A few highlights included the Central Indiana Grotto, Indiana Cave Survey, and the IKC all winning ribbons on one or more of their newsletter covers in the Graphic Arts Salon (the IKC's ribbon was for newsletter #70 with a nearly fifty-year old photo by Don Martin). During the annual auction, Bambi Dunlap's quilt and other creations raised almost \$1600 for the Cave Acquisition Fund (the fund that provides grants for organizations like the IKC for cave acquisitions). Finally, the IKC would like to congratulate Indiana caver (and IKC President) Dick Vernier for being named an NSS Fellow.
- ❑ Three bat papers of interest were recently published in the *Proceedings of the Indiana Academy of Science* (Vol 113, No 1, 2004). The papers are "Colonies and Reproductive Patterns of Tree-Roosting Female Eastern Pipistrelle Bats in Indiana" by Jacques Pierre Veilleux and Sherry Veilleux; "Bats of Navel Surface Warfare Center at Crane, Indiana" by Virgil Brack Jr and John Whitaker Jr; and "Bats of the Hoosier National Forest" by Virgil Brack Jr, John Whitaker Jr, and Scott Pruitt.
- ❑ As we have stated many time before, the IKC relies upon donations beyond membership dues to fund many of their projects (an example, see the article starting on page 6 detailing the recent improvements made to the Wayne Property). In the past quarter, we have received a number of donations and we would like to recognize Bob Armstrong, Anne Crow, Jaime Coffman, Mark Deebel, Keith Dunlap, Robert Masta, Nathan Pate, Andrew and Shavon Peacock, Gary Roberson, Marvin Steele, Kathy Welling, and the Cave Conservancy Forum.
- ❑ Another way the IKC earns a few donation dollars (generally around \$100/year) is by recycling aluminum cans. Besides collecting cans at Cave Capers, we have a half dozen or so members who save and donate their personal cans and in some cases cans from where they work. Keith Dunlap stockpiles them and Bob Vandeventer occasionally hauls them off the recycling place. If you would like to participate, just bag your cans up (preferable crushed) and give them to Keith Dunlap when your paths cross (or he might even pick them up in the Indianapolis area).
- ❑ Two new members have joined the IKC in the past quarter. Please welcome Karen Tadsen (438) and Nathan Pate (439). The IKC membership now stands at 198.

Endangered Bats Using More of Wyandotte Cave Following Winter Closure

A recent survey of the Indiana Department of Natural Resources' Wyandotte Cave found the hibernating endangered Indiana bat population had moved into areas of the cave not used in decades. Winter cave tours were discontinued for the first time in September 2002 to allow the rare species to hibernate undisturbed in Wyandotte Cave, one of the bat's most important wintering caves.

The survey, funded by Indiana's Nongame and Endangered Wildlife Program, was conducted in February under the supervision of Dr Virgil Brack, a well-known bat expert who has studied the population of bats in the cave for over 20 years. Dr Brack and his crew discovered hibernating Indiana bats in an area known as Bat's Lodge, where they haven't been seen since systematic surveys began in 1981.

"This is quite amazing," said Lori Pruitt, Indiana bat recovery coordinator for the US Fish and Wildlife Service who participated in the February survey. "We have found bats back in Bat's Lodge -- a historic hibernation area that hasn't been used in decades." Pruitt speculates that the absence of human disturbance associated with winter tours may have contributed to the bats' movement into Bat's Lodge.

Pruitt praised the Indiana DNR for its ongoing efforts to conserve the Indiana bat. "It appears that the reduction in disturbance during the winter has made Bat's Lodge more suitable for hibernating Indiana bats," Pruitt said. "We hope that better hibernating conditions mean that more Indiana bats will survive the winter, and more young will be produced in the spring. We look forward to future surveys to see if bat numbers in the Bat's Lodge area of Wyandotte Cave increase."

Indiana bats are extremely vulnerable to disturbance during hibernation because arousal from hibernation can cause the ani-

mals to burn more energy than they have stored for the winter. This can cause bats to die before emerging in the spring to feed on insects, or leave them unable to survive spring migration to summer habitat.

About 31,217 Indiana bats were counted during the latest survey, including 4,598 in Bat's Lodge. The total is up from 28,584 found in 2001. Historically, it is estimated that Wyandotte Cave harbored more than a million Indiana bats during winter months.

The Bat's Lodge area of Wyandotte Cave is named for its historic use by hibernating Indiana bats. An 1851 record mentions tens of thousands of bats "suspended from the rocks in large clusters, like bees swarming." Winter cave tours -- which began in the 1850s -- traveled through Bat's Lodge, which has a low ceiling. Records from the 19th century note that visitors of the time often reached up and brushed the clusters of hibernating bats hanging overhead.

Cave tours at Wyandotte resumed May 1 after hibernating bats exited the cave for summer roosts in wooded areas. Pruitt said that the few bats remaining in the cave during summer months can tolerate disturbance far better than hibernating bats. Managed tours do not pose a threat to the bats summering in the cave.

"Under the DNR's new visitation schedule, Wyandotte Cave continues to offer a great experience for visitors, but at the same time, its role as a high-priority hibernating cave for endangered Indiana bats is safeguarded," Pruitt said. "We're excited at the potential boost to this species' recovery."

Listed as an endangered species in 1967, Indiana bats were among the first animals identified as endangered under a law that preceded the current Endangered Species Act. Indiana bats num-

bering in the millions were once found throughout the eastern United States, hibernating in caves and spending summer months in forested areas. Under the Endangered Species Act, plants and animals listed as endangered are considered likely to become extinct in the foreseeable future throughout all or a significant portion of their range.

Indiana bats still occur in areas of their former range, but their numbers have declined significantly and are still dropping. The total population estimate is currently about 380,000 Indiana bats, a 60 percent drop since the 1960s. It is believed that modification and disturbance of their hibernation caves and loss of summer habitat have contributed to their decline, although other factors, such as pesticide use, are also under investigation.

The US Fish and Wildlife Service is the principal federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 95-million-acre National Wildlife Refuge System, which encompasses 540 national wildlife refuges, thousands of small wetlands and other special management areas. It also operates 69 national fish hatcheries, 64 fishery resource offices and 81 ecological services field stations. The agency enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

US Fish & Wildlife Press Release

INDIANA KARST CONSERVANCY TREASURY REPORT**Income/Expense Statement
From April 1, 2004 to June 30, 2004****INCOME:**

Dues Apportionment and Residuals	628.75	
Donations - Cans for Karst	66.79	
Donations - General	200.00	
Donations - Wayne Cave / Land Acquisition Fund	7635.37	
SpeLogger Sales (8 units)	974.00	
Interest	45.54	
	<u> </u>	\$9,550.45

EXPENSES:

IKC Update (printing, production, mailing)	255.55	
Stewardship/Conservation	210.27	
Membership	74.98	
Education	33.85	
SpeLoggers Fabrication (10 units)	1003.87	
Business (credit card fees, security box rental, etc)	69.90	
Property Taxes	131.69	
Transfers to/from restricted funds/other adjustments ¹	10151.82	
	<u> </u>	(\$11,931.93)

NET OPERATING EXCESS (DEFICIT) THIS PERIOD: (\$2,381.48)

**Balance Sheet
June 30, 2004****ASSETS:**

Cash in Checking / Saving Accounts / CDs	46980.50	
Accounts Receivable / Pledges ²	1240.00	
Wayne Cave Preserve (20.00 acres)	75000.00	
Sullivan Cave Preserve (28.00 acres)	72000.00	
Buddha Karst Nature Preserve (36.84 acres)	29000.00	
Orangeville Rise Nature Preserve (3.01 acres)	7000.00	
Indian Creek Conservation Easement (valued at \$1/acre)	13.16	
	<u> </u>	<u>\$231,233.66</u>

LIABILITIES & OPERATING EXCESS:

Land Acquisition Fund	7679.33
Deferred Dues Fund (168 + 28 members)	2760.00
Stewardship Endowment Fund	13484.96

Previous Operating Excess	26690.85
Net Excess (Deficit) This Period	<u>(2381.48)</u>
Current Operating Excess ³	24309.37
Real estate liquidity	<u>183000.00</u>

Total Liabilities & Operating Excess \$231,233.66

NOTES:

- 1) Includes \$2500 transfer from the General Fund to the Stewardship Fund for Wayne Cave Preserve.
- 2) Wayne Pledges: \$400; SpeLogger invoices: \$840.
- 3) Includes upto \$2500 committed to improvements for the Wayne Cave Preserve.

IKC SUMMER BOARD MEETING MINUTES

Saturday, June 19, 2004
Bloomington, Indiana

BOARD MEMBERS PRESENT:

Richard Vernier, President
Bob Sergesketter, Secretary
Keith Dunlap, Treasurer
Bruce Bowman
Bruce Devore
Dave Haun (proxy by Marks Sparks)
Kriste Lindberg
Steve Lockwood
Nick Noe
Don Ingle
Tom Sollman
Bill Tozer
Bob Vandeventer
Sue Vernier
Jamie Winner

BOARD MEMBERS ABSENT:

None

The meeting was called to order at 7:08 PM in Room 143 of the Geology Building on the IU campus, President Richard Vernier presiding. Mark Sparks was accepted as proxy for Dave Haun. The minutes from the previous meeting were approved as published in the June 2004 *IKC Update*.

Treasurer Dunlap reported a cash balance of \$47,723 of which about \$27,000 is in the general fund and the rest in restricted funds. Total assets, cash plus land holdings, are \$230,736.17. We have 196 members with 29 left to renew. A reminder to pay dues was published in the *IKC Update* and Dunlap will send reminder letters to the last few hold-outs.

Education and Outreach.

Lindberg reported that she is putting a big push on Project Underground, trying to make it more of a statewide organization. She is also continuing to work on the Hoosier Riverwatch and the Storm Drain Marking projects. There has been another "breakthrough," this time in Lawrence County. Workers putting in a water line across the road from the entrance to Spring Mill State Park broke into a void. A couple of cavers checked it out and it didn't go so it was filled in. She is still planning on developing a karst program that can be presented to real estate developers to help them deal with various issues that can come up when working in karst areas. She also noted that the IKC received a "thank-you" certificate from WonderLab in Bloomington for sponsoring the bat program.

Hancock Property.

Dunlap reported the Federal appraisal for this property is proceeding, but is not ready to present to the owners yet. We may know more by the Fall meeting.

Wayne Cave.

Dunlap reported that we raised \$64,000 of the \$75,000 cost of the property with the remainder coming out of the Cave Acquisition Fund. Dick Blenz is no longer matching donations since we have reached our initial goal. We are still soliciting donations to get the Cave Acquisition Fund built up so we are ready if another property comes on the market.

Robert Sollman reported on today's work session at the Wayne Cave property. The culvert was replaced, the road was graded and two water runoff swales were graded, a drainage ditch was dug along the right side of the road, and the log and brush piles around the edges of the parking area were broken up and piled in the middle of the clearing for eventual burning. Tomorrow more clearing of brush piles and grading will be done and next week the rock will be delivered for the road and the parking area. There will be another work session next week-end for final grading of the rock and possibly burning the brush pile. The gate will also be installed. Tozer asked if the parking area will be usable right away. Robert said yes though it may be rough for a while until some smaller rock is put down later. The combination lock will still be in use.

Buckner Management, Ownership Transfer.

Vernier said that he has heard that Dick Blenz is considering speeding up the transfer of the Buckner property to some entity other than himself. Vernier asked if anyone had any first hand information about Blenz's intentions. No one did but there was a lot of discussion about the IKC's involvement in whatever happens. Bowman finally said that it's Blenz's decision and we need not worry about it until he makes his decision. Let's wait and see and not take any action based on rumor. Tozer agreed but said we must be prepared to act if the NSS or the BIG or whatever group is given responsibility for the property wants the IKC to become involved with managing it.

Isom Property.

Dunlap presented maps of the Isom property, 66 acres that border the south boundary of the Wayne Property but does not adjoin Blenz's property. The property has recently come on the market and it contains the Bullseye Entrance to Buckner Cave. The asking price is \$5500 an acre. Dunlap said that the price is higher than the going rate in that area but that doesn't mean that they won't get it. He thinks a more realistic market price would be in the \$3200 to \$3300 an acre range. Devore asked what would be the attraction to the IKC. Dunlap said the fact that it is adjacent to the Wayne Property. Vernier said that it also contains the former pit entrance to Showcase Cave. It is now closed. Tozer asked if we



could buy a small piece of land around the Bullseye entrance. Dunlap said that the owners might consider it but the planning commission may not allow the sale of a small parcel. Lindberg thought that they would. There was more discussion but it was felt that unless we can get just a small parcel around the entrance, this property is not a priority. Tozer pointed out that the entrance could be considered a liability to a potential buyer and that could give us some leverage on getting a favorable price for the part that we want. Dunlap said that if we aren't prepared to spend \$100,000, there is no point in even floating a trial balloon. If someone buys the whole property, then we could approach the new owner and see if they would sell us the entrance area. Vernier said that there doesn't seem to be a lot of interest in pursuing the matter so let's just wait and see what happens.

Shaft Cave.

There was no report and no current action.

Sullivan - status, management plan update.

Dunlap said that we can't change the management plan until we know what's in the grotto liaison agreement which is in the process of being changed.

Spring Mill MOU Status.

Vernier reported that the Spring Mill MOU is still in limbo. He hasn't contacted them and they haven't contacted him.

Grotto Liaison Agreement Update.

Dunlap has requested that the position of Agreement Coordinator be created to handle reports, waivers, interactions with the various grotto liaisons, distribution of new keys and so on. He is doing most of this now but there is nothing as far as IKC policy that says how to handle the various jobs. Dunlap wants to have an Agreement Coordinator position and wants a short job description written for that position. The Agreement Coordinator would not necessarily be a separate job or office. Bowman questioned the need for the Agreement Coordinator, saying that the Grotto Liaison should be able to submit the required reports and information directly to the various cave patrons. There was much discussion as to what the duties of the Agreement Coordinator would be and since the Grotto Liaison Agreement is presently undergoing some changes, Vernier said that he and Dunlap will work on the concept a little more. More changes in wording in various sections of the agreement were discussed at length and these changes will be written up as a revised Grotto Liaison Agreement and sent to all Board Members for review and voting. Tozer moved that, upon review of changes to the Grotto Liaison Agreement, the Board vote on the changes by electronic means, seconded by Sue Vernier. Bowman proposed an amendment that we must receive all 15 votes before the vote is decided, seconded by Ingle. This was followed by much discussion including the reading of the portion of the by-laws pertaining to electronic voting. Dunlap called the question. The

vote on the call to question was 14 for, 1 opposed, 0 abstaining. The vote on Bowman's amendment was 6 for, 5 opposed, 4 abstaining. More discussion followed until Ingle finally called the question. The vote on the call to question was 15 for, 0 opposed, and 0 abstaining. The vote on Tozer's original motion, as amended by Bowman, was 12 for, 2 opposed, 1 abstaining. This means that the Grotto Liaison Agreement will be distributed at a later date with revisions noted and the Board will vote for or against the revisions via E-mail or by telephone. All 15 votes must be accounted for in order for the vote to be valid.

Items from the Floor.

Dunlap has IKC hats for sale. The price is \$12.00.

Dunlap also said that in the past we have made a transfer of money into the Stewardship Endowment Fund, when property was purchased, in the amount of 10% of the property value. We have not done this yet in the case of the Wayne property and so Dunlap moved to transfer \$2500 from the General Fund into the Stewardship Endowment Fund. He said that this amount is about one-third of what we would have put in but his thinking is that we could put in another third next year and then again in the following year to bring the total amount put in at 10% of the property value. Lockwood seconded the motion. Bowman proposed an amendment to increase the amount transferred to \$5000. There was no second. Tozer asked if there are separate endowment funds for each property. Dunlap said no, there is just one fund and it has about \$11,000 in it. Sollman asked if the endowment fund can all be used on one property or must it be used on all properties proportionally. Dunlap stated that how the money is spent is up to the Board. The Stewardship fund is for all of our properties and the amount that is put into it is just a guess as to how much we think we may need. Tozer asked if we had ever taken any money out of the Stewardship Fund. Dunlap replied that we have not. The original intent was to be able to pay for things like property taxes and insurance but these expenses are currently paid out of the General Fund and the Stewardship Fund has become more of a rainy-day or emergency fund. The vote was 15 for, 0 opposed, 0 abstaining. Twenty-five hundred dollars will be transferred into the Stewardship Endowment Fund from the General Fund.

Next Meeting.

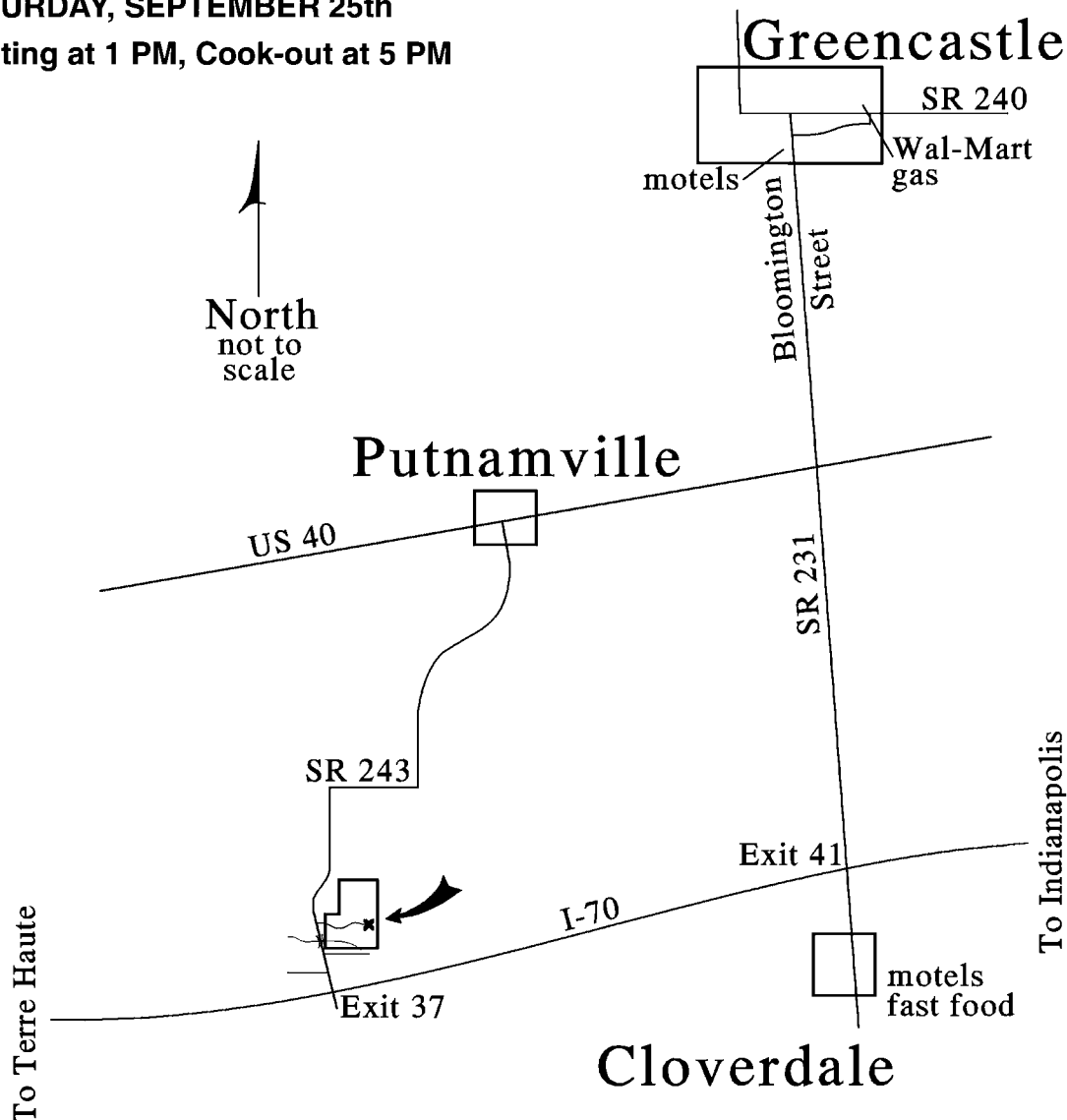
After some discussion, the next meeting was set for September 25 at Tom Rea's place. The Fall meeting usually includes a cookout/pot luck supper and will be combined with the CIG annual cookout, same as last year. The IKC business meeting will start at 1:00 PM

Bowman moved to adjourn. The meeting was adjourned at 9:10 PM.

Respectfully submitted,
Bob Sergesketter, Secretary

IKC MEETING AND IKC/CIG COOK-OUT
SATURDAY, SEPTEMBER 25th
Meeting at 1 PM, Cook-out at 5 PM

To Crawfordsville
 & I-74 Exit 34



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.

