



IKC UPDATE

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ikc.caves.org

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: The main entrance to Buddha Cave on the IKC's Buddha Karst Nature Preserve.
Photo by Dave Everton (Fall 2010).



IKC QUARTERLY MEETING REMINDER
SATURDAY, DECEMBER 10th, 2:00 PM EST
BLOOMINGTON, INDIANA
MONROE COUNTY PUBLIC LIBRARY, ROOM 1C

The quarterly meetings are for the elected Board to conduct business, and for our members and other interested persons to participate and have an open forum to talk about caves 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: Summary of fall workdays at our preserves and future activities; Financial reports; Land acquisition activities; I-69 update; and more....

Rumor has it there will be an ad hoc Christmas cookie contest, so bring your favorite to share.

Meeting directions: The Monroe County Public Library is located at 303 E Kirkwood Ave (two blocks east of the courthouse square in Bloomington). On-street parking is limited to 2 hours, so park in the library's lot or nearby bank lots (see www.monroe.lib.in.us/general_info/mcpl-bloomington-map.html for more details). The meeting rooms are one level down from the main entrance.

ACTIVITIES CALENDAR

Dec 10 – IKC Quarterly meeting (see above)

Feb?? – IKC Directors meeting (date & location to be determined)

March ?? – IKC Annual Business meeting (date & location to be determined)

April ?? – Indiana Cave Symposium (date & location to be determined)

For more information on the Indiana Karst Conservancy, visit our website at ikc.caves.org or write to our PO box. Membership to the IKC is open to anyone or any organization interested in supporting cave and karst conservation. Annual dues are \$15. Please see inside the back cover for a membership application form or to make a much-appreciated donation. Donations can also be made by credit card using the donation button located on our website's home page.

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...

During the last few weeks we have been very busy working on a project for the Hoosier National Forest (HNF). In my work as a cave biologist, I've had a working relationship with the HNF for a long time, well over a decade. Looking at our (Salisa and mine) 2010 report on cave fauna of the HNF, I see that we've been to 167 caves scattered across the forest service's "purchase units" in 19 quadrangles extending from the Ohio River to Monroe County. These range from small holes (the HNF has no defined size or length limits on what is considered to be a cave) to the immense Lost River Cave System. We've also looked at a number of springs, seeps, wells, drain tiles, mines, and anything else that might have a subterranean creature in it. Many of these sites we have visited repeatedly for the purpose of retrieving pitfall traps and conducting additional sampling, so I think it's safe to say we've conducted hundreds of trips into the caves of the HNF. My relationship as a biologist is now intertwined with my role as President of the IKC, and most recently, as the IKC/HNF liaison. This relationship is merely punctuation of the volunteer work performed by IKC and Indiana Cave Survey personnel for over 20 years in doing cave location work and resource inventories on the HNF.

For anyone who has not been there, I would have to tell you that the Hoosier National Forest is a wonderful place. It is managed by the Department of Agriculture (don't let the "National" designation mislead you, this isn't a national park) as a multi-use area that includes the harvest of timber. There are numerous places designated as "Special Areas" that receive additional conservation management. The HNF straddles the Crawford Upland, a region of rugged landscapes with sandstone cliffs, limestone floored valleys, and caves and karst features galore. Among my favorite places on the forest are Hemlock Cliffs (Crawford Co), Wesley Chapel Gulf (Orange Co), Plaster Creek Seeps (Martin Co), and the Deam Wilderness (Monroe Co).

I've written more reports than I can remember for the Forest Service, including the almost yearly

bioinventory reports, as well as dozens of assessments for Regional Forester's Sensitive Species in several different forests (Hoosier, Shawnee, Mark Twain, et al), and most recently an assessment for subterranean ecosystems on the HNF. These are all used for the purpose of assisting in the stewardship of the karst resources of the HNF. Looking up at the wall in my office are some reminders of this journey with the Forest Service... several plaques in recognition of regional honor awards and the certificates for my part in helping with the video *Caves: Life Beneath the Forest*. I have very fond memories of the creation of this project, despite thinking I was going to die of



heat exhaustion on a 98 degree day that my interview was filmed at the entrance to Dillon Cave. We've found dozens of rare and undescribed subterranean species on the HNF. Although most have gone to specialists in various fields of invertebrate zoology, I did describe a new species of cave millipede endemic to the HNF that we discovered in Crawford County

and named after the karst coordinator at the time, Kelle Reynolds: *Pseudotremia reynoldsae*. In a line of over-achievers, her successor Cindy Sandeno, went on from her tenure here in Indiana to become the national cave and karst advisor for the US Forest Service. It's been a pleasure to work with such accomplished people.

As we all know managing karst is a tricky affair and Indiana's landscape is, unfortunately, replete with failed examples. I have some concerns about the new guidelines for the management of karst that are being enacted on the HNF [*editor: see more details about this on page 5*]. Changing the language of the forest plan to allow for cutting non-native pine plantations around caves is, in my opinion, and excellent idea (and one that not coincidentally I voiced earlier this year on a site visit with HNF personnel). However, I think there is still a lot to learn about how sinkholes are managed. I believe that the concept of a "closed" sinkhole is a mis-nomer in that dissolved nutrients flow freely into the subterranean system to the under-lying community regardless of whether or not

there is a cave entrance or even a crack present. In a small project I did for the HNF it was fairly obvious that the fauna of sinkhole floors in deciduous forest is much richer than in similar sinkholes where the trees have been removed.

This reminds me of the field trip during the National Cave and Karst Management Symposium that was held in Washington state. During the trip, which featured looking at forest management in adjacent British Columbia (southwestern Canada) we viewed a demonstration by a logging company. They were using a large piece of equipment to remove large pieces of tree top that had been cut and left in a sinkhole. The guy standing next to me commented, "That looks great for the field trip, but there is no data to support that it's actually a good idea to remove the organic material from the sink. To the contrary it might well be better to leave it there..."

My point is that data on sinkholes in the realm

of forest management is very sparse. Cave crickets forage up to 100 meters (or more) and may emerge from openings in what some people would call "closed sinkholes". You'd be amazed where cave crickets appear on warm summer nights if you start putting out "oatmeal trails" around sinkholes (i.e., a tablespoon or so of dry oatmeal sprinkled along a path every 10 meters or so). And nutrient input into the subterranean system is even broader depending on the topography around a sink. So I would urge caution in making decisions when organisms that have century long life spans are involved... research indicates that a cave crayfish may live for more than a 100 years and damaging an ecosystem with these delicate creatures is a difficult thing to repair. A mis-step can potentially occur quickly that would erase an entire ecosystem that took millennia to establish and will be gone forever.

Jerry Lewis

NEWS BRIEFS..

- ❑ In the September *IKC Update*, it was mentioned that the IKC has granted permission to the USGS for the installation of a temporary river stage and flow monitor just down stream of the Orangeville Rise. This monitoring unit is now in place and functional, transmitting data via a satellite uplink. The study will run several years and will help in predicting/understanding downstream flooding for towns like West Baden and French Lick.
- ❑ The IKC celebrated its 25th anniversary this year and Tom Sollman took it upon himself to order and donate two dozen commemorative hats. The hats are similar to the IKC's standard ball cap (<http://ikc.caves.org/images/promo1.jpg>), but with "25 YEARS, 1986-2011" integrated into the design. There are currently 10 of these special hats left. These hats are \$15 (plus \$3 postage) with 100% of the proceeds going into the IKC's Cave Acquisition Fund. Contact Keith Dunlap (see page 2) to order. When they are gone, they are gone!
- ❑ The Hoosier National Forest is considering amending their forest Management Plan that could significantly impact the ecological stability of caves and karst under their stewardship. The current management standard states, "Prohibit timber harvesting and prescribed burning within 200 feet of cave entrances, direct drainage input, such as sinkholes, swallow holes, and any streams flowing into a known cave, except for research purposes." The proposed amendment would change the standard to be, "Prohibit timber harvesting and prescribed burning within 200 feet of caves." Their argument is that the current standard is too restrictive since the Hoosier spans a lot of karst and thus, prevents them from performing such tasks as the removal of non-native pine or perform prescribe burns used to restore natural communities in karst areas. While their intent may be good on those examples, their implementation may be flawed in that the changed standard would also allow substantial commercial timbering activities to occur in and around sinkholes and other karst features needing protection. The IKC com-



mented on the proposed language change during the scoping process back in 2009 and our President, Jerry Lewis, who is also a cave biologist expert and contractor with the HNF has also provided feedback on the language change. It basically comes down to striking a balance between allowing more flexibility to manage the forest (for both restoration and commercial opportunities) and potentially impacting sub-surface ecosystems that are difficult to assess and access. The previous standard perhaps erred on the safe side to protect those biological resources, but there has been no recent shift in knowledge to justify the standard to be relaxed, and for that reason, it is disappointing to see the Hoosier adopt this change.

- The IKC has gained three new member in the last quarter. Welcome George Mattson (510), Christian Haydel (511), and Jeremy Langley (512). The IKC membership currently stands at 181.

GUY STOVER PIT CAVE CLEAN UP - THE BIG HAUL

by Benda Shultheis (Cleanup Project Coordinator)

Earlier this year Gary Robertson and Rand Heazlitt contacted the owner, Cecil Boone, to see if they could try to get into Guy Stover Pit Cave, looking for a possible connection with Binkley Cave. After re-opening the pit and finding a connection, it was decided the trash-filled cave should be cleaned up. I was asked to coordinate the cleanup and gladly accepted. The cleanup was started in April with the help of many cavers, with much effort put into bagging the trash in the bottom of the pit.

On Oct 1st, the time had finally arrived for the big haul. John and I had been working for a few months to get all the gear ready for this weekend. Pulleys, rope, and webbing had all been gathered and ready. We worked the whole week prior to the big haul out, making sure we had everything we needed to make it happen. The list of attendees was a little slim, so I started making personal phone calls, hoping to round up a few last minute cavers. I figured they couldn't say no to my girlish charm. I was right... we now had at least 15 cavers coming, which was not as many as I had hoped for, but enough to get the job done.

It was the Friday before the clean-up, and we had planned to leave the house by 7:00 AM. Tim McLain arrived right at 7:00 and we didn't get out of the driveway until 7:15. We were to meet Bill Greenwald at 7:30 in Greenwood; needless to say, we were a little late. On the ride down, I got a

call from All Gone dumpster service, saying that they did not have the 30-yard container like we had ordered, but they would drop off a 20-yard one instead. This was not a problem that we were worried too much about at the time. We had to meet the dumpster people at noon, and made it, arriving at the cave just in time to see Mr Boone pulling in at the same time, with Jim Houghton pulling in right behind us all. We spent some time talking with Cecil, and waited for the dumpster to come. Sure enough, a few minutes later, here comes our dumpster. We showed him where we wanted it and then went on to the cave.

It was now time to rig the pit for the haul system. Mr Boone stuck around and we took some pictures with him; he watched as Jim, John, Bill, and Tim rigged the pit for the haul out. I was surprised how quickly it went up. It helps a lot when you have had practice! Doing the Houghton Hole cleanup last year made it easy not to make the same mistakes. The haul setup was done and we



Trash all bagged up and ready to be hauled out of the pit.

photo Chris Bell



had time for Mr Boone to see it work before he had to leave, and then we all said our good-byes to him. All finished with the haul system, we headed to Rand's to bunk down for the night.

We all woke up early to grab a quick breakfast at the usual place of Fredrick's Café. The meeting time for the cleaning crew was 9 AM so we then headed to the church to get ready. I stayed at the church to wait for the others, while Tim, John, Bill, and Jim headed to the cave to get some last minute prep done. The first to show up at the set meeting time were Jonathan Annonson and Pat Burns. Soon, Dave Everton and Bart Nott pulled in, and the others trickled in slowly. With everyone finally there, we were able to give out assignments. John (pit boss), Pat, and Jonathan were to go in the pit to help load the haul bag on the bottom. Dave was the haul bag controller; he would man the rappel rack that kept the bag centered in the pit. Tim (surface controller) would guide the tractor that Jim used to pull the haul bag to the surface, and would also be keeping others on task. Bob Jackson took care of the safety prussik on the main haul line. Bill Greenwald took care of the haul line, keeping it straight and coiling it up each time the bag was raised or lowered. Bart was our truck driver; he drove Jim's truck back and forth from the pit to the dumpster. Gary Roberson was the bag handler. He would unhook the bag for the haul line every trip out of the cave. John Benton, Shane Myles, and Scott Ferriell (a friend of Mr Boone) would unload the haul bag and load the contents into the truck, then ride back to the dumpster and unload the trash into it. So they had double duty... Way to go, guys! I was not feeling well this weekend, so I didn't do much.

The crew being all in place, we were ready to get started. After a little on the job training, the bags started come up in a flurry, with the first one up at around 10:30 and the last one at 12:30. A record pace was set, mainly because of the knowledge we gained cleaning Jim Houghton's cave. After all the trash was hauled to the surface, we took a lunch break. I had fixed some Taco soup, chips, and seven layer dip, along with ham sandwiches for those who didn't like soup. As we were eating,

Brad showed up ready to go caving. After some friendly ribbing that he was over dressed for fence building from the hard working crew, Brad, Dave, and Shane went inside the cave to do some exploration and check an upstream lead.

After lunch, we started unrigging the pit. We hurried Brad and the boys down the pit and started getting things down from the trees. After that, we started on the perimeter fence. Jim had his post-hole auger for his tractor, and started digging the holes for the corner posts. This made setting the fence a breeze, compared to digging them by hand. Worried about how many rocks we would encounter, Richard Newton (who donated all the cedar fence posts) had brought a large metal rock buster, but we didn't even have to use it. Mr Boone had given us all the fencing and barbed wire, and also gave us the metal fence posts to use in between the corner posts. Jim had already built a gate to install (for safety reasons) with a lock. Before we knew it, the fence was done. We didn't even think that we would get that far in one day, but with some very good help, everything got completed in record time. By 6:00 PM we had a clean cave and a fence put up; something we thought would take two days. It goes to show you that these Binkley cavers get things done.

Well, this project has been a joy to coordinate, and I have many acknowledgements and thanks to make. It's a long list, but I want to thank each one. I have gotten the chance to get to know Mr Boone and his family, who didn't know us from anyone, but still let us come and dig great big holes on his property. Also, Scott Ferriell (a good friend of Mr Boone, who helps with his property and hunts on his ground) came out and helped us with the clean-up and was paying it forward. Jim Houghton also paid it forward by helping, after we helped with his cave cleanup last year.

I thank the many cavers who came and spent



Tim McLain (left), Brenda Shultheis, Cecil Boone (cave owner), and John Shultheis.



many hours bagging tons of trash in preparation for the haul day, as well as all who came and made a two-day job into one. Several organized caving groups donated money to help make this all happen: the Central Indiana Grotto made a generous donation of \$200; while the Indiana Karst Conservancy and the Bloomington Indiana Grotto made donations of \$100 each. Also, the Hoosier Cavers contributed \$60 which helped pay for the little extras.

Several cavers helped in different ways; Kent Koster loaned us webbing and use of his pulley. The CIG let us use some of their pulleys and vertical gear. Richard (Fig) Newton provided a timely last-minute donation and delivery of the cedar fence posts. Jim Houghton helped in many ways: he built the gate, hauled down his tractor and post hole auger, and provided nails, screws and such. Rand Heazlitt provided us a place to stay throughout the course of the project. Bob Jackson bought the lock for the gate and some staples.

A special tip of the helmet goes to the following persons (in no particular order), who came and bagged trash on one or more days at the top and

bottom of the cave and performed various other duties: John Shultheis, Tim McLain, Bill Greenwald, John Benton, Gary Roberson, Pat Burns, Jonathan Annonson, Bob Jackson, Dave Everton, Bart Nott, Brian Leavell, Elza Marvin, Eric Edelman, Mike Lorance, Shane Myles, Scott Ferriell, Jim Houghton, Richard Newton, Rand Heazlitt, Aaron Valandra, Todd Webb, Ty Spatta, Chris Bell, and Kevin Smith. Lastly, thanks to the Indiana Speleological Survey for taking on this worthy project and coordinating the fund raising.

Guy Stover Pit Cave is now connected to the longest cave in Indiana (Binkley), which through this entrance will allow exploration to some of its far reaches, which even the hardest cavers of the past did not often have the chance to visit. This cave cleanup offers many benefits, one of which is a very happy cave owner who welcomes conscientious cavers. Also, it affords a better and cleaner environment to cave in, and a beautiful cave to be enjoyed by all who enter. Once again, a good time was had by all under the sinkhole plain south of Corydon, Indiana!

2011 INDIANA BAT FESTIVAL

by Don Ingle (Education Committee Chair)

August 27th marked the arrival of yet another Indiana Bat Festival. Once again, it was held at the Science Building on the campus of Indiana State University in that land of exotic smells, Terre Haute. Ah, sweet memories. I've spent some 25 years of my life in this city, working on my major in food service, with a minor in crustacean physiology. So I can talk some trash about Terror Haute. I'm entitled. Let's start over, shall we?

Once again, time to make new friends and renew some past acquaintances with old ones, such as that 500 foot cobbled walkway that leads to the Science Building from the free parking area. The last 100 feet of which, are uphill and on a slight slope, making whatever progress you make creep ever so slightly downhill and sideways towards the dorms, away from your intended destination, making you feel somewhat like a drunk fuzzily doing his best to walk a straight line for the nice policeman. And failing miserably. With all the accompanying noise (whamwhamwhamwham) that rolling over a cobbled walkway gets you. Thank God for the carts ISU provides upon request for the vendors moving stuff in and out, other wise I wouldn't probably have noticed that last detail.

And in the final analysis, it is all about the details, isn't it? Sure it is. I want you to be able to feel the experience with me, dear reader. Because otherwise the articles would just look like this: I carried the stuff in and set up. Sometime later in the day, I tore it down and carried it all back out again. In between there was a whole lot of kids yelling. The end.

But don't get me wrong. Using the carts is better than not using the carts. Much better. The fact that I'm writing this at home at all rather than from a hospital room at Union Hospital while in traction is a testament to that immutable fact. The day sort of passed by as in a dream. Of course, having very little sleep the night before would impart a sort of dreamlike quality to the description of the proceedings, wouldn't it. At least one of the parents commented on the fact I looked a bit rough around the edges that afternoon. But, in the interest of journalistic integrity (seems to me to be a contradiction in terms, that one does... kind of like military intelligence) I shall attempt to be coherent for the remainder of this article. I'm sure the entertainment value of the article will suffer though. Your loss.



I was alone running the inflatable cave, and so couldn't get away much, except for rest room breaks and one trip to Room 218 to get some refreshments that the event organizers had once again thoughtfully provided. I had the display up but did not have the karst ground water model set up, as I was afraid someone would actually want me to demonstrate it. That, and it weighs a ton and I didn't want to be bothered carrying it in and out when I wouldn't have any time to spare to operate it anyway. I had my new BlackBerry PlayBook running an endless series of cave and karst educational videos in front of that, adding to the cacophony. Most of the effort went into the cave, however. I went all in with the bells and whistles this time, even setting up cave water dripping sound effects up towards the back of the cave. Done, for my own personal amusement, I guess, as it turned out. Most all of the kids never noticed. And if they did, it was invariably misinterpreted as being the chirping of bats. An unintended bonus. Yeah. Sure. It's a bat. Take your shoes off. Have you got a flashlight? Stalactites were hung from the roof of the cave indoors, a new thing for the Bat Festival for this year. Last year, though we had them, they were lost somewhere in Kriste's basement. They were there this year. Until about 3 PM, when the kids, all sugared up and filled with the joys of face painting, ran around in a pagan dance and tore them all down like the road com-



pany of Lord Of The Flies. After that, they stayed down and were subsequently removed. Too close to the end of the day, that was, to bother with putting them back up.

The day had the same ebb and flow as in the past Festivals. Periods of boredom, followed by exuberant periods of intense activity. Although, overall, it seemed it to me it was much busier later than it was earlier in the day this year. I don't know why. I'm talking about the Festival attendees, not me. I was a zombie trying to pass for human. Much like the other 364 days of the year, now that I think of it. I had become a still life painting that would later crank out an article to document what its like to be fed to the wolverines and be able to live to tell the tale. At about 4:45, when it had become obvious it was all over,

I finally gave it up as a lost cause and began to tear down. Someday, I may even attend the evening activities at Dobbs Park. But not this year. I think I might have been home in bed before they even had gotten the harp netting up for the bat capture display after dark. Working the night before rather late and getting home around 1 AM, not sleeping very well at all, and then having to get up pretty early to be there on time may have had something to do with that. Perhaps.

Many thanks to Laura Hohman and Brianne Walters for all their help. I need a nap... Zzzzz.

Culprit behind bat scourge confirmed – A cold-loving fungus is behind an epidemic decimating bat populations in North America.

by Susan Young (27 October 2011)

Researchers have confirmed that a recently identified fungus is responsible for white-nose syndrome, a deadly disease that is sweeping through bat colonies in eastern North America.

The fungus, *Geomyces destructans*, infects the skin of hibernating bats, causing lesions on the animals' wings and a fluffy white outgrowth

on the muzzle. When white-nose syndrome takes hold of a hibernating colony, more than 90% of the bats can die. The disease was first documented in February 2006 in a cave in New York, and has spread to at least 16 other US states and four Canadian provinces.

The culpability of *G. destructans* for this sudden outbreak was

thrown into question when the fungus was found on healthy bats in Europe, where it is not associated with the grim mortality levels seen in North America¹. Some proposed that the fungus was not the primary cause of the catastrophic die offs, and that another factor — such as an undetected virus — must be to blame. But a study published today

SINKS OF INDIAN CREEK

by Jerry Lewis

It has long been known that the Sinks of Indian Creek is an important place, but the degree of that significance is only now becoming more clear. Viewed as it flows through the nearby town of Corydon, in Harrison County, Indian Creek looks about like any other creek in southern Indiana. However, the water continues its path southwest of Corydon to an area where the entire creek, during normal flow, disappears as it sinks into an underground conduit. From Richard Powell's work during the 1960's it was realized that this water reappeared at Harrison Spring, over 4 miles away (figure 1). This is the largest spring in Indiana, emerging from an orifice in a field that measures approximately 50' X 70' in extent. According to the Indiana Cave Survey the rise pool is 41 feet deep, and has underwater cave passages that have been penetrated about 500 feet toward the Sinks of Indian Creek and 1200 feet in the other direction. Clearly there is a large amount of cave passage remaining undiscovered in the intervening 4 miles, but exploring it will be extremely difficult at best since it is presumably all underwater.

Indian Creek is readily visible before it vanishes underground at the Sinks of Indian Creek, before it disappears into un-enterable holes. However, a stream invisible on the surface flows through the Blowing Hole cave system and joins the waters of Indian Creek underground. Until not long ago Blowing Hole was known as a cave with about a mile of stream passage that ended at a breakdown pile. That rock fall has now been penetrated and cave passages have been mapped for a total of distance of 7 miles, stretching all the way to a point about 2 miles to the south-east of the Sinks where the cave approaches highway 135 (figure 2). In a remarkable recent discovery it has been found that a stream passage in Binkley Cave is flowing *into* Blowing Hole. Passages in Binkley and Blowing Hole caves now overlap, al-

though attempts to physically connect the two caves continue to frustrate explorers. It's probably just a matter of time... Binkley Cave is now known to be one of the longest caves in the world (surveyed at (27.1 miles in length as of this November writing), to which Blowing Hole has now been connected hydrologically. Thus, if you add the current surveyed length of Binkley Cave, Blowing Hole (7.0 miles) to the minimum possible passage length of the Harrison Spring conduit (4.1 miles), the extent of this groundwater system is over 38 miles!!!

In 1997, concurrent with the creation of the subdivision of a rural property, a conservation easement was created to protect the natural aspects of the Sinks of Indian Creek. Approximately 13 acres in extent, the easement consists of a relatively narrow band of property spanning several subdivision lots along the south side of Indian Creek and extending to the north bank of the creek. The conservation easement was originally provided to The Nature Conservancy of Indiana, who transferred the easement to the Indiana Karst Conservancy in 2000. It is now the responsibility of the IKC to monitor the easement to ensure that the conservation terms of the easement are being observed. To that end we had the property re-surveyed and placed metal t-posts with white and red PVC covers (figure 3) to make delineation of the easement area easy for the landowners to understand. Most of the property is forested and the intent of the easement is to allow the part that had been previously cleared to return to natural riparian forest (figure 4).

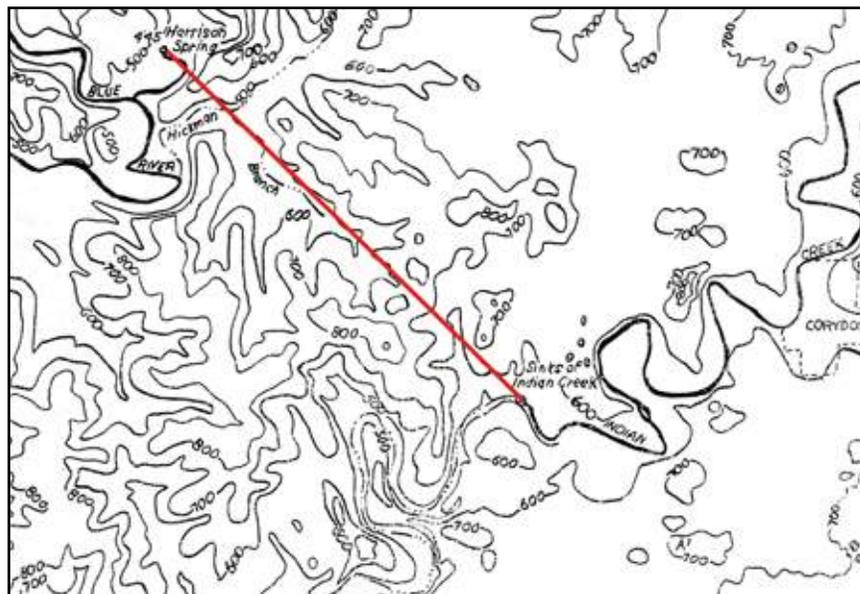


Figure 1 – Underground flow from Sinks of Indian Creek to Harrison Spring (Powell, 1965)

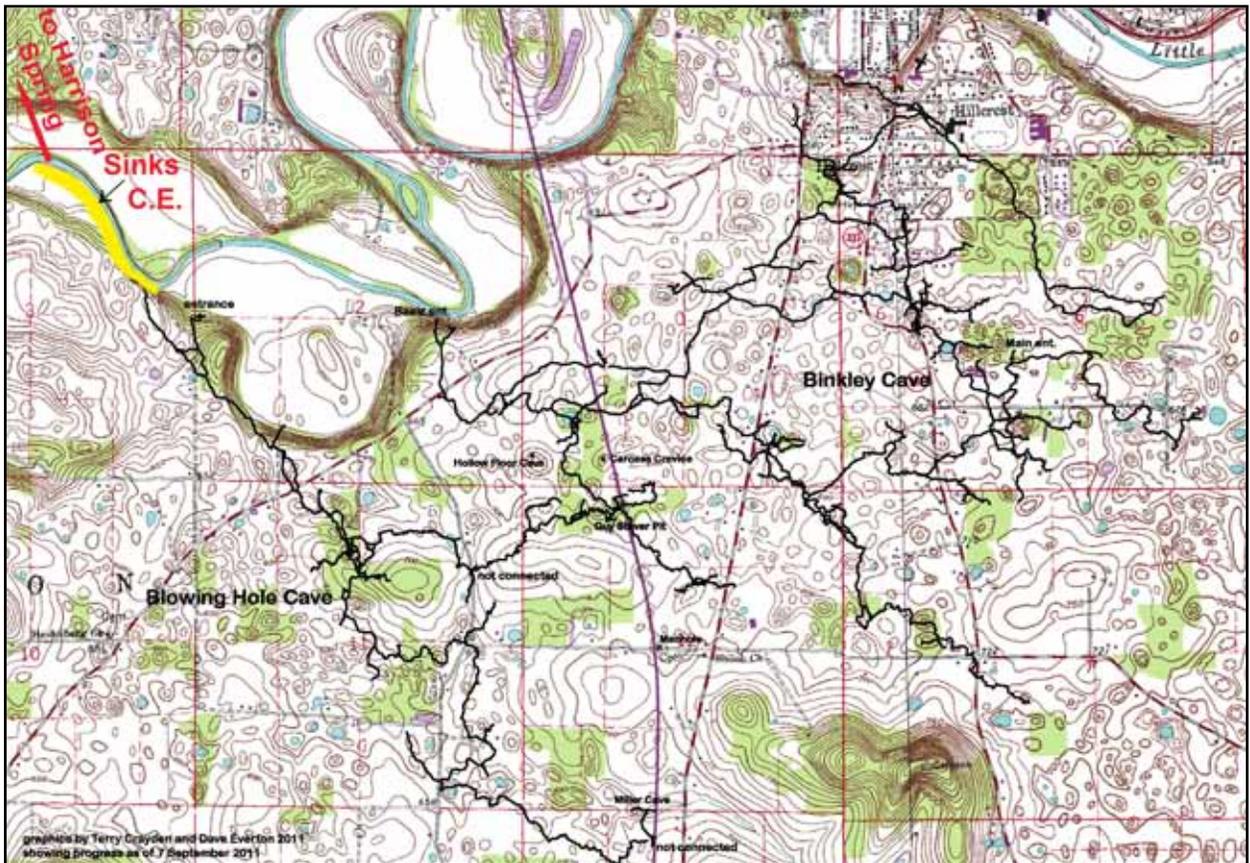


Figure 2 – Binkley & Blowing Hole caves, and the Sinks of Indian Creek Conservation Easement (Everton, 2011)



Figure 3 – Installing t-post markers at the conservation easement boundaries so proper monitoring can be conducted annually.

Figure 4 – After 10+ years, the riparian area is re-foresting and bluebells are blooming (spring 2010).



INDIANA KARST CONSERVANCY TREASURY REPORT

**Income/Expense Statement
From July 1, 2011 to September 30, 2011**

INCOME:

Dues Apportionment and Residuals	681.25	
Donations - General	116.25	
Donations - Land Acquisition Fund	435.12	
EQIP grant (Buddha stewardship)	765.00	
IKC SpeLoggers	480.00	
Interest	<u>486.35</u>	
		\$2,963.97

EXPENSES:

IKC Update (printing, production, mailing)	238.57	
Education / Outreach	28.99	
Stewardship	109.06	
Conservation donation (Guy Stover Pit cleanup)	100.00	
Hats (25th Anniversary)	231.12	
Transfers to/from restricted funds/other adjustments	<u>520.14</u>	
		(\$1,227.88)

NET OPERATING EXCESS (DEFICIT) THIS PERIOD:

\$1,736.09

**Balance Sheet
September 30, 2011**

ASSETS:

Cash in Checking / Saving Accounts / CDs	122547.50	
Robinson Ladder Cave Preserve (73.48 acres)	162000.00	
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)	<u>13.16</u>	
		<u><u>\$467,560.66</u></u>

LIABILITIES & OPERATING EXCESS:

Land Acquisition Restricted Fund	39622.59	
Deferred Dues Restricted Fund (180 members)	2925.00	
Stewardship Endowment Restricted Fund	41108.40	
Previous General Fund (total)	37168.58	
Net Excess (Deficit) This Period	<u>1736.09</u>	
Current General Fund (unrestricted)		38904.67
Current General Fund (committed)	3000.00	
Real estate liquidity (basis value)		<u>345000.00</u>
Total Liabilities & Operating Excess		<u><u>\$467,560.66</u></u>

IKC EXECUTIVE BOARD MEETING MINUTES

Saturday, September 10, 2011 – Borden, IN

BOARD MEMBERS PRESENT:

Jerry Lewis, President
 Keith Dunlap, Treasurer
 James Adams (proxy by Salisa Lewis)
 Bruce Bowman
 Dave Haun
 Don Ingle
 Everett Pulliam
 Bob Sergesketter
 Bruce Silvers
 Karen Silvers
 Tom Sollman
 Bob Vandeventer (proxy by Kevin Smith)
 Richard Vernier
 Carla Winner
 Jamie Winner

BOARD MEMBERS ABSENT:

None

The Quarterly Executive Board Meeting was called to order at 5 PM EDT at the home of Jerry and Salisa Lewis. Proxies for Jim Adams and Bob Vandeventer were accepted. The meeting minutes from the March and June meetings were approved.

Treasurer's Report

Keith presented the treasurer's report. We have \$121,852.17 in cash, \$345,000.00 in land for total assets of \$466,852.17. Funds breakdown: Land Acquisition \$39,418.59, Deferred Dues \$3,480.00, Stewardship \$40,792.26, and General/unrestricted \$38,161.32. Total membership stands at 177, with 24 to be dropped. The to-be-dropped includes some members who will probably renew late.

Robinson Ladder Cave Preserve

Jerry, Tom, and Keith inspected and serviced three temperature/humidity dataloggers on Sept 10, 2011. They installed a new SpeLogger and discovered an older SpeLogger, which had been "lost" two years ago, apparently during a game of hide-and-seek. The property has been mowed recently by Jamie and Carla Winner, with Tom weed-eating around the barn and the cave appears to be in good shape. Carla and Jaime Winner report that a variance has been applied for to commence the fall burn. There should be a burn in mid-October, weather permitting. Plans are in place to till around the burn area for firebreaks.

Wayne Cave Preserve

The preserve is in the process of acquiring Keith's adjacent property; to be complete some time in 2012. Per the directive at the last meeting, Keith Dunlap formally informed BLA/InDOT that the IKC was still interested

in offering the southern half of the Wayne Property as a mitigation property. However, with InDOT likely adopting the "low-cost" design criteria for Section 4 of I-69, their requirement for mitigation tracts will be reduced by a third, so it is unlikely they will need, or pursue our offer.

Buddha Cave Preserve

The latest revised Management Plan was previously distributed by e-mail; while there was some discussion, no further changes were presented. A motion was made by Bowman to accept the Plan as previously distributed, seconded by Carla Winner. Motion passed 14-0-1. The trail/parking area was mowed before Cave Capers. Bush honeysuckle will be treated after the first hard frost (when most of the other plant species are dormant). A second weed treatment around the trees is planned for Spring 2012. The 2011 tree treatment was paid for by an EQIP grant and completed by a contractor and volunteers.

Sinks of Indian Creek Conservation Easement

Jerry and Keith inspected the property on September 10, 2011. Jerry reported that the picnic shelter built partially on the easement has been removed. There were signs of excessive mowing on three lots of the easement. Jerry indicated he would remind landowners in the annual letter to refrain from mowing on the easement. Dunlap suggested that the IKC could offer to plant trees on the easement lot which used to have the shelter on it. This would reduce the amount of the easement being mowed, and restore some of the original forested habitat. The corrected legal description of the easement needs to be recorded. We will need an attorney to draw up the document and record it.

Sullivan Cave

Dunlap reported that the spraying around all the trees has been completed. Dunlap plans to have the out-house pumped this fall, as we all know that \$#!t happens. Dunlap plans to work on a new design for the gate latch in all his free time. On October 8th, there will be a firewood-splitting "party" on the property. Board members are encouraged to attend.

Shiloh Cave

A bioinventory of Shiloh Cave is continuing. Jerry and Tom will place pitfall jars in early October and retrieve them later in the month.

Land Acquisition Activities

Salamander Cave: After several months of informal conversations with the owner, the IKC made a formal offer on August 15th to acquire 10 acres with the cave. No reply as of the meeting. [Editor's note: on Septem-



ber 11, the owner declined our offer].

Sinking Creek, Cave-Trinkle Entrance: The "8-acre" property with a nice house is for sale and listed by a realty company (\$190k). Carla Winner and Dunlap have both spoken with the owner and while the owner is not overly interested in sub-dividing the property, he has not ruled it out as a future consideration if the property does not sell. Dunlap has unsuccessfully attempted to meet with the owner in person several times. Carla, Todd Webb, and other from HCG plan a trip to Sinking Creek Cave on September 11. According to GIS estimates, the property is closer to 12 acres. It would be helpful to determine the true acreage and exactly where the entrance sinkhole is on the property and discuss subdivide options with the owner. Carla reports that the owner appears interested in protecting the cave and continuing to allow cavers access while the property is for sale and after the sale.

Education & Outreach

Ingle indicated the IKC participated in the Indiana Bat Festival on August 27th. The Education and Outreach committee is following up on an e-mail, which the IKC received about use of the inflatable cave by someone who was not part of the NSS.

The Committee did not participate in the Ferdinand Folk Festival due to a miscommunication with the Festival coordinator about space allotment. However, the Indiana Outdoor Expo at Fort Harrison is taking place the same day and the IKC will be there.

Jerry Lewis reported that TNC had requested that the IKC draft a letter of support for a grant to do water quality improvement (e.g., septic tank management) in Blue River/Lost River drainages. TNC also requested that the IKC provide a match with two days personnel time to provide a field trip/lecture/or other educational program. Jerry agreed that the IKC could provide \$1300 in matching labor costs. Cassie Hausweld has reportedly sent in the grant application.

Items from the Floor

Bruce Bowman noted that Keith Dunlop was honored at Cave Capers with a lifetime membership to CIG, and that he was also awarded the NSS Conservation Award at the annual convention. Go Keith!

I-69: Dunlap reported that the Record of Decision for Section 4 (southwest of Bloomington) was signed on September 8th, which authorizes InDOT to start right-of-way acquisition/eminent domain and construction. InDOT basically dismissed our comments on the FEIS related to our alternative alignment submitted during the comment period of the DEIS. The IKC may pursue additional legal avenues with other environmental partners. We have also made Freedom of Information requests for documentation of the analysis of our alignment proposal, which was originally identified as "*Appendix NN*" in the FEIS, but later disavowed by InDOT as not existing.

Clean-up Project: Jerry Lewis reported that he had received a request for funding to help with the Guy Stover Pit Entrance clean up. The dumpster rental is \$450 and so far about \$350 in donations to the Indiana Speleological Society (ISS) has been received. Jerry suggested the IKC make a \$100 donation. Dunlap made a motion to donate \$100 towards the Guy Stover Pit Entrance clean up, Bowman seconded the motion. The motion carried unanimously.

Suicide Cave: Pulliam reported that they did a cave cleanup at Suicide Cave today. The gate had several feet of debris and mud accumulated against it, which was cleared to the bottom bar. They did not clean out further down because they did not want to encourage digging under the gate to gain entrance to the cave. A new lock was put on the gate. The hole for the lock needs to be drilled out to make it slightly bigger. The gate hinges were greased so that the gate swings open more easily. Subsequently, there was a trip into the cave. Twelve people showed up for the work and cave trip, five were new people. No dangerous levels of CO₂ were noted inside the cave (this was in response to a prior report that the cave had very high CO₂).

Hats: Dunlap modeled the new limited-edition 25th anniversary IKC caps that Tom Sollman designed, produced, and donated. There are about 20 hats available, going for \$15 each.

Website: Robert Sollman discussed his proposal for his Capstone Project at IUPUI. He would like to redesign the IKC's website and bring it up-to-date (technically and visually). He is also considering making an interactive kiosk for one of the IKC properties, perhaps Buddha, or to tour with the inflatable cave. The NSS server can still host the IKC site, and the site will have CSS templates for new properties and/or updates.

Next Meeting

December 10, 2011 in Bloomington at 1PM, local time. Place to be determined. We will have a cookie contest. Bring a dozen (or so) of your favorite holiday cookies to share.

The meeting adjourned at 6:45 PM.

Post-meeting Activities

The annual IKC dessert contest, as part of the after-meeting pitch-in cook-out was a great success. In the running this year: Bruce Bowman brought a berry-pear pie, Keith brought apple crisp and chocolate cupcakes, Carla entered a pineapple upside-down cake, and seems like there was something else. The *winner* of the dessert contest was Bruce and his pie; followed closely Carla; and third place was Keith's divine chocolate cupcakes. So, the challenge is on. Who will be the winner at the December meeting?

Respectfully submitted by Salisa Lewis, Acting Secretary.

Continued from page 9...

in Nature² reveals that *G. destructans* is indeed guilty.

“The fungus alone is sufficient to recreate all the pathology diagnostic for the disease,” says David Blehert, a microbiologist at the National Wildlife Health Center in Madison, Wisconsin, and senior author on the report.

Bat-to-bat spread

Blehert and his colleagues collected healthy little brown bats (*Myotis lucifugus*) from Wisconsin, which is well beyond the known range of white-nose syndrome. They infected the bats by direct administration of *G. destructans* spores to the skin or by contact with infected bats from New York. By the end of the 102-day experiment, the tell-tale white fungus was growing on the muzzles and wings of all of the directly infected Wisconsin bats and 16 of the 18 exposed to sick bats.

This is the first experimental evidence that white-nose syndrome can be passed from bat to bat, and is very worrying from a conservation point of view because bats huddle together in large numbers in caves and mate in large swarms, says Emma Teeling, a bat biologist at University College Dublin in Ireland. “If a bat has this fungus on

them, it’s going to spread quickly throughout the population,” says Teeling, who was not involved with the study. “It’s like a perfect storm.”

The infected Wisconsin bats did not die during the experiment, which may be due to the limited time line of infection, the authors suggest. Although the study does not directly show that a healthy bat will die from infection with *G. destructans*, the results did show that the fungus alone was sufficient to cause lesions di-



Infected bats in Batwing Cave, Indiana

agnostic of white-nose syndrome to form on previously healthy bats, indicating that the fungus is the cause of the deaths so often associated with white-nose syndrome in the wild.

To stop a scourge

Since it first appeared, white-nose syndrome has behaved like a novel pathogen spreading from a single origin through a naive population,

says Jonathan Sleeman, director of the National Wildlife Health Center, who was not involved in the study. Proof that *G. destructans* is the primary cause of white-nose syndrome will “help us focus our actions or management efforts into the future”, he says.

Although little can be done to control the spread of the disease through bat-to-bat transmission, the US Fish and Wildlife Service (FWS) has asked people to stay out of caves in and near affected areas, and has closed some caves on agency-managed land.

On 21 October, the FWS announced that up to \$1 million in funding will be made available for research on white-nose syndrome. Projects covering topics such as how the fungus proliferates within caves and mines, and the potential for biological means or environmental manipulations to improve bat survival, are among the service’s top priorities.

References

Puechmaille, S. J. et al. *Trends Ecol. Evol.* 26, 570-576 (2011).
Lorch, J. M. et al. *Nature* (2011).

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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.

