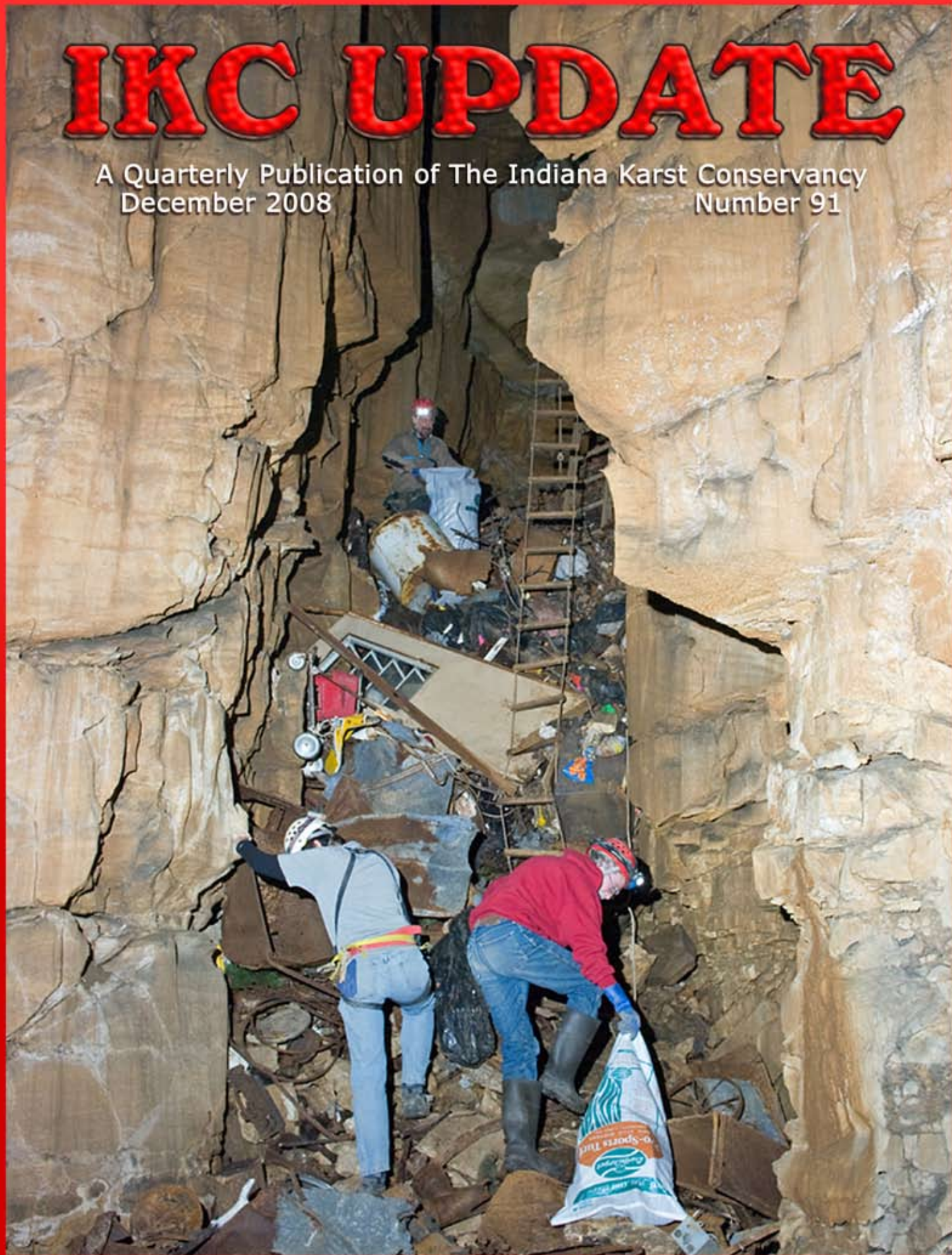


IKC UPDATE

A Quarterly Publication of The Indiana Karst Conservancy
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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 trash pile at the bottom of Houghton Hole, Harrison County, Indiana.
See page 5 about the planned cleanup. Photo by Dave Black © 2008.



QUARTERLY MEETING REMINDER
SATURDAY, DECEMBER 13th, 4:00 PM EST
BLOOMINGTON, INDIANA
IU GEOLOGY BUILDING, ROOM 143

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 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: Brief recap of the last quarter's activities; Buddha kiosk; HNF/TNC land acquisition news; Cave River Valley management; Indian Creek Conservation Easement status; Treasurer's report; Land acquisition activities; and more...

Meeting directions: The Geology Building is located at 10th and Walnut Grove. Tenth Street runs east/west and is one of the major streets that run across the IU campus. Park behind the building, parking permits are not enforced on weekends. Enter the building from the rear at the west end. The room is halfway down the hall on the right.

ACTIVITIES CALENDAR

December 13 – IKC Quarterly Meeting, IU Geology Building (see above)

December 13 – Wayne Cave Cleanup, Bloomington (see page 7)

April 4 – Lost River Tour, Orleans (see page 5)

April 18 – Indiana Cave Symposium (location has not been finalized)

April ?? – Tree Planting at Buddha Property (date to be finalized)

For more information on the Indiana Karst Conservancy, visit our website at <http://www.caves.org/conservancy/ikc> or write to our PO box. Membership to the IKC is open to anyone interested in cave and karst conservation. Annual dues are \$15. Please see inside 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...

Recently the question of a possible cave acquisition in Jennings County has arisen and with it much discussion. This is a topic of great interest to me because the cave is in the “other” Indiana karst area. Until now all IKC properties and most of our activities have been in the southcentral karst that encompasses the Mitchell Plain and Crawford Upland. The southeastern karst has seemingly been the ugly stepsister, a concept fostered in the book “Caves of Indiana”, which listed a total of zero caves in the SE karst area.



And like the more beautiful stepsister, the ugly stepchild suffers from the same threats to its existence. As I am sitting here writing this, an e-mail just appeared from IDNR informing me of yet another road project to be bulldozed through yet more karst. This one is in... you guessed it... the southeastern karst.

I've rambled through quite a bit of the SE karst and have lived on the edge of it for much of my life. Since the entire area was covered by the Pleistocene glaciers, some of it as recently as

about 10,000 years ago, the caves are buried under till and scarcer than in the southcentral karst. But don't be put off by that... there are a *lot* of caves in southeastern Indiana. Most are along creeks and have spring entrances that lead to passages that usually dwindle rapidly in size. Like anywhere else, the caves come in various shapes and sizes, with the longest in the SE karst being Wilson Cave, with just over a mile of passage.

The first project I completed in Indiana was a bio-inventory of caves in southeastern karst, published in what was then called the *NSS Bulletin* in 1983. In that article I reported on the troglobites that I had encountered while sampling in 57 caves in Clark, Jefferson, Jennings, Decatur and Ripley counties. Other bioinventories included the Crosley State Fish & Wildlife Area (1994-1995, 24 caves) and Clark County (1995-1996, 38 caves including the defunct Indiana Army Ammunition Plant). Finally, in 2001-2002 Salisa and I did the bioinventory of 35 caves on the Big Oaks National Wildlife Refuge, formerly the Jefferson Proving Ground.

The result of this sampling has revealed that a significant proportion of the jewels of the Indiana cave fauna are found only in the SE karst. Some, like the Cryptic spring snail have been found in both the SE and southcentral karsts, but most of the fauna in SE karst area caves are species endemic to the area. Examples include a variety of crustaceans (amphipods, isopods), pseudoscorpions, beetles, and millipedes. The IKC has made an excellent inroad into protecting caves and endemic fauna of the southcentral karst. Thus, we have an entire karst area within our state awaiting our arrival. Whether or not a suitable cave for purchase is at hand remains to be seen. But without a doubt the IKC will have great opportunities for cave and karst conservation in the southeast karst.

Jerry Lewis

NEWS BRIEFS...

- We are sorry to announce that Cindy Sandeno, the Hoosier National Forest Karst Coordinator, along with her husband, Eric, who also works for the Forest Service, have transferred to the Monongahela National Forest in West Virginia. The Hoosier, being the smallest National Forest in the system, is at a distinct disadvantage of keeping good employees due to its limited career advancement opportunities compared to larger forests. We will miss Cindy as she was very progressive and imaginative in promoting karst management and karst education and was instrumental in the production of *Caves: Life Beneath the Forest*. With Cindy gone, Steve Harriss will be the interim Karst Coordinator. Steve has

a strong interest in caves from a recreational and biological standpoint, so we look forward to working with him in the future.

- ❑ April 18th is the date for the 2009 Indiana Cave Symposium. The location has not been finalized, but several venues in the Lawrence County area are being investigated. It's not too soon to be thinking about making a presentation about cave exploration, conservation, research, or other aspects related to caving. Contact Dave Everton (DEverton@indiana.edu or 812-824-4380) for more details.
- ❑ Also in April, the date still to be finalized, will be Under-Earth Day. This year, the event will be back at Buddha Karst Nature Preserve where we will be planting 1,200 hardwood trees. This will complement the 4,000 trees we have planted since 2002 covering approximately 8 acres. We still have a long way to go to reforest the entire property, but by planting a few acres each year, we can demonstrate the steady progression with trees at various sizes (we already have trees over 10 feet high producing fruits and nuts for wildlife). And by doing the planting with volunteers, the cost of reforesting is very minimal compared to using a commercial planter. We also reduce our risk of losing a large planting due to hard drought in a particular year if we spread the effort out over several decades.
- ❑ Mark your 2009 calendar for next year's Lost River Conservation Association's surface tours of the Lost River. They are April 4th, June 6th, and September 19th. Smaller groups can arrange special trips by contacting Dee Slater at (317) 253-6951.
- ❑ The IKC had one new member in the past quarter. Welcome John Dimit Jr (478). The membership stands at 179.

HOUGHTON HOLE (BIG TRASH CAN) CLEAN UP PROJECT

by Ron Adams

Big Trash Can is an appropriate name for this cave; it was reported to the old Indiana cave list by Leo Schotter with a vague location and no other information. During the planning stages for the 2007 NSS National Convention in Crawford County, Dave Haun and Bob Vandeventer were approached by the owner of Big Trash Can, Jim Houghton, who had heard about the convention and was interested in having cavers come to his property to look at the pit cave on his land. Jim has a beautiful place just south of Milltown – he has built a really nice cabin and a detached garage which are nestled well off the main road on a wooded ridge.

Bob made a visit to the property and found Jim Houghton to be very friendly and also found that Jim had been down in the pit cave several times, which is unusual for landowners. Another unusual aspect was that a previous owner had installed an electric cable lift that was capable of allowing a rider to get into the platform cage and have the cable/winch mechanisms lower them to the bottom of the pit. Jim had never tried to put power to the lift, and the rigging for the lift was very questionable as it was rigged with a steel cable strapped

to two trees stretched nearly horizontally, with the lift cable hanging from the center. The trees have grown around the cable which is now a bit rusty. Due to the angles, the forces would be tremendous on the horizontal support cable if much weight were applied to the lift.

When Bob descended the pit, rigging the rope to Jim's back hoe, Bob found the drop to be about 45 feet with a wooden-rung rope ladder hanging from a tree, as well as a 40 feet extension ladder leaning up in the pit. Jim uses the ladder to ascend the pit and then uses an ascender to climb from the top of the ladder over the lip of the pit. Once on the bottom, much trash was encountered and a steep trash covered slope leads down one side. The rope ladder was very useful to negotiate climbing down the steep slope as well as the flowing trash pile on the slope (see this issue's cover photo). The trash consisted of everything from bagged trash to house and car parts. No significant leads from the bottom of the drop were found, just a small grim side lead with little air. But at the bottom of the slope is a spacious parallel dome which is drippy, but too far from the entrance to be trash filled, the ceiling being very beautiful with classic rings



seen from the bottom. A small flowing stream can be seen under large breakdown boulders (and car parts) at the edge of the dome.

Dave Everton and I planned a trip to Big Trash Can for April 19, 2008. I arrived at Jim's place around noon and Jim and I rigged the drop with my rope and his back hoe. I found Jim to be a great guy and very enthused about being a cave owner. Jim is retired from the Ford Motor Company and bought the property five or six years ago, first building the garage, where he lived while building his cabin. Dave arrived with Bruce and Karen Silvers of the Northern Indiana Grotto, and a few other friends, and we all descended the pit. We were all impressed with the size of the pit and the opening, and we all felt that once cleaned up, this will be a classic Indiana open air pit. Several cameras emerged from cave packs and we shot some photos of the cave. The volume and variety of trash was quite impressive. Bruce and Karen volunteered that the Northern Indiana Grotto would be glad to join up with the Central Indiana Grotto in sponsoring a clean up project for the cave.

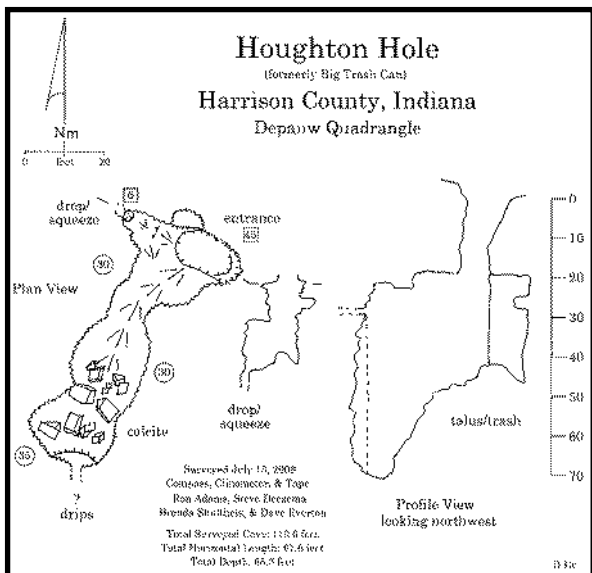
During the 2008 Cave Capers another trip was made to Jim's property. I asked Brian Leveall of the Eastern Indiana Grotto, who was a key player in the clean up of Carcass Crypt Pit, to come look at the pit and the hoist rigged at the entrance. We did not drop the pit on this trip but about fifteen folks came out to take a look. Brian made some great suggestions for a basic plan for cleaning up the pit. He said that we should do several trips to sort, organize, and bag the trash to get it prepped for hauling out. He said that this will take more time than the actual haul day. He indicated that the Carcass Crypt cleanup required six trips to sort

and bag and only one trip to haul it all out. He suggested using a strong tarp to gather several trash bags on to and use the grommet corners to tie the tarp for hauling multiple bags out. We will work further with Brian on all the logistics of hauling out the lift and the trash and junk when the time comes, but this is a great outline for the project to get started. Brian also volunteered the support of the Eastern Indiana Grotto for the project.

After Cave Capers, Dave Everton and I planned a trip for Saturday July 13th to map the pit. Late that morning, John and Brenda Shultheis and family, and I met up with Jim and rigged the drop. I brought along a roll of 55-gallon drum liners and we were planned to start probing and bagging the trash pile and find out how deep it was. Dave Everton and Steve Doezema then arrived and we all descended the drop. Dave and I surveyed and shot photos while the Shultheis' started probing and sorting the trash at the top of the slope. Later I joined in on a little of the trash digging and we were able to expose a good segment of original cave floor. Fortunately, we did not encounter much garbage except for a couple bags of vintage dirty diapers (yummy), mostly it was a lot of steel and plastic and beverage containers. Also discussed were possible names for the cave, given that hopefully soon the current name would no longer apply. Jim was not too particular about which name we would like to use for the cave, so Dave came up with the name Houghton Hole, which has a nice ring and also is a nice tribute to Jim for his care and concern about the caves on his land.

The Shultheis' returned for another clean up trip the first weekend of August during the Dayton Underground Grotto's WormFest at the Crawford County Fairgrounds. They recruited a few folks from WormFest to join them and nearly had the top of the slope cleaned up. Brenda's enthusiasm for the project led a few of us to nominate her to spearhead organizing the clean up. She gladly accepted and will be outlining plans to continue the process, including the recently completed November Central Indiana Grotto monthly cave trip that had a good turnout for bagging debris.

There appears to be much enthusiasm from the various grottos that we will be able to clean up this cave, and turn it into one of Indiana's classic pits. Along with removing the trash, the goals outlined include; recycling the steel and tires from the pit, removing the lift cage, removing the barbed wire around the entrance which the trees are growing into, and building an appropriate fence with



a gate outside of the tree line around the pit entrance. I paced off the perimeter of the tree line and estimated 200 linear feet of fencing would be required to circle the trees. Jim offered some lumber he has for fence posts and also offered the use of his auger attachment for his back hoe to dig the fence post holes. This will make quick work of installing a fence and keep materials costs low. Also, recycling the large amount of steel in the pit will hopefully help offset some of the costs for dumpsters rental and tipping fees. The CIG has discussed and agreed to fund these costs and the EIG and NIG has also offered to help. Any groups or individuals interested in contributing towards labor, or expenses, or engineering should please contact Brenda. With the help of the regional caving community, we feel that our goals can be accomplished with a reasonable amount of effort while not incurring any large expenses, and the payoff will be great, having another open air pit and a land owner well taken care of!

Tentative Work Dates

Weather permitting, the following dates will be scheduled for bagging debris and cutting up larger items: January 24, March 28, May 16, and July 11/12. The tentative haul out weekend is set for August 21-23. There will be at least one more trip after August to install the fencing around the pit and any final clean up of equipment.

Jim Houghton has offered camping on any of these dates. However, if you want to camp, please

let Brenda know ahead of time so she can let Jim know.

If you have any questions or would like to help with this project feel free to contact Brenda (flowersbybrenda@sbcglobal.net or 317-354-6661.



Brenda Shultheis descending into Houghton Hole with the old cable lift precariously suspended over her head. Removing the lift will be one of tasks to be performed as part of the cleanup.

WAYNE CAVE MINI-CLEANUP: DECEMBER 13th

It has been a few years since the IKC has undertaken a clean-up in one of their caves so we have decided to spend a little effort in the "Old Wayne" section of Wayne Cave, and specifically at the bottom of the entrance "pit" removing old trash that was deposited there long before the IKC started managing the cave in the mid-1980s. The effort should take only a few hours and likely the effort to haul the trash back to the parking area will be greater than extracting it from the cave (i.e., we can use surface-only volunteers if you don't want to enter the cave). If nothing else, use the opportunity to get underground for a couple of hours.

The start time will be at noon and we will end around 3 PM in time to clean up and attend the IKC meeting in Bloomington at 4 PM. We will meet in the Wayne Cave parking lot. All you need is your typical caving clothes and equipment. For more information, contact Keith Dunlap (see page 2 for contact info).

PROTECTING MORE OF THE LOST RIVER KARST SYSTEM

by Cindy Sandeno

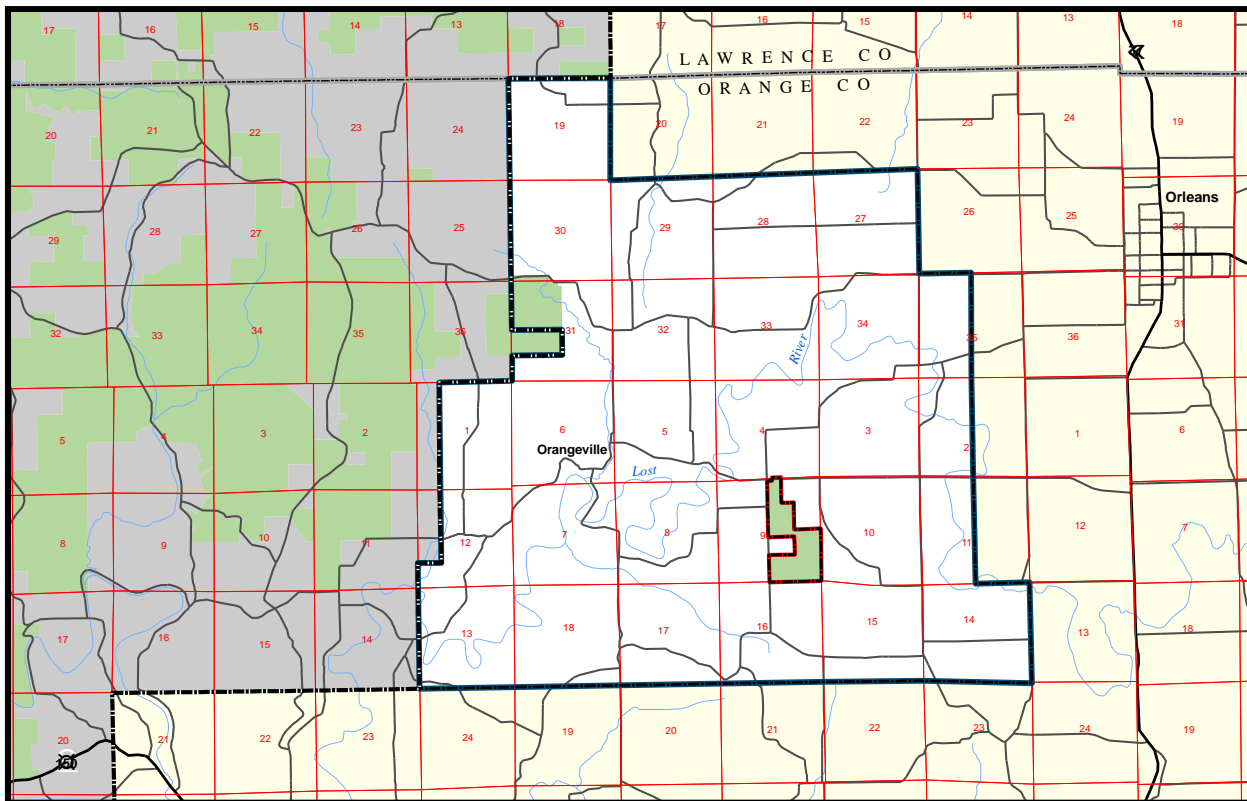
After several years of hard work by a number of partners including The Nature Conservancy and the Indiana Karst Conservancy, the Hoosier National Forest boundary is being modified to allow for the acquisition and management of unique limestone karst features located in the Lost River karst system. While sinking streams and their re-surgences are common features of karst regions the world over, the Lost River in Southern Indiana is among the most complex in the world. This sinking river is surrounded by an area populated with sinkholes, swallow holes, storm rises, gulfs, hanging valleys, subterranean cutoffs, sinkhole ponds, karst fens, and myriad other karst features.

The Lost River watershed lies in south-central Indiana. The first 12 miles of the Lost River, starting in Washington County, follows a normal dendritic course encountering very few karst features. After that, the stream enters into a sinkhole plain and slowly sinks in a number of inconspicuous swallow holes in its channel. Clyde Malott (1932) reported that a one square mile section contained 1,022 individual sinkholes. The Lost River goes underground in the sinkhole plain; however, dur-

ing heavy rainfall, water may follow a surface channel to three very large swallow holes. The dry-bed route between the sinks and the rise of the stream follows a highly meandering route about 22 miles in length, whereas the subterranean channel is a fairly direct eight mile course down the regional dip of the strata.

One of the most impressive geological features of the Lost River karst area is Wesley Chapel Gulf, a national natural landmark owned by the US Forest Service. A gulf is always associated with an underground stream, and its development is dependent upon the collapse of the overhead rock and the solution and removal of that fallen rock by the same stream. Gulfs begin as collapsed sinkholes. When a collapsed feature has its steep-walled perimeter enlarged to such an extent that it possesses a distinct alluviated floor in which an underground stream rises and sinks, it may be called a gulf.

Wesley Chapel Gulf is the largest sinkhole in Indiana at nearly eight acres in size and it provides a rare glimpse of the Lost River on its subterranean path. The Lost River rises from a 125-foot



The expanded purchase boundary of the Hoosier National Forest in the Lost River area will allow the Hoosier to acquire property critical to protecting karst and sub-terranean species. Several high-priority properties have already been identified and acquired by The Nature Conservancy for the eventual transfer to the HNF as funding becomes available.

deep rise-pool called Boiling Spring located at the southern end of the gulf. The artesian waters rise from the main subterranean course of the underground Lost River. The waters in Boiling Spring are forced to rise 20 feet or more from the submerged passage during low-water periods, and as much as 50 feet or more during flood periods. The water flows for a short distance and then disappears through the mud-covered talus rock at the base of the south wall of the gulf, eventually resurfacing a final time at the True Rise, several miles to the west of the Gulf.

In addition to the subterranean passage of the Lost River, a number of caves radiate out from Wesley Chapel Gulf, including the Lost River Cave System. The Lost River Cave System is already listed as the third largest in Indiana with over 20 miles of mapped passage. With further exploration, it will likely be found to be the largest in Indiana. The Lost River Cave system is enough to excite the imagination of anyone who loves the mysterious world that lies beneath our feet.

Besides the many miles of cave passage of this vast complex, the system is a hotbed of rare cave life. Twenty-four species of troglobites (cave-obligate species) have been discovered in the Lost River Cave System. Of this total, 19 are listed as rare or endangered, and five are endemic to the Lost River. Three of the species were previously unknown to science. Due to the impressive list of animals found in this cave system, it now ranks within the top 10 caves in the United States in terms of species richness. This makes the cave system important not only to Indiana, but to the

entire United States.

A sizable segment of this cave system lies beneath a tract of land just west of Wesley Chapel Gulf, outside the forest boundary of the Hoosier National Forest. The newly proposed modification of the Hoosier's boundary will allow the Forest Service to acquire and manage some of the unique karst features that surround the Lost River, maybe even the Lost River Cave System itself. The boundary adjustment represents the work of a lot partners both internally and externally as well as a 'watershed' achievement for karst conservation.

Additional editor's comments on the expansion: Purchase boundary changes literally requires "an Act of Congress" to accomplish and required the support of Representative Baron Hill to make it happen. The "expansion" was really a "swap" in that the 16,723 acres added in the Lost river area was balanced by 16,600 acres removed from the Hoosier's Purchase Boundary southwest of French Lick in an area it currently owns no property and likely would never be purchasing future tracts. In addition to the Wesley Chapel Gulf tract, the Hoosier has been working with The Nature Conservancy for several years to protect a number of important properties as they become available. This includes two tracts just west of Wesley Chapel Gulf and very recently a large tract auctioned by Kimball Company that contains part of the Lost River dry bed. With the revised Purchase Boundary, these properties may eventually be transferred to the Hoosier, as funding allows.

IKC EDUCATION AND OUTREACH COMMITTEE REPORT

by Kriste Lindberg, Chairman

We are pleased to report that good progress continued to be made with our expanded education plan and collaboration with the NSS Environmental Education Committee/Project Underground. Items are being fine tuned and modified where appropriate as the plan evolves – the first four have already been accomplished and were reported in the last *IKC Update*. Now, progress on the rest is underway. Below is a brief synopsis of the plan's timeline:

- Appointing regional coordinators
- Creating a web page on the IKC web site
- Garnering media coverage
- Setting reporting procedures
- Gathering traveling trunks (Project Underground activities such as the inflatable cave, the *Caves: Life Beneath the Forest* cave life documentary, karst/groundwater models, and more)
- Employing a database to keep track of details
- Correlating programming to standards
- Engaging in additional marketing and outreach



- Attracting more funding
- Holding a Project Underground board retreat
- Conducting Project Underground facilitator trainings

In more detail...

Gathering traveling trunks: Our traveling trunks are about to expand. We are working on items to include in them and plan to have them purchased by the end of the year.

Employing a database to keep track of details/engaging in additional marketing and outreach: It has been uncanny how well the plan is coming together. It seems as though it is meant to be – the timing is impeccable. With the coming year, we will even be coordinating with Indiana University professors and the City of Bloomington to produce a win/win. Thanks to the expansion of an environmental education spreadsheet that was created earlier in the year, we will be working together to increase its functionality by tying in not only our immediate efforts with cave and karst education expansion, but also other, related environmental education endeavors, such as the Storm Drain Marking Program, Hoosier Riverwatch, Project WET, and more. Folks visiting the site will be able to see who is offering what in their area and receive contact info as well as click links to the various offerings and those who offer them. The idea is for it to be a clearinghouse of sorts, something that is badly needed.

In addition, to help with national efforts, let's welcome Dianne Gillespie to the fold. She has accepted the position of NSS Education Division Chief, taking over for my former partner, Amy Bern (as you may recall, Amy and I had paired up to oversee the division in the earlier part of the decade – she oversaw the western

states and I the eastern states – I subsequently left my post to take on additional environmental education responsibilities with the City of Bloomington and she, subsequently, took on the whole US). Amy has now left her post to help prepare for the 2011 NSS Convention, which will be held in her state, Colorado. And, the National Cave and Karst Research Institute (NCKRI) is in the process of hiring an education director to help them with their endeavors, as well. Things are really looking up for cave and karst education, in general! We trust all will continue to come together nicely and thrive in the same spirit of cooperation that has proven successful in the past.

Holding a Project Underground board retreat: Plans are underway for a Project Underground board retreat during the earlier part of the coming year to help coordinate the program in conjunction with the NSS Environmental Education Committee (the NSS and Project Underground operate under an MOU) and others who are joining in the overall endeavor.

As the stage is now set for even more mutually beneficial synergy to continue and thrive,



I will now be stepping back a bit to help pick up the slack for our lagging economy. At this point, I can no longer afford to volunteer at the pace that I have been. Like the Jack Nicholson film suggests, "Something's gotta give!". Therefore, by the end of the year, I will be leaving my post as Chairman of Project Underground. We are in the process of talking with others to find a successor that can continue to give it the time and energy it deserves. I'll still remain on the board as a NSS liaison and also remain as Chairman of the NSS Environmental Education Committee, as well help ensure a smooth transition. I will also remain as Chairman of the IKCs Education and Outreach Committee.

Regarding further progress on related endeavors, updates on upcoming events mentioned in the September 2008 *IKC Update* issue and more include:

- Caves Among Us: Leonard Springs Nature Park Tour (LSNP evening hike), Bloomington Parks and Recreation, September 17. These tours, given quarterly, introduce visitors to LSNP, a park focusing on cave and karst as well as water resources. The mood of the park changes with the seasons. In the summer, it is quite popular. This particular trip attracted over 40 attendees. Needless to say, due to the growing popularity of this tour, we are now giving them once per month rather than once per quarter!
- Caves of Indiana: A presentation for kids and adults, Greenwood Public Library, September 8. Bob Vandeventer brought "the cave" to "the library". The participants mainly consisted of a boys group and their parents, about 20, altogether. Then, the librarians caught wind of what was going on, and it brought the count up to about 30. All enjoyed themselves and got a lot out of it! Good contacts were made, too.
- Second Annual BatFest, Indiana State University, Terre Haute, September 13. Thanks to Don Ingle for once again hosting the 38 foot inflatable cave at this event! It was, as usual, a hit. We look forward to next year.
- Take a Child Outside Week, Bloomington Parks and Recreation, September 23-30, including Bats in the Park and an After School Activity Day. TACO Week, as it's affectionately called, is actually part of a national, even international as I understand it, week devoted to taking kids outside so they can partake in what nature has to offer. This year, we had at least a dozen entries, including Bats in the Park, a collaboration with Laura Hohman of Bat World Hoosier Hills, on September 26th that attracted more than 80 participants and after school day activities on September 30th, which included the inflatable cave, hosted dozens, as well. Thanks to the latter, a local high school teacher offered up her students to make 36 origami bats for us to hang in the cave. They look great!
- Shirley Springs Cave Tour, Bloomington Parks and Recreation, October 1. We conducted a tour of Shirley Springs Cave for a small group of elementary school children.
- Leonard Springs Nature Days, Part I, Bloomington Parks and Recreation/Sycamore Land Trust/Monroe County Community School Corporation, October – November 2008. Hosting all 6th graders in the Bloomington area, totaling approximately 900 to karst, creek, wetland, forest, and soil stations. We, along with the Bloomington Indiana Grotto, are making sure the trail stays in good shape, too! During the first half, five schools came to visit. We had many appreciative people of all ages, especially the younger ones! After this Fall's event, we held a "Thank You Reception" in the atrium of City Hall, where we showed a slideshow of images taken this year, exhibited dozens of colorful "thank you" notes from the school children, presented tools used in the field, and more.
- Environmental Education Association of Indiana Annual Conference, Camby, Indiana. This year, by invitation, we took place in the Friday evening Share Fair, a technology show and tell. We showcased the *Caves: Life Beneath the Forest* cave life documentary, giving a brief introduction and showing a few clips. As you can imagine, it was well received! We also had our IKC display for the duration, complete with a sign up sheet for those interested in joining us in our cave and karst education and outreach efforts.

Our next IKC Education and Outreach Committee Meeting will be held one hour before the next IKC Winter Quarterly Meeting, at 3:00 PM in the Geology Building of Indiana University where we will discuss the NSF grant in relation to traveling trunks, the database, correlation to standards, more funding, the upcoming Project Underground

BUDDHA KARST NATURE PRESERVE KIOSK COMPLETED

by Keith Dunlap

In 2001 the IKC purchased 37 acres containing Buddha Cave. Part of the funding for the acquisition came from the Indiana Heritage Trust and in exchange for their assistance, the property was dedicated as a state Nature Preserve. Since the property is still considered privately owned (the IKC holds the fee title), we were not obligated to allow public visitation, but the IKC Board decided early on that it would maintain a parking area and loop trail to provide reasonable access to the public and leverage the property as an educational facility since it contained many examples of various karst features at one location. In addition to several caves, the property had various sinkholes in different stages of development, two sinkhole ponds, a sinking stream, and a perennial spring. We also wanted to demonstrate how the property could be reforested over time by planting one to two acres of native trees per year, over a twenty to third year progression.

To promote this educational vision, in 2002 the IKC Board approved funding for a kiosk to be placed at the property's trail head. The kiosk was to serve three purposes: state the visitation rules, recognize the donors who made the acquisition possible, and finally to have a karst education component along with a trail map. The three purposes developed into a three panel kiosk design with the two foot wide by four foot high side panels set at 45

degrees to the larger four foot square center panel, capped with six-sided angled roof. The design was both simplistic and complex and constructed completely of cedar for a durable, but natural appearance. A final design detail was to construct the roof in spaced layers, creating 3/4-inch gaps that would act as a large bat house. The roof was topped with slate shingles which not only looked good, but would store heat during the day to further facilitate bat use. The kiosk was designed and constructed by Keith Dunlap and roofed by Clyde Simerman. Installation of the structural part of the kiosk was completed in April of 2003.

Other projects seemed to take priority on the creation of the educational artwork for the kiosk, so for five years, the kiosk bore white blank panels. Finally, member Cindy Sandeno volunteered to pick up the project and create the panels. The visitation rules and donors list were provided, but Cindy did the rest including having the loop trail GPSed and transferred onto an aerial photo. Other artwork was provided by Barry Carpenter and Kriste Lindberg. Cindy provided several full-size drafts of the panels with final approval given at the June 2008 meeting (see the center panel, above right). The artwork was then printed onto aluminum sheets by Johnny's Signs in Bedford and installed in the kiosk on October 25th. It took six years from start to finish, but the results were worth the wait.



Keith Dunlap and Cindy Sandeno pose by the completed kiosk at the Buddha Karst Nature Preserve.

Welcome to Buddha Karst Nature Preserve

General Information:

- Buddha Karst Nature Preserve is a 37-acre property owned and managed by the Indiana Karst Conservancy.
- The Indiana Karst Conservancy is a non-profit organization dedicated to the preservation and conservation of Indiana's karst features.
- For more information, visit us at: ikc.caves.org or write to PO Box 2401, Indianapolis, IN 46206.

Special Features: Caves, sinkholes, sinkhole ponds, springs, and wet-weather swallets.

Length of Loop Trail: 1.0 mile.



What is Karst?

- Karst is a landscape formed by soluble rock that dissolves to create features such as caves, sinkholes, springs, and underground streams. About one-quarter of the U.S. land surface is karst.
- Sinkholes are depressions on the surface caused by water moving downward into cracks and passages (such as caves) in limestone. Sinkholes provide a direct pathway for surface water to move into the subsurface.
- Effectively, karst provides little filtration. Surface water can sink quickly carrying contaminants into the groundwater. These contaminants impact the fragile underground ecosystems.
- Because cave ecosystems are directly affected by surface activities, we can not protect the subsurface without protecting what's above them.
- Caves are priceless laboratories for medical, biological, geological, hydrological, and other scientific study.

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facilitator training in Indiana and more.

Below is a list of upcoming events specific to cave and karst education in Indiana:

- Hoosier Association of Science Teachers, Inc. (HASTI) Annual Conference, Indianapolis, Indiana, February 4-6, 2009. We will be there once again... for the third year running!
- IDNR Division of Reclamation, Meeting, Brown County State Park, February 10. The *Caves: Life Beneath the Forest* cave life documentary will be shown at this meeting, including a question and answer period.
- Leonard Springs Nature Days, Part II, Bloom-

ington Parks and Recreation/Sycamore Land Trust/Monroe County Community School Corporation, March – May, 2009. For a more detailed description, see above.

- Hoosier Outdoor Expo 2009, Fort Harrison State Park, September 25-27 – The IDNR is hosting this first-time-ever event and it will be *HUGE!* They have asked for us to be there with our inflatable cave. We won't let them down...

If you would like more information on any of the above and/or wish to help, please contact me at kriste.lindberg@gmail.com or (812) 339-7210.

COUNTING BAT NOSES:

NEW SOFTWARE MAY ENHANCE INDIANA BAT POPULATION SURVEYS, IMPROVE TECHNIQUES TO DETECT WHITE-NOSE SYNDROME

by Andy King, biologist, USFWS Ecological Services

Bat biologists are currently gearing up – at the Fish and Wildlife Service’s request – to head underground with digital cameras in tow. They are preparing to take part in the Service’s 2009 biennial winter surveys of the federally endangered Indiana bat (*Myotis sodalis*). Digital photography is rapidly changing and improving how bat biologists traditionally estimate winter-bat populations within hibernacula (i.e., caves and mines). Having spent hours or days manually identifying and counting thousands of tiny bat noses on computer screens, bat counters have long hoped for a better way. Some have dreamed of running photographs through a software program and instantly receiving an accurate bat count (plus or minus an acceptable amount of standardized error). Fortunately, the weary bat counters’ dreams may be closer to reality, thanks to some USDA Forest Service remote-sensing specialists who recently accepted the challenge.

The Forest Service is used to taking on management challenges associated with the Indiana bat and its habitat. The Indiana bat occurs on national-forest lands in 14 states including Indiana’s Hoosier National Forest. Dale Weigel, a forester with Hoosier National Forest, and Andy King, a biologist with the Service’s Bloomington, Indiana, Ecological Services Field Office, proposed the bat-imaging project. They submitted it as part of a national competition to the Forest Service’s Remote Sensing Applications Center in Salt Lake City, Utah. RSAC selected the unique bat-imaging project for funding and will soon begin feasibility testing using state-of-the-art image-recognition software. The Service’s ultimate goal is to develop a program to

more quickly and accurately identify and estimate the number of individual bats within digital photographs. Its Bloomington office will be providing the digital images for the feasibility tests.

In recent years, the Service and its partners have been taking steps to improve the accuracy of Indiana bat-population estimates and trends. This information ultimately affects the Service’s assessment of the bat’s recovery criteria. For example, in 2006 the Service sponsored a field test of bat surveyors. The test determined surveyors using digital photography had significantly less error in their population estimates than those using traditional survey techniques. Digital photography is also valuable because it can reduce field-survey time and disturbance levels in hibernacula and produce permanent records. However, as a survey technique, digital photography is not without limitations. States with large winter populations of Indiana bats (e.g., Indiana, Kentucky, New York, Illinois, Missouri, and West Virginia) rarely have adequate staff to count digital-bat images. Distinguishing pinkish noses from bent wrists and counting tens of thousands of bat noses in hundreds of images can take weeks or months. So, if RSAC succeeds in standardizing and automating a system for estimating bat numbers from digital images, it will benefit the Service’s and its partners’ Indiana bat-recovery efforts.

In addition to digital images of healthy bat clusters, the Service and its partners will provide RSAC with those of clusters with fungal growth on noses, ears, and forearms. Scientists have associated this fungal growth with the newly emerging threat, white-nose syndrome. The current WNS outbreak apparently began at four hibernacula near Albany, N.Y., during the winter of 2006-2007. It rapidly spread this past winter to about 30 additional sites in New York; Vermont; Massachusetts; Connecticut; and, perhaps, Pennsylvania. WNS has affected at least five bat species, including the Indiana bat. And mortality rates have exceeded 90 percent at some sites. As initial funding allows, RSAC will test the feasibility of imaging software to quickly scan and accurately detect individual bats exhibiting fungal growth. Initially, researchers did not notice low levels of fungal growth,



indicative of early onset of WNS, at some affected sites. New York biologists later examined and discovered its presence in digitally enhanced photographs. If feasible, digital-imaging software

would provide an efficient means of conducting standardized WNS surveillance at bat hibernacula across the eastern United States and Canada.

INDIANA KARST CONSERVANCY TREASURY REPORT

Income/Expense Statement From July 1, 2008 to September 30, 2008

INCOME:

Dues Apportionment and Residuals	723.75	
Donations - General	324.23	
Donations - Land Acquisition Fund	213.00	
Interest	<u>271.56</u>	
		\$1,532.54

EXPENSES:

IKC Update (printing, production, mailing)	231.67	
Education / Outreach	324.00	
DNR Service Contract	29.56	
Business (Property taxes, website fees, etc.)	46.50	
Transfers to/from restricted funds/other adjustments	<u>352.35</u>	
		(\$984.08)

NET OPERATING EXCESS (DEFICIT) THIS PERIOD: \$548.46

Balance Sheet September 30, 2008

ASSETS:

Cash in Checking / Saving Accounts / CDs	97027.78	
Wayne Cave Preserve (20.00 acres)	75000.00	
Robinson Ladder Cave Preserve (40.40 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>\$355,040.94</u></u>

LIABILITIES & OPERATING EXCESS:

Land Acquisition Restricted Fund	32666.59
Deferred Dues Restricted Fund (179 members)	2992.50
NSF Education grant	840.00
Stewardship Endowment Restricted Fund	29322.62

Previous Operating Excess	30670.77	
Net Excess (Deficit) This Period	<u>548.46</u>	
Current Operating Excess (unrestricted funds)	31219.23	
Real estate liquidity (basis value)	<u>258000.00</u>	

Total Liabilities & Operating Excess \$355,040.94

IKC SEPTEMBER BOARD MEETING MINUTES

Saturday, September 20, 2008 – Ferdinand State Forest

BOARD MEMBERS PRESENT:

Jerry Lewis, President
 James Adams, Secretary
 Keith Dunlap, Treasurer
 Bruce Bowman
 Dave Haun (proxy Carla Winner)
 Don Ingle
 Kriste Lindberg
 Steve Lockwood
 Bob Sergesketter
 Bruce Silvers
 Karen Silvers
 Tom Sollman
 Bob Vandeventer
 Richard Vernier
 Jamie Winner

BOARD MEMBERS ABSENT:

none

IKC President Lewis called the third quarter meeting of the Executive Board of the Indiana Karst Conservancy to order at 5:09 PM EDT. The June 28, 2008 meeting minutes were approved as published in the September 2008 *IKC Update*. Carla Winner was accepted as proxy for Board Member Haun.

Treasurer's Report

Treasurer Dunlap reported \$354,968.73 in assets including \$96,968.73 in cash. Totals for the following funds were reported: Land Acquisition, \$32,546.59; Stewardship, \$29,322.62; Deferred Dues, \$2,970.00; NSF Grant, \$840.00; General Fund, \$31,289.52. All property taxes for 2008 have been paid and we currently show 178 paid members on our roster. Twenty-one additional "members" may be dropped for non-payment of dues.

E-mail motions

There have been two e-mail motions and votes since the last meeting:

August 20, 2008: Dunlap moved that we accept the presented DNR contract to perform work related to the calibration and installation of temperature and humidity data loggers at eight bat caves. Dunlap will perform the work with the proceeds, not to exceed \$1,026, to go to the IKC. Lewis reported that he did not record who seconded this motion. Motion passed, 14-0-1.

September 3, 2008: Haun moved that Earth Tech be allowed to conduct scientific research at the Orangeville Rise and that information obtained will be shared with the IKC. Lewis reported that he did not record who seconded this motion. Motion passed, 15-0-0.

Lewis commented that some issues, such as the Orangeville Rise water monitor could be left up to the property manager's discretion. Lewis and Dunlap pointed out that our property management plans specify that all research on our properties is subject to IKC Board approval. Discussion. No motion.

Education and Outreach Committee

Lindberg reported on our Education and Outreach Committee. Three regional directors have been appointed, Ingle (South), Vandeventer (Central) and Karen Silvers (North) and a web page has been created. Reports will be produced for each event. A new poster has been created. There was a presentation at this year's NSS Convention. The committee is pursuing grants for additional groundwater models and other equipment.

Vandeventer moved to fund \$75 for Lindberg to attend the Environmental Education Association of Indiana with the other half of the \$150 fee funded by Project Underground. Ingle seconded. Motion passed 15-0-0.

Robinson Ladder Cave Preserve

Prairie Restoration – Jamie Winner has been in contact with the company that we talked to last year about conducting a controlled burn on the property. A fall burn can be scheduled in October for \$2,257. Winner asked if there is any additional equipment that could be purchased at this time in addition to funding the prescribed burn. Our NRCS's WHIP funding will run out if we do not schedule the burn this year. The contractor will write up a burn plan, but the IKC will need to submit some forms to IDEM. The Board instructed Jamie Winner to "plow" ahead to get the job done.

Dunlap reported on temperature and humidity monitoring in Robinson Ladder Cave that is related to the broader DNR contract that pertains to several properties. He hopes to complete the contract work next Monday.

Lewis reported that a limb or tree has fallen across the access road. This will need to be removed before the crew arrives for the burn. Jamie Winner will take a chain saw to it.

Wayne Cave Preserve

Lewis has been doing bug collecting in the cave. He feels that a quick cleanup of trash at the bottom of the entrance climbdown might be in order. Dunlap suggested that this might be a good project for the day of the next meeting in December.

Indian Creek Conservation Easement

Lewis reported that he has been in contact with Christian Freitag and drew up a letter to Sycamore Trust of-

fering a \$2,000 endowment plus legal fees to accept the easement. They have asked for additional related paperwork and records of our dealings with the easement property for review before proceeding with our offer.

Dunlap noted that the IRS has increased their reporting requirements for holders of conservation easements starting this year.

Buddha Cave Preserve

Dunlap reported that the artwork for the kiosk has been turned into sheet metal. There are a few issues with the transfer of the artwork. There was discussion regarding our acceptance of the finished pieces. Adams will review the finished pieces and report back to the Board.

Dunlap noted that we have been planting about an acre a year of trees at the property. Dunlap moved that we fund up to \$350 to purchase 1,000 trees (approximately two acres) for the 2009 tree planting. Sergesketter seconded. 15-0-0. Dunlap will place the tree order.

Sullivan Cave Preserve

Dunlap reported that there is little to report. There have been several donations received from people visiting the cave. A solar-powered vent fan could be useful in the newly installed outhouse. Sollman suggested that painting the vent pipe black should draw air thru more effectively than the current white painted pipe. It was agreed to try this before the fan installation is attempted.

Illinois Geological Survey Project

Lewis read an e-mail he has received from a geologist who wishes to sample stalagmites in Indiana. He wants

to take core drillings for research. He has not specified how the IKC might help and IKC properties might not be impacted. Lewis will contact the geologist or more specific information.

Cave River Valley

The Cave River Valley property has changed ownership. There has been Internet discussion on future plans and many cavers have expressed concerns. Dunlap commented that, perhaps, the IKC should voice an opinion. The draft management plan is available on the DNR website. No public input has been formally solicited. Lewis directed Dunlap to draft a letter expressing IKC concerns.

Other issues

A drilling company proposal to change the oil and gas drilling regulations in karst areas has been submitted to DNR. No formal petition has been accepted.

There was discussion on land acquisition activities. The Roberts Cave property is for sale and supposedly an offer has been accepted. There are also 9,422 acres owned by Kimball coming up for auction in November.

The next meeting was scheduled for December 13, 2008 at 4:00 PM in Bloomington at the Indiana University Geology Building, if available. Lewis will follow up. Thanks to Jamie and Carla Winner for hosting the meeting. The meeting adjourned at 6:56 PM followed by the traditional IKC Fall cookout/pitch-in.

Respectfully Submitted, James Adams, Secretary

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.

