



IKC UPDATE

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INDIANA KARST CONSERVANCY, INC**PO Box 2401, Indianapolis, IN 46206-2401**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: A dreary winter day at the Donaldson Entrance to Shawnee Cave,
Spring Mill State Park. Photo by Rich Lunseth, December 2015.



ANNUAL BUSINESS MEETING REMINDER
SATURDAY, March 19th, 10:30 AM EST
ELLETTSVILLE, INDIANA
MONROE COUNTY PUBLIC LIBRARY (ELLETTSVILLE BRANCH)

The Annual Business meeting is for the purpose of Executive Board elections. Annual reports from the IKC Cave Patrons and Property Managers are also presented. And as always, the meeting is for members and other interested persons to have an open forum for talking about caves, 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 meeting is informal, and everyone is encouraged to attend and participate. The IKC Board wants your input.

Preliminary Agenda: Elections; Cave Patrons/Property Managers annual reports; Upcoming projects at various other preserves; Chestnut tree planting at Robinson Ladder Cave Preserve; Indiana Cave Symposium; DNR cave access update; Financial reports; Land acquisition activities; and more....

Meeting address: 600 W Temperance St, Ellettsville, IN 47429 (812) 876-1272

Directions: The Ellettsville Branch is located at the intersection of Highway 46 (Temperance Street) and Sale Street. To reach it from Bloomington, travel west on Highway 46 until you reach the stoplight at Sale Street. Turn left. The library and parking will be 1 1/2 blocks on your right.

ACTIVITIES CALENDAR

- Mar 19 – IKC Annual Business meeting (see above)**
- Apr 16 – Tree Planting at Robinson Ladder Cave Preserve (see page 6)**
- Apr 30 – Indiana Cave Symposium (see page 9)**
- Jun ?? – IKC Quarterly Board Meeting (date & location to be determined)**
- July 9 – Grand reopening of Wyandotte Cave (tentative)**
- Aug 5-7 – Cave Capers (Lawrence County Recreation Park)**

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...

Since my last rambling in the December *IKC Update*, I've received some interesting correspondence concerning the topic of workdays... Interesting because what I'm hearing is coming from two very different directions. On one hand I've had a couple of people e-mail me, completely unprompted, and ask, "What can I do to help?" On the other hand, I had some correspondence from the Eastern Indiana Grotto (EIG) asking how to get more people to help, in reference to a cave entrance/sinkhole dump cleanup that they've been conducting.

Addressing the first question, the IKC is a "land trust" conservancy, and as such we have an almost endless list of things that need to be done. If you want to find ways to help, I'd suggest starting by reading the *IKC Update*. For instance, this issue announces the upcoming April tree planting at the Robinson Ladder Cave Preserve. We'll be planting chestnut trees along with several other kinds of trees that are complementary to the chestnuts. The process is relatively simple, you dig a hole, put a tree in it, and then fill around the seedling with the soil that came out of the hole. We'll be giving the chestnut trees some extra attention to prevent them from becoming dinner for the local deer population, but you can read about that in the announcement concerning the planting day (see page 6). This is an opportunity to get your hands dirty for a good cause, and after the trees are planted, that's just the beginning. Like all of the tens of thousands of trees we've planted on our other preserves over the years, they will need to have periodic herbicide treatment to keep the weeds from out-competing them, and if the next couple of summers bring drought, they'll need water. Lots of things for people looking for ways to help.

Think about that for a minute... in planting trees you're doing something that will make a real difference. In the case of the chestnuts, you'll be

helping re-establish an all-but-extinct species that not so long ago was a predominant member of Indiana's forest communities. The trees will produce abundant chestnuts to feed wildlife populations. In the summer the leaves produce oxygen for the atmosphere, and each fall they will blanket the newly established forest floor to provide nutrients for the plants and animals that live there, as well as to the cave community below. And you can bring your grandchildren, or your cat, or whomever is important to you and say, "I planted that tree." I've never known anyone who planted a tree who didn't feel better for it.

"How can I help?" We do many other things on our preserves. For example, last year Tom and Robert Sollman took on the task of building an information kiosk at the Wayne Cave Preserve. This was tantamount to building a small house and it



looks great! Every preserve could use a kiosk... The Shawnee and Buddha Karst preserves each have over a mile of hiking trails... and the trails have to be mowed starting in the spring. There are trees on several preserves that continue to require herbicide treatment to knock down the weeds. And there is a continuing battle with exotic plants (honeysuckles, autumn olive, etc) at every preserve that requires teams of people to eliminate these plants before they get a foothold. Furthermore, most of our preserves also have established woods needing attention. While we may never cut our trees, it is still good

management practice to perform Timber Stand Improvements (TSI) to keep the woods healthy. This means keeping grapevines in check and manipulating/thinning the more common species to favor oak and hickory.

And then there is good old-fashioned garbage. IKC volunteers have cleaned up what seems like countless dumps... it's a joke in the organization that we can't purchase a new property if it doesn't have an abandoned trailer to get rid of. The Shaw-



nee Karst Preserve didn't have a trailer... it had an entire house that had been demolished and thrown into the sinkhole containing the entrance to Upper Twin Cave. It took several workdays to clean out, but we got it done. And every preserve accumulates garbage in and around it... feel free to bring a garbage bag and clean something up as most of our properties border a road. A good example is the Orangeville Rise Preserve, as there always seems to be something there to pick up.

This brings up the question from the EIG, "How do we get more participation?" Well, I hope I'm leading by example here... I'm asking for help. There's an army of cavers out there ready to help, but many (and I include myself in this) aren't going to just go out to a preserve and start doing something without some reassurance that what they're doing is making something better and not worse. For example, many people can't tell a tiny bush honeysuckle plant from a native tree, and they're not going to start yanking plants out of the ground for fear that they might be oaks rather than weeds. So that's where asking comes into play. Organize an activity and then ask people to come help. After you ask, then ask again. Remind folks of upcoming workdays and keep it in front of them.

For spreading information, I'm starting to appreciate the value of social media sites like Facebook. I first joined Facebook when the IKC Education and Outreach page was established.

Recently the page has been expanded to be more of an overall IKC page, and I've started posting things that we've been doing, for instance the work that cavers did to re-open the collapsed IKC Entrance to Upper Twin Cave. The response to posts is usually rapid and profuse... I've been a little surprised how many people are looking at our page when I put something up on Facebook. So that's a great way to announce activities and then send out reminders.

And it's also a great place to show results. We usually have photos of recent workdays in the *IKC Update*, but I'm finding that Facebook is an excellent way to show the results that are being accomplished during our workdays in a more timely manner. Who doesn't like receiving a little acknowledgment? A great way to give electronic pats on the back is to put up photos of workdays in action, group shots of the participants, and before and after photos at the project site. And if someone wants to bring donuts or cookies to the workday, that doesn't hurt participation either.

So... ask, remind, and acknowledge... I think that's how it's done. The IKC has a long list of things that need to be done, just ask any Property Manager or Board member and I'm sure you'll get some suggestions.

And in April, come help us plant chestnut trees ... you can even hug one if you're so inclined.

Jerry Lewis

NEWS BRIEFS...

- ❑ On February 14th, the IKC celebrated its 30th anniversary (officially incorporating in 1986). It is also interesting that nearly half of the members who joined the IKC in our first year are still active members. These include (in order of joining): Keith Dunlap, Glenn Lemasters, George Cesnik, Tom Rea, Mark Webb, George Brutchen, Stephen Collins, Dave Haun, Jeff Cody, Lynn Miller, Bill Tozer, Scott Fee, Kevin Strunk, Ernie Payne, and Noel Sloan.
- ❑ The final report for the January/February 2015 bat census has been released (contact Keith Dunlap if you would like a copy). To quote the report's executive summary, "A total of 184,641 Indiana bats was found, a 17.8 percent decrease (nearly 40,000) since 2013. This decrease was likely associated with White-nose Syndrome...". Many of the details of the census can be found in the December 2015 *IKC Update*.
- ❑ Speaking of bat census, during January/February 2016, fifteen of the "smaller" hibernacula were visited. Of these only two caves (Panther in Washington County and Swinney in Harrison County) now have significant populations of Indiana bats. The good news is that in both of these caves, the numbers actually increased. Unfortunately in the remaining caves, as was observed in 2014, the numbers seem to have dropped below a sustainable threshold. With that said, Robinson Ladder Cave owned by the IKC, had 9 bats (6 which were Indiana bats) in 2016, compared to just one big brown in 2014.



- ❑ Also during the 2016 bat count, another white-furred Indiana bat was spotted in Saltpeter Cave, (Monroe County). This is very likely the same bat observed in 2014 in the same cave (and within a few feet within the cave). This bat was featured on the March 2014 *IKC Update* cover. It also suggests the white bat observed in Grotto Cave (also Monroe County) in 2015 may be a different bat.
- ❑ Several media sources have reported that Wyandotte Cave will be reopening this summer. The tentative reopening date is supposedly July 9th with limited operations until Labor Day, although nothing official has been announced. The IKC has offered our assistance in recruiting volunteers to help as needed, but details of what roles we might play have not been worked out. Obviously, more will be announced as the reopening gets closer.



photo courtesy Keith Dumlup

- ❑ The IKC has gained one new member in the last quarter. Welcome Thomas Rasmusen (564). The IKC membership currently stands at 189.

CHESTNUT TREE PLANTING WORKDAY – APRIL 16th

The IKC and The American Chestnut Foundation are organizing a joint tree planting project at the IKC's Robinson Ladder Cave Preserve in Crawford County. Start time is 11 AM EDT. The goal is to plant at least fifty of TACF's Restoration 1.0 hybrid American chestnut trees, along with 150 other seedlings (butternut, walnuts, and red oaks). We will also be erecting a perimeter fence around the planting area to prevent deer browsing. Depending upon the volunteer turnout, the planting project should take two to three hours. If we have additional time after the tree planting, we likely will work on Timber Stand Improvements (TSI) on the remaining property and invasive control. Please bring gloves, shovels, loppers, and your preferred snacks.

The American chestnut is a historically significant tree to the eastern United States, including Indiana. The species grew on ridgetops and once dominated southern Indiana forests. Unfortunately, an invasive blight all but eliminated the native species. Over the past thirty years, extensive efforts by TACF to develop a blight-resistant hybrid has netted a viable tree which is now being selectively planted to revive the species.

Directions to the Robinson Ladder Cave Preserve: The property is located on the east side of State Road 66 north of Milltown. From the south, travel 2.8 miles north from State Road 64. From the north, travel 4.2 miles south from US 150. The access lane gate is located directly across from Baylor Road (GPS: Lat N38.3938 Long W86.2718). The street address is "4000 N State Road 66, Milltown, IN" (note: MapQuest and Bing properly show the location, Google map does not). Drive the lane back to the parking area and park at the edge of the woods.

IDNR INTERIM CAVE ACCESS REPORT, YEAR TWO

by Dave Everton, Access Coordinator

The March 2015 *IKC Update* contained an article explaining the history, background, implementation, and summary of the first year of the Indiana DNR Interim Cave Access program. This article is a brief report on the second year of the initial two-year agreement, which expired on January 29, 2016.

Background: In late early 2014, an Interim Cave Access Program Letter of Understanding was finalized between the IDNR and the IKC. Donaldson-Bronson Cave in Spring Mill State Park was reopened, along with the lower section (aka Boat Dock entrance) to Upper Twin Cave during the winter months (when boat tours are not in operation). Two caves (River and Endless) in Cave River Valley were also opened during the summer months, but closed for the remainder of the year to protect hibernating (federally-endangered) Indiana bats. The IKC has administered the cooperative program for the IDNR, which stresses using proper WNS decontamination protocols in an effort prevent the transmit of the fungus that causes White Nose Syndrome. I was appointed to be the IKC's Access Coordinator, and have acted as the liaison between groups wanting cave access and Spring Mill State Park staff. In addition to reopening the four caves administered under the access program, the IDNR also relaxed cave restrictions on the dry side of Donaldson Cave in SMSP, and Wolf Cave in McCormicks Creek State Park, allowing unscheduled visitation by anyone during park hours.

2015 Trip Summary:

- Endless Cave (May 1 to August 31): 15 trips (up from 8 in 2014)
- River Cave (May 1 to August 31): 9 trips (up from 5 in 2014)
- Donaldson-Bronson Cave (year around): 13 trips (up from 7 in 2014)
- Upper Twin Cave (November 1 to May 15): 4 trips (up from 3 in 2014)
- Grand total: 41 trips on 20 different dates (up from 23 trips on 14 different dates in 2014)

Five requested trips didn't take place: two were called off by the trip leader due to water levels and/or weather forecast, and the other three didn't have the minimum number of cavers. I fielded a lot more access inquiries this year. Many persons had heard "the caves" were open, but really didn't know what they were getting into until communicating with me. The position of Access Coordinator offers a great chance to discuss particulars with requesters, and as a result, potentially prevent accidents or incidents which could result from visitors being ill-prepared. It also allowed me to redirect some groups to local grottos for better training and education, or to other "wild" or commercial caves to better match their experience levels. This was truly a win-win for all.

In the first year, I was very surprised that I did not get many inquiries from groups not affiliated with organized cavers. This year, there were more

A group of enthusiastic (and wet) cavers completing half of their double through-trip at the lower entrance to Upper Twin Cave, Spring Mill State Park.



photo courtesy Charlie Yettors



unaffiliated caver requests. Again, I believe this provides us (the IKC) an opportunity to try to ensure that unaffiliated groups will follow basic safe and responsible caving practices, including taking steps to educate about, and prevent the possible spread of White Nose Syndrome.

According to my records, 187 cavers took advantage of the opportunity to visit the caves requiring authorization in 2015, up from 148 the year prior. Included in that number are some cavers who went more than once. I took my first trip in ten years into Donaldson-Bronson Cave in May, and it was evident to me that there have been a lot of unauthorized visits there, from seeing names and dates scrawled on places in the cave. However, without

gating the cave, which would be nearly impossible, there is no practical means of enforcing the cave closure or deterring unauthorized visitation.

The IKC and IDNR have reviewed the initial cave access program and the IKC has made a request to extend the agreement for another two years. The IDNR seems receptive to the request. I am personally grateful to the IDNR for implementing this program, and many cavers have expressed to me their appreciation as well. I truly hope our cooperative experience will eventually lead to an expanded number of caves on state lands being reopened in the future, and more importantly, that it will continue to foster improved relations between Indiana cavers and state and federal agencies.

IKC ENTRANCE TO UPPER TWIN CAVE RE-OPENED

by Keith Dunlap

As was reported in the September *IKC Update*, the IKC entrance to Upper Twin Cave slumped close last June. This was not just a little dirt, but an estimated 50 to 60 cubic yards of mucky terra-rossa clay. The IKC Board weighed various options to reopen the entrance and decided the most efficient was to hire a contractor with the proper equipment (a tracked “bobcat” loader) that could remove the soil and other debris material out of the sinkhole, thus preventing it from eroding into the cave. This removal task was done in late November, after being delayed several times due to additional wet weather.

Once the mechanical effort was completed, the exposed slopes and the new ingress into the sinkhole were seeded with grass and stabilized with layers of straw mats and straw bales. In the pre-

vious ravine into the sinkhole, a check dam was also constructed and lined with riprap to further minimize future erosion.

As it turned out, the “fun” was just beginning. The old entrance was basically a narrow six-foot climb down that transitioned into a horizontal crawl into a room. This entry was now packed with mud and rocks, making it awkward to make progress. So digging commenced about six foot to the left which seemed more promising. On a second workday, several cavers entered the cave via the downstream “boat dock” entrance and worked to dig towards the outside crew. This was successful with the cave being reopened on December 5th. Two additional workdays were used to remove several large limestone slabs that partially blocked the entrance. The



photos courtesy Keith Dunlap



2016 INDIANA CAVE SYMPOSIUM PREVIEW

by Keith Dunlap

The 24th annual Indiana Cave Symposium, co-sponsored by the Indiana Karst Conservancy and Indiana Cave Survey, will be held on Saturday, **April 30**, in the Clover Room at the Crawford County Fairgrounds (on State Road 66 south of Marengo). The customary free cookout (burgers, brats, and other assorted meats and non-meat offerings) and pitch-in side dishes (please bring a covered dish or dessert to share) will start at 5 PM EDT. Presentations will begin at 7 PM. The *tentative* presentation titles and presenters (in no particular order) include:

- Jerry Lewis – Multi-pronged compilation that will encompass re-opening the IKC entrance of Upper Twin Cave, stream level monitoring in Upper Twin, the bio-inventory of the Shawnee Cave System, and a preview of results from the HNF sinkhole project.
- Rand Heazlitt – Binkley cave update
- Bill Greenwald – Bat boxes
- Kevin Romanak – Caving Club of Indiana University
- Melissa Fitzpatrick – CCIU bat box project
- Dean Wiseman – TBA
- Dave Everton – ICS survey & other activities

For more information about the Symposium, contact Dave Everton (deverton@indiana.edu or evening phone 812-824-4380) or visit the Indiana Cave Survey website (www.caves.org/survey/ics).



photo courtesy Dave Black, 2015

effort resulted in the new entrance being a little more caver-friendly than the original one.

Only time will tell if the sinkhole walls remain stable, or if we will have more issues in the future. Regardless, for now access is restored and the our intervention minimized the amount of soil that en-

tered the cave (or would have entered the cave in the future had we not removed it from the sink).

Thanks to Dave Everton, John and Brenda Shultheis, David Schaefer, Brad Hopper, Jerry Lewis, and Keith Dunlap for the physical and mental support on this project.



photos courtesy Jerry Lewis

HOOSIER NATIONAL FOREST SINKHOLE PROJECT

by Jerry Lewis

For my entire career as a cave biologist, I've been visiting... caves. In the part of Indiana encompassed by the Hoosier National Forest (HNF), where most of the caves occur on the Crawford Upland, the cave entrances are frequently associated with sinkholes. I've visited hundreds of Indiana caves, but had never paid much attention to the sinks, since my mission was always to sample the fauna of the cave. That changed in 2015 when the HNF asked me to conduct an evaluation of sinkholes.

The purpose in doing this project is practical. A frequently misunderstood fact about national forests is that they are not national parks. The national forests are under the administration of the United States Department of Agriculture, not the Department of the Interior, as is the case in national parks and national wildlife refuges. Thus, the mission of the Hoosier National Forest (and all national forests) includes timber production. One of the goals of this project is to better understand the ecological niche and importance of sinkholes in the karst landscape. I'm trying to answer questions like "Is there a difference between sinks with open drains versus no openings?" or "Is the fauna of sinkholes of any significance?"

Between September 19th and October 1st, 2015, I selected 25 sinkholes located in 12 tracts, from the Deam Wilderness (Monroe County) to the glades along the Ohio River. At each site a GPS location was established; the physical dimensions of the sink were measured; the temperature and relative humidity taken at rim and floor; and a ¼ square meter quadrat was placed in the floor and all leaf litter/organics removed from the area. The leaf litter was weighed in the field and then sifted to extract the finer detritus and all of the invertebrates contained therein, which was then bagged for return to the lab for bug extraction. All living organisms were collected with the use of a Berlese funnel extractor. The leaf litter was placed in the funnel with a light placed above it that gradually warms and dries the detritus, driving the critters to their demise in a vial of alcohol waiting below.

After the first round of visits to the 25 sinkholes, some observations could be made:

- All sinks evaluated in the warm, late summer conditions, regardless of size or depth, displayed lower temperature and higher humidity in the floor than the rim.



Salisa Lewis weighing and sifting leaf litter from a sinkhole in the Deam wilderness on the Hoosier National Forest.

- The sinks in the majority of the tracts were inhabited by Regional Forester Sensitive Species.
- Two species of spiders not previously recorded in Indiana were discovered, testifying to the climate-buffered environments of HNF sinkholes, as these species were otherwise found in the warmer areas of the southern United States.
- Two species previously known only from HNF caves were found inhabiting sinkhole floor habitats (Bollman's cave millipede *Conotyla bollmani*, Gray-handed pseudoscorpion *Kleptochthonius griseomanus*).
- Increased biodiversity was strongly correlated to the presence of deciduous forest canopy providing leaf litter to the sinkhole floors.
- Decreased biodiversity was displayed at sinkholes where deciduous forest had been replaced by pastures or pine plantations.
- The same non-native, invasive invertebrates found in Indiana caves (e.g., the Greenhouse millipede *Oxidus gracilis*) were found in sinkholes.

The plan is to visit each of the 25 sinkholes four times to evaluate seasonal changes in the habitat and community. During the first round of visits the surface temperatures were in the 70s and 80s. The fall visits were mostly conducted in November, and the winter evaluations are currently underway (started in late January and will continue into March). The first year of the project is anticipated to end after the spring 2016 evaluations.

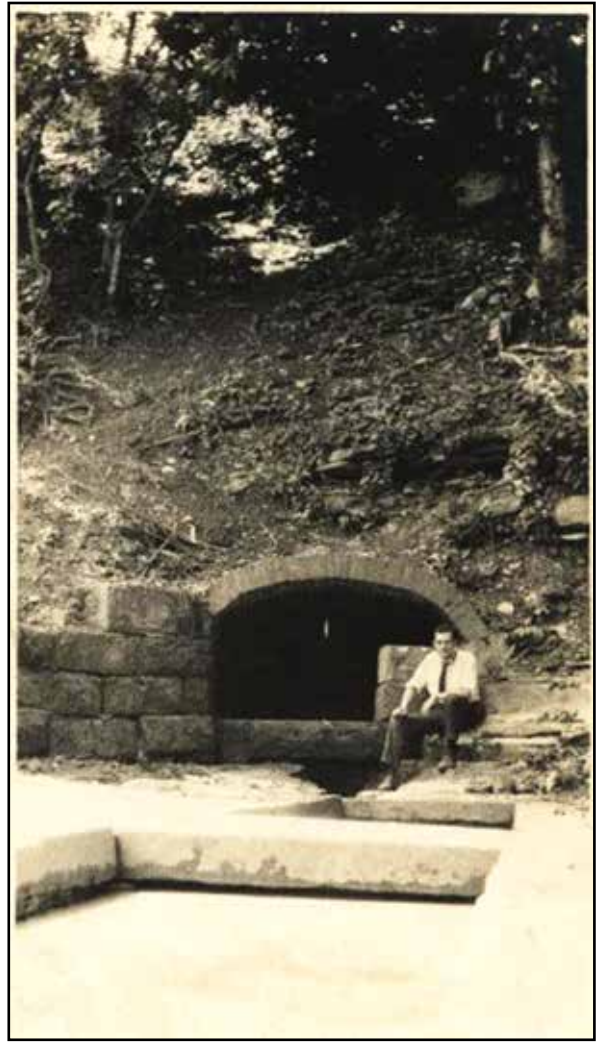
A LOOK BACK AT INDIANA KARST

by John M Benton

Edwin Powell Hubble, is the astronomer for whom the Hubble Telescope is named. Hubble was born in Marshfield, Missouri on November 20, 1889. He was the most famous astronomer of his time. He died in California in 1953 having advanced several theories in the field of astronomy.

What is little known about Hubble, is that he spent a little over three years in the southern Indiana area, after his family moved to Louisville in 1911. Hubble's father, John P. Hubble, died in Louisville in 1913 and is buried in Cave Hill Cemetery. In the fall of 1913, as a recent college graduate, Edwin Hubble was hired by New Albany High School in Floyd County to teach Spanish, physics, mathematics, and to be the high school basketball coach, where his team came in third place in the state tournament. After the school term ended in 1914, Hubble returned to grad school at the University of Chicago, and Hubble would later become world acclaimed for his contributions in astronomy.

Hubble must have had a keen interest in all the natural sciences, not only astronomy. There are two pictures of Hubble on the University of Louisville Astronomy web site, one showing the young teacher Hubble, sitting in front of Fairgrounds Spring at Corydon, Indiana; this is now known to be one of the resurgences of Indiana's longest cave, the Binkley Cave System. Did Hubble sit and wonder if there was indeed a large cave behind this spring? And the other picture shows Hubble and his friend Jack Roberts inside Wyandotte Cave's Worm Alley passage, leading into Milroy's Temple. Both men had hiked to Corydon, and then onto Wyandotte Cave on a two-day journey in 1914. If Hubble had other karst experiences, they were not recorded, but it seems there was interest, at least during his brief stay in the southern Indiana area, 1911-1914.



Photos: Both taken by Jack Roberts, courtesy of John R. Hale. Thanks to University of Louisville Astronomy web site, which supplied information.



2016 MAMMOTH CAVE FIELD ECOLOGY CLASS

by Jerry Lewis

For many years every summer, Western Kentucky University has offered a series of hands-on classes in a variety of cave and karst topics. I've agreed to teach a class this summer about cave Ecology. It's not going to be a conventional class... the classroom is going to be Mammoth Cave National Park, where I did years of work on the groundwater communities for my doctoral research way back when. I've continued to work in the central Kentucky karst region over the years and will be sharing my knowledge of the cave ecology in the world's longest cave.

We won't be sitting in a class, there won't be an expensive book (or a cheap one for that matter), we won't be listening to lectures or watching Powerpoint presentations. My intention is to spend the majority of our time somewhere in the field: various parts of Mammoth Cave, sinkholes, springs, seeps, and maybe some places where people wouldn't necessary think to look for subterranean fauna, like gravel bars on the Green River, or talus slopes below cliffs.

What is ecology? In our culture, people tend to think that ecology is something that an activity is either good for, or bad for, or involves chaining oneself to a giant tree. Actually the textbook definition of ecology is "the branch of biology that deals with the relations of organisms to one another and to their physical surroundings." Some specifics about what I plan to do: The "physical surroundings" are the central Kentucky karst. We'll be talking about the karst environment as a habitat. We'll be going in the historic entrance of Mammoth Cave to look at Shaler's Brook in Gratz Avenue (my doctoral research site), the breakdown stream in Rafinesque Hall, and the base-level Styx and Echo rivers. Using the Carmichael Entrance we'll look at the "Great Kentucky Desert", the dry, dusty upper level passages that stretch for miles in the Mammoth Cave System, on the way back to the mid-

level streams in the Cathedral Domes area. And we'll visit the area around the beautiful Frozen Niagara, where tourists go to gawk at the formations, but we'll be visiting to see what lives on flowstone and stalagmites.

The "organisms" are the cave fauna of the central Kentucky karst, the most diverse cave community known in the United States. Over the course of the week we'll be learning how to recognize and identify many different kinds of animals that live in the cave. In the streams we'll see everything from isopods to cavefish, and in terrestrial habitats we'll learn how to tell the difference between the two kinds of cave crickets, and see cave beetles, harvestmen (pictured), salamanders, and anything



else that presents itself. We'll compare what lives in sinkholes, springs, cave entrances, and the deep zones of Mammoth Cave.

Finally, we'll look at the interactions of all of these animals with the different communities. We'll look at different methods for evaluating population sizes and the roles of temperature, humidity, or food availability in determining community composition. For a bit of high-tech cave ecology, I hope that we

can explore a new method for classic mark and re-capture studies. In the old days animals were physically marked in some way, released, and then recaptured at a later date... a classic method for doing population estimates. We'll be looking at "photomarking" and then using a computer pattern recognition program to see how many of our "marked" specimens were recaptured. One day of the class will be devoted to studying pollution ecology, with a trip outside of the park to look at how man's activities in surrounding areas have impacted the caves and their communities in the central Kentucky karst.

The Ecology class is July 10-16th. For more information on all of the classes, go to <http://www.karstfieldstudies.com/index.php>

INDIANA KARST CONSERVANCY TREASURY REPORT

**Income/Expense Statement
From October 1, 2015 to December 31, 2015**

INCOME:

| | | |
|-----------------------------------|---------------|------------|
| Dues Apportionment and Residuals | 701.25 | |
| Donations - General | 489.20 | |
| Donations - Land Acquisition Fund | 2,250.00 | |
| Interest | 266.98 | |
| | <u>266.98</u> | \$3,707.43 |

EXPENSES:

| | | |
|--|-----------------|--------------|
| IKC Update (printing, production, mailing) | 294.30 | |
| Education / Outreach | 5.46 | |
| Stewardship/Conservation | 2,190.43 | |
| Business (website, CC fees, etc) | 61.50 | |
| Liability Insurance | 837.50 | |
| Ind Acad Science grant | 696.12 | |
| Transfers to/from restricted funds/other adjustments | 1,761.34 | |
| | <u>1,761.34</u> | (\$5,846.65) |

NET OPERATING EXCESS (DEFICIT) THIS PERIOD: (\$2,139.22)

**Balance Sheet
December 31, 2015**

ASSETS:

| | | |
|---|--------------|---------------------|
| Cash in Checking / Saving Accounts / CDs | 142,094.75 | |
| Robinson Ladder Cave Preserve (73.48 acres) | 162,000.00 | |
| Shawnee Karst Preserve (50.31 acres) | 105,000.00 | |
| Wayne Cave Preserve (31.85 acres) | 85,000.00 | |
| Sullivan Cave Preserve (28.00 acres) | 72,000.00 | |
| Buddha Karst Nature Preserve (36.84 acres) | 29,000.00 | |
| Orangeville Rise Nature Preserve (3.01 acres) | 7,000.00 | |
| Indian Creek Conservation Easement (valued at \$1/acre) | 13.16 | |
| | <u>13.16</u> | <u>\$602,107.91</u> |

FUNDS & OPERATING EXCESS:

| | | |
|---|-------------------|--|
| Land Acquisition Restricted Fund | 36,178.95 | |
| Deferred Dues Restricted Fund (187 members) | 2,846.25 | |
| Indiana Acad of Science | 0.00 | |
| Stewardship Endowment Restricted Fund | 55,901.00 | |
| Previous General Fund (total) | 49,320.93 | |
| Net Excess (Deficit) This Period | <u>-2,139.22</u> | |
| Current General Fund (unrestricted) | 47,181.71 | |
| Current General Fund (committed) | 600.00 | |
| Real estate liquidity (basis value) | <u>460,000.00</u> | |

Total Liabilities & Operating Excess \$602,107.91

IKC EXECUTIVE BOARD MEETING MINUTES

Saturday, December 15, 2015, 10:30 AM EDT – Bedford, Indiana

Board Members Present:

Jerry Lewis, President
 Sue Vernier, Secretary
 Keith Dunlap, Treasurer
 Joy Baiz
 Bruce Bowman
 Dave Haun (proxied by Salisa Lewis)
 Everett Pulliam
 Bob Sergesketter
 Bruce Silvers
 Kevin Smith
 Tom Sollman
 Carla Striegel-Winner
 Richard Vernier
 Jamie Winner

Board Members Absent:

Bob Vandeventer

The meeting was called to order by President Jerry Lewis at 10:30 AM at the Hoosier National Forest office in Bedford, Indiana. IKC Board members and HNF personnel shared introductions.

Hoosier National Forest Karst Update

Brief presentations were given by IKC President Jerry Lewis and HNF Ecosystems Program Manager Gary Dinkel. Michael Chaveas, the forest's Supervisor, added additional comments on wanting to re-initiate some joint projects with the IKC. With that said, he indicated the existing Memorandum of Understanding (MOU) between the IKC and HNF needs to be updated due to current HNF policy of limiting the MOU duration to five years, plus other policy changes (the present MOU is over 25 years old).

September Meeting Minutes

The minutes from the September board meeting were approved as published in the December 2015 *IKC Update*.

E-Mail Motions

On October 22, 2015, Joy Baiz made a motion to accept the bid for the work to excavate and stabilize the entrance to Upper Twin Cave at Shawnee Karst Preserve as described in the quote provided by Keith Dunlap and allow for up to \$2,500 to cover the expense for the project. The motion was seconded by Bob Vandeventer on October 22. On October 26, President Jerry Lewis called for any further discussion on the matter and then called for the vote. With a vote of 13 yes and 2 abstaining, the motion was passed on October 28, 2015.

Let the record also show that President Jerry Lewis met with Allen Pursell and Cassie Hauswald of The Nature Conservancy on October 28, 2015, to discuss the poten-

tial work to re-open the cave entrance. TNC had no objections and thought using excavating equipment would be the best way to decrease sediment flow into the cave.

Treasurer's Report

Treasurer Keith Dunlap reported cash assets totaling \$139,855.64 and land assets totaling \$460,000.00 for total assets of \$599,855.64. Funds include Stewardship: \$55,693.54; Deferred Dues: \$3,442.50; Land Acquisition: \$33,928.95; General Fund (unrestricted): \$46,716.84; and ad hoc Science Fund: \$73.81. The IKC membership currently stands at 186.

Shawnee Karst Preserve

Jerry Lewis reported on the status of the cave entrance. Efforts are underway today (12/5/15) to finish reopening the cave after excavation work was completed in late November. The entrance may require further stabilization due to the possibility of more material sloughing from above, so a round two of cleanup may be required. Straw matting has been put down and the ravine, where the old dump was removed, was stabilized with a check dam. Jerry will have to investigate to what extent sedimentation may have impacted the cave.

Jerry also reported that he has completed the bat box part of a kiosk to be placed at the property sometime in the future.

Suicide Cave

Kevin Smith reported that there have only been two cave trips since he took on the position of cave patron. However, there were no complaints about the lock or the functioning of the gate since repairs were completed.

Buddha Karst Nature Preserve

Keith Dunlap reported on stewardship activities. The road gate post was replaced and the gate re-hung. Graffiti removal efforts were finished and the area mud-washed to hide any remaining marks.

Sullivan Cave Preserve

Keith Dunlap is still pursuing a prospective land acquisition project near the Sullivan Cave property. The port-a-john was finally pumped!

Wayne Cave Preserve

Tom Sollman reported that the creation and installation of information panels in the new kiosk is still in the planning phase.

Robinson Ladder Cave Preserve

Keith Dunlap reported that there will likely be further visitation from The American Chestnut Foundation personnel before the actual planting of twenty-five or



more chestnut trees in the spring in the upper field. Other trees – butternut, walnut, red oak, etc – may also be planted. Keith would like to spread out the plantings to avoid a high failure rate if there is one season of unfavorable weather. Deer browse cages will be used.

A bat survey will be done in January or February, 2016.

Education and Outreach Report

Jerry Lewis advised that the Facebook page originally set up for Education and Outreach has been converted to a general IKC Facebook page. Recent postings of the Shawnee Karst Preserve excavation were popular.

The inflatable cave resides in Keith’s garage and the Bat Festival people do want it. It will be given to them at the next Bat Festival with a demonstration on use and then left in their possession.

Wyandotte Cave Tour Proposal Update

Keith Dunlap reported on his discussion with Bob Sawtelle, Property Manager of O’Bannon Woods State Park, on the reopening of Wyandotte Cave. The state of Indiana has provided some capital funds to reopen the cave for commercial tours and Bob has the responsibility to carry this out and is looking at options on how to do it. Bob is proposing limited weekend cave tours in 2016 with plans to pull from other DNR park system personnel and a pool of volunteers. An austere system model will probably be used with a big reopening sometime after July 4.

Keith needs to get a feel for the level of interest from the IKC as an organization and from individuals willing to volunteer. Working with the DNR would probably be good for both organizations. This would give cavers an opportunity to work in the cave. John Benton knows the tourist route and the scripted spiel to use. Presently there is a concept but no detailed plan. Keith would be happy to take on the role as liaison between the state and the caver community and work on the proposal. A straw vote showed a general consensus that

the IKC Board support this opportunity. Whatever the IKC eventually decides to do, its involvement, including liability, should be in writing so that there are no misunderstandings with the DNR. The State Park system has well-trained natural resource interpretive personnel that should also be involved. Jerry Lewis, Keith Dunlap, Tom Sollman, and John Benton are willing to carry forth with the proposal.

Land Acquisition Activities

Keith Dunlap mentioned that Kevin Strunk has expressed interest in potentially pursuing land acquisitions in the Owen County area. Keith has encouraged Kevin to contact landowners, find out their interest and report back to the IKC.

2016 Elections and Candidate Solicitations

The present officers are willing to run again in 2016. The following directors are up for reelection: Bruce Silvers, Everett Pulliam, Carla Striegel-Winner, and Jamie Winner. All are willing to serve again, but new blood is also desirable. More IKC members are encouraged to run (preferably younger members with less gray hair or at least with hair! :). The completed ballot must go out to the membership 30 days prior to the annual meeting in March.

Items from the Floor

There were no items from the floor.

Next Meeting

The next meeting will be Saturday, March 19, 2016. The likely location will be the public library in Ellettsville, Indiana, and the time will be either 10 AM or 11 AM. Keith Dunlap will confirm the actual location and time.

Adjourn

The meeting was adjourned at 12:21 PM.

Respectfully submitted, Sue Vernier, IKC 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.

