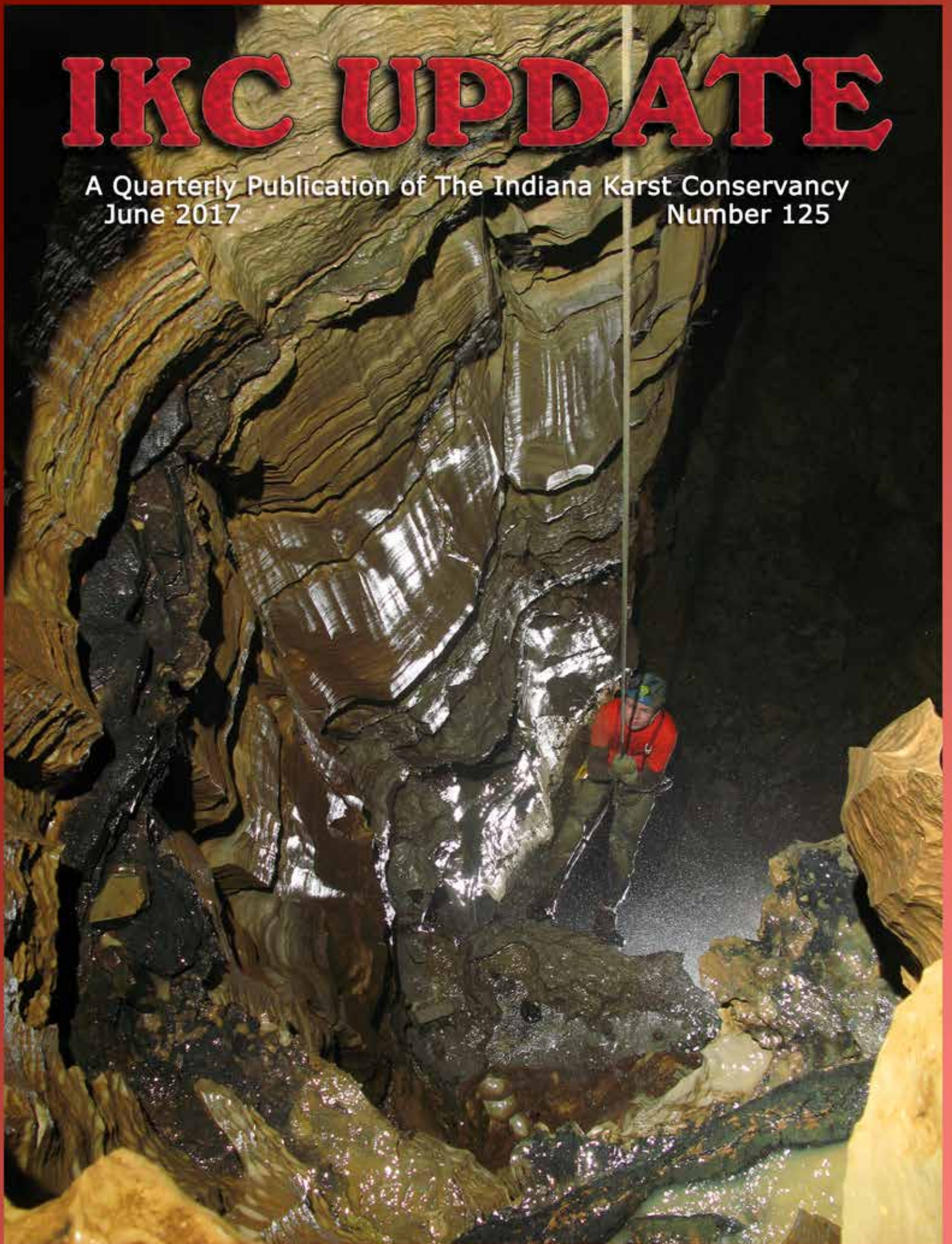


IKC UPDATE

A Quarterly Publication of The Indiana Karst Conservancy
June 2017

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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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*grottos with liaison agreements

Cover: Colton Kaiser rappelling the 47-foot pit at the bottom of Rolling Rock Cave (Crawford County). Photo by Chris Bell.



IKC QUARTERLY MEETING REMINDER

SATURDAY, JUNE 3rd, 1:00 PM EDT

BLOOMINGTON, INDIANA

WAYNE CAVE PRESERVE

The quarterly meetings are for the Executive 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: Recap of recent work projects and promotion of upcoming projects at our various other preserves; Financial reports; Land acquisition activities; Sauerkraut Cave gate; and more....

Stewardship Activities: There will likely be some work activities at the property before the meeting including mowing the trails, erosion control, invasive eradication, etc. If you are so inclined, show up early and pitch in. Start time will be 10 AM.

Directions to the Wayne Cave Preserve: From the intersection of SR 37 and SR 45 in Bloomington, take SR 45 west 1.4 miles to Airport Road. Turn west (right) on Airport Road and continue past the airport to Garrison Chapel Road (approximately 2.7 miles from SR 45). Turn south (left) on Garrison Chapel Road for about 1/4 mile to Gardner Road. Turn west (right) on Gardner Road for approximately 4/10 mile and look for a driveway on the left (marked 8363 on the fence). If the gate is open, proceed up the driveway to the parking area.

ACTIVITIES CALENDAR

June 3 – IKC Quarterly E-Board meeting (see above)

June 19-23 – NSS National Convention (Rio Rancho, NM)

Aug 4-6 – Cave Capers (Harrison County Fairgrounds)

Sept ?? – IKC Quarterly Board Meeting (date & location to be determined)

Dec ?? – IKC Quarterly Board Meeting (date & location to be determined)

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

The IKC Update, distributed for free, is published quarterly for members and other interested parties. The purpose of this newsletter is to keep the membership and caving community informed of IKC activities and other news related to cave/karst conservation. Submission of original or reprinted articles for publication is encouraged.

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RAMBLINGS FROM THE PRESIDENT...

First, I want to thank my wife Salisa for bailing me out of the hole I dug for myself, when I committed to working in caves in Virginia while at the same time giving a talk on the history of the IKC at the Indiana Cave Symposium. As much as I wanted to be at the symposium, I have to work for a living like everyone else, and I was thankful that she could pick up the slack for me. So, thanks Salisa, and I'll see the rest of you at the symposium in 2018.

The commitment that took me to Virginia was a project to evaluate the status of the Lee County Cave isopod (*Lirceus usdagalun*). It's a long story, but the short version is that during my work at the Smithsonian Institution last year, I discovered that there were only minor differences between the Lee County Cave isopod, a federal endangered species, and Harger's Spring isopod (*Lirceus harger*), a common species inhabiting springs in several states. After a visit with my son at Cornell University in New York, my journey to chase isopods started with sampling springs in central Pennsylvania. I

learned from some trout fishermen at a spring that the isopods were called "Pressed Bugs" (because they looked like they'd been pressed flat), and were common in trout streams. Next I collected specimens in the Appalachian karst valleys of Maryland and eastern West Virginia, then continued into Virginia to visit the caves inhabited by the endangered species. I finally finished up in Tennessee and Georgia. Over the course of two weeks, I drove over 2700 miles and had some interesting experiences along the way. I thought I'd share a few of them.

I'd been in the field working for a week when I pulled into Blacksburg, Virginia at the home of Wil and Zenah Orndorff. Both cavers, Wil is the karst protection coordinator for the Virginia Natural Heritage Program. I'd known Wil for years, but this was the first time I'd stayed at his home or gone caving with him. I guess I wasn't surprised to find they had separate washing machines for caving clothes and "normal" clothes. His wife has a ceramics studio in their home.

Two dogs and two cats – one of the cats tried to adopt me. It felt like home.

The stay at Wil and Zenah's home was just a waystation, as the next day Wil and I headed south to the Ward Cove karst area in Tazewell County, Virginia, driving both our vehicles through the mountain valleys in a driving rain storm. Fate was with us and the rain stopped when we pulled up to the owner's house at Hugh Young Cave. I'd been in another part of this cave system – Fallen Rock Cave – in October, 1976 with my major professor, Dr. John Holsinger. I was working on a Master's degree at Old Dominion University at the time

and the visit to the cave was included in a several day field trip that was part of John's very first cave biology class. We had driven from Norfolk to see the a variety of cave animals. One of my memories from that cave trip long ago... *could that really have been 41 years ago...* was seeing the very animal we'd come to see today... a cavernicolous *Lirceus* isopod. Back in 1976 it was an undescribed species, and now in 2017 we'd collected about twenty of the iso-



Pennsylvania Pressed bug (*Lirceus brachyurus*)

pods so that I would have the specimens I needed to finally rectify that situation. Part of the specimens will be going on a little trip to colleagues in France for DNA sequencing.

After Hugh Young Cave, Wil and I headed south again and pulled in to Natural Tunnel State Park to stash my car at the bunkhouse where we'd be staying. Natural Tunnel is a story in itself. I'd first visited the park in 1977 to see the "tunnel", which is actually an enormous cave passage that a railroad uses as a tunnel. Back in 1977 one could just hike down to the bottom of the gorge and walk through the cave/tunnel on the railroad tracks. Now that's not allowed... it is of course an active railroad and trains use the tracks. Something about liability...

Our focus that day wasn't train tunnels, but searching for the endangered Lee County Cave isopod. We first went to the Lee County Airport, just to have a quick look and take a few photos. A strange brand of endangered species management had been employed with the construction of

the airport, which had reportedly paved over much of the recharge area of the Simms Spring complex, inhabited by the Lee County Cave isopod. Placing an asphalt cover over the recharge area effectively extirpated the species in that drainage. Go figure.

Next we went to Flanary Bridge Spring, interesting because both the Lee County Cave and Harger's Spring isopods occur there together. I took some photos from above the spring, then put the camera safely on a stump and then slid down a slippery mud slope to collect isopods from the spring. We found both forms of the isopod on the same rock, encouraging my belief that they wouldn't have much stopping them from breeding with one another if so inclined. After our short stop at the spring, we headed over to Thompson Cedar Cave.

When we arrived at our next destination, called "the Cedars", I understood why we had dropped off my little rental car and taken the state's four-wheel drive vehicle. Wil opened a gate into a field and we drove first through tall weeds and brambles, then threaded our way through the dense cedars to an open spot where we parked. By that time the sun was getting low in the sky and we were hoping to make a quick trip into the cave before it got dark. We quickly changed into coveralls and got our stuff ready, including my camera... which I then realized I'd left sitting safely on the stump at Flanary Bridge Spring. I guess one is really not on a cave trip unless something like this happens. After I expressed a couple of expletives, we made a quick trip back to retrieve the camera, and then went back to the Cedars.

A situation that had developed at Thompson Cedar Cave was the reason the Lee County Cave isopod had been listed as an endangered species. To get to the cave requires walking along a hill of sawmill waste that is about twenty feet high, a souvenir of a small sawmill that had been operated next to the cave's sinkhole entrance. Quantities of sawdust and other waste had leached into the cave and killed all of the isopods.

As part of the subsequent mitigation process the sawmill has been re-located and large berms bulldozed to block most (but not all) of the mill waste from entering the cave. We walked over long piles of black mill waste, then reached the narrow entrance to the cave and entered. Inside, Wil showed me an in-feeder that was still bringing mill waste into the cave. And the isopods, which are supposed to be white in color, were all a yellowish brown, apparently discolored by chemicals in the mill waste.

That evening we stayed in an old farm house the state had purchased and converted into offices and a field station with some bunks. The next morning we arose and had a surprisingly good breakfast at the local gas station. One of my most interesting conversations with Wil, and the punchline for this ramble, occurred that morning on the way over to McDavids Cave in the Rye Cove karst area. I'd been avoiding talking about the elephant in the room – White Nose Syndrome – but I was becoming curious about how it was being treated in Virginia. According to the US-FWS mapping of the spread of the infamous bat disease, it had originally been found in New York during the 2006-07 hibernation season. WNS had spread across Virginia by 2008-09, and the disease was in all of the state's karst areas within another two years. Wil told me that the situation was relatively simple in Virginia at this point – the disease had spread through the caves so rapidly that it became apparent there wasn't much to be done about it, and that cave closures would be ineffective. He remarked that he had seen cavers doing careful disinfection of equipment, but that unless someone was travelling to an area where the disease had not yet spread, it

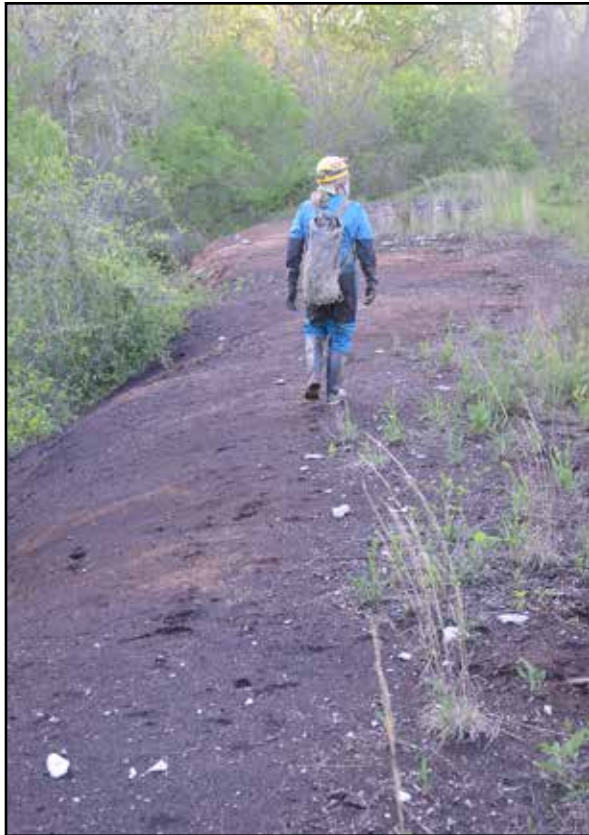


Jerry Lewis collecting isopods in the trunk stream passage in McDavids Cave.



was a fruitless task. I remarked that I'd cleaned up my equipment before coming to Virginia, but guessed it was a little pointless to try to prevent taking WNS from Indiana back to where it had probably come from in the first place.

That morning in the Rye Cove karst area was beautiful and sunny, a perfect spring day. We walked out to the large bowl-shaped sink encompassing the entrance to McDavids Cave through a mass of blooming wildflowers carpeting the pasture. In the distance were the mountains that formed the cove. We wormed our way into the body-sized hole and crawled down to the top of the twenty-three foot crevice that leads to the rest of the cave. Wil is big into cave rescue in the Blacksburg area and rigged a rope with an additional feature commonly used for rescues, a



Wil Ordorff walking across a sawmill waste pile at Thompson Cedar Cave.

mini-pulley that allows one person to pull an injured caver up a pit. We did the drop and I found myself on a mudbank next to the trunk stream that drains Rye Cove. Finding the endemic Rye Cove cave isopod, *Lirceus culveri*, was like fishing in a bucket – there were a couple on every rock right there at the base of the pit. It took only a few minutes for us to collect the twenty specimens that I needed, and then we started out. Wil went up first and when I got to the lip, he demonstrated the pulley system – it was pretty simple for Wil to winch me up the pit, and he said if there were two people they could bring an injured caver up a drop in short order. I tucked that away for future reference and added taking a rescue course to my list of things to do.

We finished up our Virginia cave work that day and I headed down to stay with former Indiana caver Ronnie Burns, who had moved to a little town outside of Kingsport, Tennessee when he retired two years ago. In another lesson about how small the world sometimes seems, Liz told me that her grandparents had owned the property that became Natural Tunnel State Park, and she used to play in the tunnel as a kid. No one worried about being caught in the tunnel with a train back then, you just had sense enough to get out of the way. The old house that the state had purchased to use as a bunkhouse... she'd played there as well, and in the creek out in front of the house, owned by friends of the family. And she'd graduated from Rye Cove High School, the same cove I'd been crawling under the previous day.

It's always interesting to travel outside Indiana and see how other folks are handling things... some of the same issues, like endangered species or WNS... sometimes the same solutions, sometimes different. I'd hope we aren't going to emulate paving our endangered species habitats, but perhaps Indiana might have a few things to learn about the approach to WNS from Virginia.

Jerry Lewis

NEWS BRIEFS...

- At the IKC annual business meeting on March 18th, Jerry Lewis, Sue Vernier, and Keith Dunlap were re-elected as President, Secretary, and Treasurer, respectively. Bruce Bowman, Bob Sergesketter, and Richard Vernier were re-elected Directors, while Matt Selig became new a Director. The full list of the Executive Board can be found on page 2. Our immense thanks to retiring Director Bob Vandeventer who served on the Board for the past 19 years.

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2017 INDIANA CAVE SYMPOSIUM RECAP

by Keith Dunlap

The Handy Meeting Barn in Bloomington was the new venue for the 25th annual Indiana Cave Symposium, which was held this year on April 29th. Indiana cavers were out and about earlier in the day caving and enjoying the warm (but very rainy) spring weather. The Symposium was once again co-hosted by the Indiana Karst Conservancy and Indiana Cave Survey, with each organization sharing the facilities rental and food expenses, which included burgers, brats, pork chops and rib, buns, condiments, and soft drinks. Approximately fifty attendees helped out by bringing side dishes, desserts, chips, and the like to complete the cookout for the first part of the event. The program part of the Symposium began promptly at 6:30 PM. The following summarizes the presentations:

- Chris Bell – Gave a very interesting presentation on his efforts to re-discover and document “lost” caves discovered and mapped by the ISS in Harrison/Crawford counties in the 1970s. He also shared some great slides with three other significant cave discoveries he and his group explored in 2016 in Harrison County.
- Salisa Lewis – Presented a visual history of the Indiana Karst Conservancy, concentrating on the past 30+ years. The interesting twist was that much of this history was before Salisa was involved with the IKC, so she read every one of the *IKC Updates* to stitch together this trip through time.
- Bruce Trotter – A little know facet of the Indiana Cave Survey is its paper file Archives. Created in the early 1990s, its purpose was a physical backup to the paper files managed by the various County Directors, as well as the subsequent electronic files and information contained in the ICS’s web-based database. What started out as a single file cabinet has expanded into several, along with storage for large format maps. While most of the Archive contents is duplicate, there are occasional unique gems mined from these files.
- Laura Demarest – With the entrapment of seven in Binkley Cave last December, Laura put together a “hands-on” presentation of “lessons learned” to enlighten others on what to pack and how to prepare for such an unlikelihood.
- Rand Heazlitt – The big discoveries just keep on happening in Binkley Cave, that passed 44 miles in the last year. Much of the activities concentrated in nearby Dewey Eckart Cave, which was subsequently connected into Binkley, annexing that mile-plus long cave into the main system.
- Dave Black – A completely visual history of the past ten Indiana Cave Symposia.
- Dave Everton – The final presentation highlighted the statistics of the past 24 symposia including the most prolific presenters, locations, and everything else related to this annual event originally conceived by Dave Black.

A hearty thanks to everyone who made this year’s Indiana Cave Symposium a success, from the symposium organizers, to the presenters, the sponsors, the burger grillers, and all the attendees! Interested in presenting next year? Just let it be known!



photo courtesy Bill Greenwald

A LOOK BACK AT INDIANA KARST

by John M Benton

Prehistoric Artifacts Made From Aragonite Sourced From Wyandotte Cave Indiana

Ever wonder if anyone was caving in Indiana around 4000 years ago? The answer is *yes!* Archaeologists have shown that Wyandotte Cave in Crawford County was explored as early as 2000 B.C. Prehistoric explorers and miners ventured into the cave at least 3000 feet from the entrance with hickory strip torches as their light source. It is believed they sought minerals and rocks in the cave to be used for medicinal and ceremonial purposes. Late Archaic peoples left torch fragments that have been carbon dated. During the Middle-Woodland period (200 B.C. to 500 A.D.), Wyandotte Cave was the scene of repeated heavy mining and explorations, according to Munson and Munson, an Indiana University husband and wife team of researchers, during a study conducted in 1990.

Flint was mined for arrowheads, spears, and other stone tools, along with gypsum and epsom crystals (medicinal use?) and aragonite, which was mined and evidently heavily valued as the source of specialized ceremonial artifacts. Aragonite is a semi-translucent, banded flowstone made up of calcium carbonate that can be the rock that forms stalactites and stalagmites in caves. Aragonite was quarried from the Pillar of Constitution, the massive stalagmite in the room called the Senate Chamber inside Wyandotte Cave. Much of the aragonite was destined to be carved into pipes, ceremonial gorgets, and figures that have been found as far away as Ohio, Illinois, Iowa, and Tennessee, as well as ceremonial sites in Indiana, such as Arrowhead Arch (where a carved aragonite pipe was found and dated to 155 A.D.) in the Hoosier National Forest and Crib Mounds, along the Ohio River in Spencer County Indiana. The eight-inch tall "Snowy Owl Man" figure was carved from Wyandotte aragonite and

came from the Kincaid Mound site in southern Illinois, across the Ohio River from Paducah Kentucky. It is thought the aragonite material was highly prized and traded to distant locations along trading routes (such as the Ohio River).

Art Gerber, a well-known relic collector from Tell City Indiana, has a few pieces of aragonite artifacts in his collection. The mineral make up of the "Snowy Owl Man" was first identified by Dr. Arnold Neumann, a forensic anthropologist from Indiana University. At the time, Dr. Neumann said that "Snowy" was the first whole, unbroken artifact

that he had seen made from aragonite. Studies by Pat and Cheryl Munson, along with Kenneth Tankersley and others, have extensively studied the chemical make-up of the mineralogy of the Wyandotte aragonite. Some characteristics of Wyandotte aragonite are distinctive and can serve therefore as "fingerprints". When these are found in artifacts, they are evidence that the source of the raw material was Wyandotte Cave. Wyandotte aragonite, under a microscope, has a specific needle-like arrangements of crystals

and two directions of cleavage that are distinct. Therefore, it can be compared to aragonite from other sources to determine its origin.

The largest aragonite formation in Wyandotte Cave is the Pillar of Constitution. Some of the stalagmites on top of Monument Mountain are also composed of aragonite. There is a large cavity, over six feet high, in the north face of the Pillar, that shows obvious signs of mining and numerous fragments of aragonite that litter the floor and cavity. Collett (1879) observed battered cobbles near the cavity that he identified as prehistoric hammers used for quarrying. Hovey (1880) and Mercer (1895) made additional observations on quarrying activities at the Pillar and Monument Mountain. In 1896, Blatchley conducted extensive excavations in the spoil pile near the Pillar and found hammer stones, antler tines, charcoal,



Continued on page 21...

TICKS: YOU'RE WHAT'S FOR DINNER

by Jerry Lewis

Recently Charlie Veters contacted me about camping at the IKC's Shawnee Karst Preserve (SKP) and I shared some cautions about the local tick population. Upon reflecting on it, I thought I'd share with everyone.

My first encounter with ticks in the area was about twenty years ago, when I'd taken my twin sons to camp in Cave River Valley for a weekend. Upon returning home from a fun time caving in Endless and some of the other CRV caves, I found that I'd picked up an unintended eight-legged guest, and about a week later, Rocky Mountain Spotted Fever. Named for the occurrence of a rash in some victims, the disease is spread by *Dermacentor* ticks, commonly known as Dog ticks. The disease is caused by the bacterium *Rickettsia rickettsia*, and is considered to be the most lethal, as well as, the most commonly reported of the rickettsial diseases. The antibiotic doxycycline is the treatment of choice. One of the few things I remember about that episode was that in my lab tests, my cholesterol count fell into the forties. Usually that only happens when one dies.

My next tick adventure was about four years ago when I contracted Ehrlichiosis, a term for a group of related tick-borne diseases caused by bites of the Lone Star tick (*Amblyomma americanum*). Since my wife Salisa and I do everything together, we both came down with Ehrlichiosis, picked up from tick bites from a work day at SKP. This was the only time in a twenty-eight year span that my doctor ever called me at home – he wanted both of us in his office before it opened the next day. The treatment for Ehrlichiosis is also doxycycline.

The following year, Salisa contracted Rocky Mountain Spotted Fever from a tick bite received while spraying our tree plantings at SKP.

Not to be outdone, this spring I was working with graduate student Gavin Bradley in the entrance area of Upper Twin Cave at SKP. Another tick bite that swelled to an ugly, six inch diameter bullseye-shaped reaction, typical of Lyme disease. I'm currently finishing a thirty-day course of doxycycline. Fortunately I started on the antibiotics before I became symptomatic and thus avoided the brunt of the illness.

All of these diseases are quite serious, sometimes fatal, and should not be underestimated. If you are bitten by a tick and a reaction occurs, or you feel ill, you should immediately seek treatment without delay. Take it from ones who have

spent months being ill, you don't want to screw around with this stuff.

[Editor's note: A recommended precaution to discourage ticks is to pre-treat all your clothing with permethrin. I have had good luck with this product. You can buy 0.5% permethrin in some sporting-goods stores or on-line in aerosol or pump spray for around \$10 for 6-10 ounces that will treat several shirts and pants. Or you can go to a farm store like Rural King and buy a 32-oz bottle of 10% permethrin in the livestock department for less than \$20 and mix it with water at a 1:20 ratio and have enough for years.

This latter suggestion is likely **not** an approved label usage of the product. Also note, permethrin is highly toxic to cats, so keep treated clothing away from your feline friends.]

American
Dog Tick



Mike Quinn © 2011

Lone Star Tick



John R Maxwell © 2009

ANNUAL CAVE PATRON / PROPERTY MANAGER REPORTS

Each year at the Annual Business Meeting, the Cave Patrons and Property Managers are asked to present a verbal summary and submit a written report describing the prior year's activities and incidents, and to make any future recommendations needing implementing. The following is a compilation of the reports for calendar year 2016:

Buddha Cave Patron Report (Jeff Cody)

Buddha Cave had a total of six trips in 2016. Four trips were arranged through Dave Everton and the other two trips were arranged through me. A total of 42 people filled out waivers for these trips. This trip total is similar to what we have had the last couple years. There were a few trips that did not go for various reasons. On New Years Day, a road was reported to be flooded. We also had a trip scheduled for August that did not go due to rain. I was contacted a couple times throughout the year, but the trip leaders were not aware of the need for a ladder to access the cave. One trip of note was on July 15 where we had a group from Korea that visited the cave. Also of note was during October and November, the water level was low enough to allow a few connection trips. This was surprising to me as we had sufficient rainfall here in Indianapolis during that same time frame. We did have a CIG trip in November that was able to go to the other entrance. No reports of any incidents were reported to me in 2016 and also no more reports of graffiti at the entrance. The cave is in good shape and at this time I have no concerns other than possible issues with ladder placement on ground that may not be level. I have heard of some using a twelve foot ladder and it seems to me that if a shorter ladder is used, the ladder placement may not be as safe. On my trips since the collapse, I've noticed if a longer 24-foot ladder is used, that allows for what looks to me to be a safer ladder placement.

Buddha Property Report (George Cesnik)

Activities included:

- May 3, 2016 – Keith Dunlap performed the following activities:
 - Mowed the parking area and trails;
 - Trimmed trees to eliminate twin trunks;
 - Noted that six of the seven Chestnut trees appeared alive and several are extending out

of the protective tubes;

- The other trees are looking great;
- Noted one Autumn Olive that will need attention;
- Planned to do some weed control later in the spring;
- Noted a 18" diameter tree just south of the footbridge that is down and a small sycamore that has been sucked into the active sinkhole in the SE corner that could be cut up to allow easier mowing access;
- Also a tree in the SW corner that fell onto the fence.
- July 30, 2016 – Keith Dunlap performed the following activities:
 - Mowed the parking area and trails.
- November 20, 2016 – Keith Dunlap performed the following activities:
 - Mowed the parking area and trails.

Sullivan Cave Patron Report (Paul Uglum)

This report covers the activity and visitation for the 2016. Sullivan Cave remains a popular and frequently visited cave. Groups vary from experienced cavers traveling upstream to the Rise, to various youth groups with limited or no wild cave experience. Group sizes range widely with the average of about eight participants per trip, which is a slight increase over the average of seven per trip in the previous two years. More experienced groups tended to be smaller, and youth groups larger.

For 2016, I have full year data for the Grotto Liaisons and the IKC. We had 82 trips (an increase of 7.5% over last year) with 668 participants (an increase of 26% over last year). Four of the trips included camping on the site. There were an additional nine trips that were scheduled, but did not take place either due to weather, or because Sullivan request was a back up. There was also a change from the BIG having the most trips, to more trips being scheduled through the Cave Patron. Most trips were requested via e-mail and keys mailed to the trip leader and returned by mail.

I lead three trips to Sullivan Cave including a CIG beginner's trip again this year. In general the cave is in good condition considering the level of visitation. It would be good to set up some efforts to remove



graffiti in the Backbreaker and remove any trash that has accumulated in the Mountain Room.

The locks were changed from the “SE” series to the “SF” series on August 27 so we have a fresh start on keys. There was one group the failed to return a key (“SE” series), nor respond to efforts to contact them, and there was another leader that failed to return the key for two months and required many e-mails and phone calls (“SF” series). Neither will be sent keys in the future. In general, group leaders have been responsible. One leader unfortunately did not manage the gate well, resulting in the destruction of one of the “SF” series locks. One additional “SF” lock has been replaced because it was difficult to open.

There are several opportunities for improvements: The road could use improvement as there is a drop off from the highway to the gravel road. It still is passable, but continues to get worse. [*editor's note: problem has been resolved*] The cave gate needs repair (replacement of the safety latch) so that it can be secured open during entry and departure. We are currently warning every leader about the gate lock and have instructions that include having a team member hold the gate open. The damaged lock demonstrates that not all of them take enough care to secure the gate in a safe condition. It would be good to have a cave cleanup/restoration project.

Sullivan Property Report (Keith Dunlap)

This was the IKC's 18th full year of ownership and we continue our long-term stewardship projects, but otherwise we are in “maintenance mode”.

The “camping” area and the area out by the highway were mowed three times last year. The lane and parking areas are in good shape and no major maintenance is anticipated for 2017. The exception is a drop-off where the driveway meets the highway.

Several members took advantage of the camping area and firewood over the past year, but overall use seemed down compared to a few years back. We are discouraging campers from bringing their own firewood to reduce Emerald Ash Borer transportation, although EAB is now pretty widespread in Lawrence County. I requested for our porta-john to be serviced last fall, but the service provider is slow to react. I need to follow up.

Locks are being serviced by Paul Uglum, the new Cave Patron. There were no major management problems or concerns encountered during 2016.

2017 activities I hope to accomplish:

- Add some new crushed rock placed where the driveway intersects the highway as there is a 3” plus drop at the shoulder of the blacktop (I keep hoping InDOT will add a new apron onto the driveway).
- Systematically walk the woods to remove grapevines, per the suggestion of the DNR District Forester.
- Spray the camping area in August to control the Stiltgrass infestation.
- Repair the cave gate (re-install latch and repaint gate).
- Put a new roof on the “wood shed”.

On the adjacent property to the east, some additional cleanup around the home site is needed and some earth grading is planned to restore the area. Overflow parking is available there and I have been keeping an area mowed for alternative parking and camping.

Wayne Cave Patron Report (Dave Everton)

Sixteen trips were requested and approved through me in 2016, and as far as I know, they all took place. Those trips totaled 69 cavers, which coincidentally is identical to the final number for 2015. However, in addition to the trips which went through me, there were three other grottos with trips: the EMG (Evansville Metropolitan Grotto) had one, the NNG (Near Normal Grotto) had one, and the CIG (Central Indiana Grotto) took two. Sixteen cavers went on those trips, so the total number of visitors was 85 cavers. Nobody informed me of any issues, although this year I stressed that what happens in the cave doesn't need to stay in the cave. For what it is worth, it just so happens that the Patron was also among the visitors last year, taking a trip on the day after 2016 began with some Chicago cavers.

Wayne Cave continues to be a source of enjoyment and pleasure for the average visitor. Thanks goes to the IKC for their many years of past protection and restoration, as well as regular continued protection and access.

Wayne Property Report (Robert Sollman)

For the 2016-2017 season, several trips to Wayne included overnights in the clearing on the hilltop with no problems. The combination lock system for ease of access to the property is still working well.



Property Maintenance included:

- The combination lock is still functioning and has been oiled several times.
- Trash was removed from the clearing and along driveway.
- Routine weed-eating and mowing of the parking lot and adjacent camping sites.
- The trail to the cave was cleared of debris and mowed.
- There were no major problems or concerns encountered during 2016-2017 season.

Future Projects include:

- Continued construction of informational boards for kiosk.
- Routine maintenance of property.

Robinson Ladder Property (John Benton)

On January 30, 2016, the bat census was conducted in Robinson Ladder Cave (RLC) by Keith Dunlap, Tom Sollman (both with IKC), Tim Shier and Cassie Hudson (both IDNR Biologists). The group noted 9 bats total, 6 of which were thought to be Indiana bats. This is an increase over the 2014 census, when only one Big Brown bat was observed.

On March 19, Keith Dunlap and Glenn Kotnik (with TACF – The American Chestnut Foundation, IN Chapter) spent about 2½ hours prepping the upper field area for the planned upcoming April 16th tree planting of new hybrid chestnut seedlings and other trees. An area roughly 150 feet wide by 200 feet long was mowed, and flags were placed at approximately 10 foot intervals (refer to 2015 report for full background info on chestnut planting project).

On April 16, around 25 combined volunteers from the IKC, TACF, CCIU (Caving Club of Indiana University) planted trees, 51 chestnuts, 51 red oaks, 52 black walnuts. An anti-deer, 8-foot high fence was installed around the perimeter of the newly planted trees to prohibit browsing of the seedlings by deer. A quick check in March 2017, showed the fence was in good shape and does not appear to have been breached. A bat box donated by CCIU was installed on the east end of the shed in the upper field. Placement here would provide the warmest habitat for newborn bats. All of the funding for seedlings and fencing was donated or in grants. All labor was

volunteer. The TACF had the project designated as an Indiana Bicentennial Legacy Project.

On April 30, IKC volunteers planted the remaining 57 butternut trees that were not available a couple of weeks prior.

On Friday June 17, Keith Dunlap, John Benton, Fig Newton unloaded a donated picnic table from Jeff Strauch. It was placed in the shed for use by members or guests. Keith had hauled the table to the property. Keith sprayed Round-up around the newly planted trees, and John applied 13-13-13 fertilizer to the trees in the upper field to promote growth. A 33 pound bag of fertilizer was just short of enough to do all trees. Keith also sprayed Round-up around the fence perimeter to inhibit weed growth (using three backpack tankfuls of Round-up) and also did some autumn olive spraying along the north edge of lower field. It looked like about 80% survival rate at that point on trees; red oaks and walnut looked the best. Keith noted the six chestnuts in white tubes, previously planted in the lower field in 2013, are alive but not as hardy as trees at Shawnee or Buddha Preserves.

On July 2, Keith Dunlap did mowing relating to the chestnut tree planting; he mowed two passes each around the inside and outside of the fence. He also made one pass on either side of the tree rows. He made an extra pass in the back because of invading blackberry briars and some volunteer ‘crappy’ trees. Recent rains have promoted growth of the trees and also unwanted vegetation, perhaps too much water for some of the seedlings.

On July 14, the company contracted to spray the powerline right-of-way on the south edge of RLCP contacted us, that they would be spraying by helicopter. Nothing detrimental was later noted due to this.

In September, at Carla’s reminder, Jamie Winner mowed the upper field in sections on different days after running out of fuel the first day. The drive lane, parking and camping areas, and around the shed/barn was also mowed by Jamie, donating his labor, fuel, and equipment. John noted most of the tree seedlings still had a faint brown ring on the ground where Keith had sprayed earlier, but the mowed strips are getting overgrown.

On September 26, Keith Dunlap and Bambi Dunlap conducted a survival survey of the tree seedlings planting in April; overall, out of the 211 trees planted, 147 survived, averaging about 70%. The chestnut survival was 61%, butternut 53%, black walnut 71% and red oak 96%. Plans are to re-plant the 64 ‘holes’ in April 2017 with one or more



species, probably white oak or chinkapin oak, two species we have had good luck with in the past and will not out-compete the other trees. There likely could be more trees not survive the winter.

On September 27, Keith and Bambi Dunlap spent over three hours mowing (with Keith's walk-behind mower) the field of tree seedlings inside the fenced area. He reports some impressive briars and growth. He had not planned on mowing again this fall, but was afraid we could not find the new trees next spring and for ease of back-planting.

In October 2016, I got a call from Mike Fischer, who owns land behind the RLC tract and uses the access road off Daughtery Lane to get to his property. He indicated there were two or three trees along the access road that hampered driving his camper in and out and would like to cut them down. Upon further investigation, it was determined the trees in question were not on the IKC property, but rather north of our property line on a tract that had recently been sold, so no action was needed on our part.

Future work? Back-planting of the dead trees inside the fenced area planned for April 22, 2017 with help of TACF folks; Keith has been in touch with Glenn Kotnik on this. Mowing strips between trees and inside and outside fence boundary, treatment with Round-up around trees and fertilizer as needed. Continue to minimize grape vine growth; treat for autumn olive and tree of heaven where seen, and continue to monitor/develop plans for upper and lower fields, bush-hogging, all or in strips, or let vegetation succession with little intervention happen. Carla Striegel-Winner continues to monitor and collect information on this.

Thanks for all the donated time and materials of the members on RLCP, especially Keith Dunlap and Jamie Winner!

RL Cave Patron Report (John Benton)

On January 30, 2016, two IKC members and two IDNR biologists enter the cave for the bat census (see above). There were no other caving requests for 2016 that I am aware of. Robinson Ladder Cave itself continues to get light visitation..

Shawnee Karst Preserve Report (Jerry Lewis)

By 2016, the first phase of work on the Shawnee Karst Preserve had been completed – roads, trails, and campsites have all been established – and during 2016, maintenance was all that was required. The nature trail, consisting of about a

mile and a half of trails that roughly follow the perimeter of the property, was mowed on two occasions. On two other occasions the trails were walked and fallen trees were removed with the aid of a chainsaw.

A bat house donated by the CCIU was put up on a tree located off the parking area loop at the end of the preserve access road. The preserve's gravel road remains in generally good condition, although some rutting occurred during the year near the base of the hill. Inspection of the area of native grasses revealed that the grassland remains in generally good shape, although some saplings are starting to encroach. Planning for an information kiosk started and the L-shaped kiosk used by the national wildlife refuge system was favored.

The cave entrance, previously closed and then re-opened after mechanical excavation, was monitored periodically. The walls of the sinkhole appear to be relatively stable now with no significant new collapse, and the cave entrance is actually slowly enlarging as run-off water erodes through the soil and gravel peripheral to the hole.

Although technically not a project of the Property Manager, the stream datalogger placed in the main stream at the base of the entrance breakdown two years ago was retrieved, the data downloaded, and then the logger was re-installed in the stream.

Plans for 2017:

- Continue routine maintenance of trails and camping area
- Continue monitoring of cave entrance sinkhole
- Consider re-grading the preserve road and add new crushed stone as necessary
- Finalize plans for information kiosk
- Consider a work day to remove saplings from the grassland

Upper Twin Patron Report (Dave Everton)

There were six trips taken during 2016, with a grand total of 34 visitors (some duplicates) who partook of the pleasure. This number does not include any trips taken by the Property Manager, who has a history of taking trips without following standard IKC protocol. Thankfully, I'm not responsible for his actions! Perhaps Presidency has some perks.

The 2015 debacle with the entrance getting covered has apparently settled down, although there was a work trip taken in May to reduce the



size of a particularly large boulder in the entrance, which continued to settle as a result of the earlier covering by mud, rock, and debris. The nice green carpet in the sinkhole was still doing well in November, when the Patron took a trip with two other well-known IKC figureheads, who were so gung-ho about caving in there, they went back through the cave after going in the IKC entrance and exiting at the boat dock, while Raymond Moul and I elected to change clothes and head over to the Donaldson entrance.

The only trips this past year were taken during the time the DNR allows us to use the boat dock entrance and section of cave, which I believe has increased the desirability and popularity of using the IKC entrance to the cave. Thanks goes to the IKC for cave and property protection, as well as continued cave access.

Suicide Cave Patron Report (Kevin Smith)

Since the cave gate and lock hasp was reconditioned in 2015, there have not been any reports of difficulty opening/closing the cave gate. A couple of groups this summer reported some difficulty engaging the lock. The lock was inspected and replaced on September 22nd. The lock was found to be thoroughly coated with mud and the mud had gotten inside the lock making it difficult to engage.

This year saw a nice increase in the number of visits to the cave. Seven trips totaling 68 cavers visited the cave in 2016. The groups represented the Central Indiana Grotto (CIG), the Caving Club at Indiana University (CCIU) as well as the Windy City Grotto. Other than the lock issues, there were no reports of any issues or concerns from the groups visiting the cave.

The IKC wishes to thank Charlie and Will Biel, stewards of the Arrow Hill Ranch Forestry & Wildlife Sanctuary, for allowing the IKC to manage visitation and the conservation of this great natural resource.

Orangeville Rise Report (Steve Lockwood)

The property continues to attract trash due to the large road frontage and seasonal flooding, but it is remaining relatively clean between trash pickups. Trash was collected from the property in February 2016, and October 2016. Every cleaning of the property yielded a large garbage bag full of trash or more. The trash collected included glass bottles, plastic bottles, plastic jugs, styrofoam cups, plastic bags, aluminum cans, and etc.

The fence built in 2003 on the western side of the property remains straight and structurally sound and has not collected any flood debris recently. The high strength wire in the fence will eventually need to be stretched again because it is slowly losing tension. A few trees are starting to grow up in the fence also. The concrete property markers installed in 2004 are still intact on the southeast corner and northwest corner of the property. The property marker on the east side of the property near the bridge over the creek that enters the channel to the rise still has not been located after being washed away in 2011. The erosion on the west bank of the Orangeville Rise streambed at the intersection of the Lost River streambed has decreased and stabilized in the direction of the fence posts along the west property line.

Most of the trash in a small ravine located on the west side of the property has been removed such as old bicycles, fencing, boards, posts, a lawn mower and other items. An old basketball goal post and some tile still remain to be removed from the small ravine. Also a small section of fence at the end of the ravine where it meets the edge of the Orangeville Rise stream bed still needs to be removed.

Activities planned for 2017 include biannual trash pickups, and cleaning the post, tile, and fence from the small ravine located on the west side of the property.

Shiloh Patron Report (James Adams)

The Indiana Karst Conservancy has continued, with the permission of the landowner, to permit up to six recreational trips into Shiloh Cave for the general caving community per calendar year. Each trip is limited to ten participants with three vehicles on the property. During 2016, all six trips were taken into the cave before the end of June. At least three requests for visitation were denied because the agreed upon quota had been reached. Other potential trip leaders may have refrained from requesting visitation as this news circulated in the caving community. The six trips in 2016 allowed 57 cavers to visit Shiloh Cave.

Regarding waivers, I always ask that the trip leader drop their waivers into the mail to me before they enter the cave. One group scanned their waivers and sent a PDF-format file via e-mail and then later sent the originals through the US Mail.

Indian Creek CE Report (Jamie Winner)

Properties covered by the conservation easement were inspected by Jamie Winner, Keith



Dunlap, and Jerry Lewis on July 1, 2016. Inspection reports were mailed to applicable landowners mid-July. One survey marker PVC cover was missing. A spare had been carried in just in case one was missing, so it was replaced during the inspection visit.

Two issues were noted during the inspection. There was some ATV traffic creating new trail off the north side of the access road in the easement

area of Lot #11. This violation was noted on the inspection report mailed to the owner. Second, the invasive species Johnson grass was noted growing within the easement area of Lot #10. The IKC extended an offer to control this for the owner, and permission to access the easement with equipment was requested. This was requested in writing as part of the mailed inspection report, but a response was not received.

...continued from page 6

- ❑ Also announced at the March 18th meeting was the retirement of George Cesnik, who has served as the Property Manager of the Buddha Karst Preserve (Lawrence County) for the past 15 years. George was there from day one after the acquisition of the property and was instrumental in the planting of over 12,000 trees on the property, as well as subsequent rounds of herbicide treatment. He also led the effort to controlling the extensive multiflora rose on the property as well as other invasives such as autumn olive and Johnson grass. For the last few years, the required maintenance activities have decreased to mostly parking lot and trail mowing, so George felt it was a good time to let someone else take over. If anyone would like to “officially” watch over this property as Property Manager and perform occasional stewardship activities, or know more about the expected responsibilities, please contact Jerry Lewis before the June 3rd meeting.
- ❑ On April 22nd, in honor of Earth Day, volunteers from the IKC and The American Chestnut Foundation planted approximately eighty trees to back-fill the non-surviving trees planted last year. The trees were hybrid American chestnuts, butternut, black walnut, and red oaks. Subsequently, all of the trees were treated with herbicide to reduce competition from weeds and to allow the trees to be better located when mowed around later in the summer. The hybrid chestnuts are thought to be mostly resistant to the chestnut blight that wiped-out the pure American chestnuts.
- ❑ Last January, the Indiana DNR conducted their biennial Indiana bat (*Myotis sodalis*) count in the ten largest hibernacula. The preliminary results, as expected, showed an overall decline of ~5000 bats or 3% (not as large as feared). The largest population decline was in Coon Cave, down over 5000 bats (21%). Other caves with decreasing populations were Wyandotte, Twin Domes, Walliers, Clyfty, Grotto, and Batwing caves. To offset those declines, Jughole was up over 5000 bats (8%). Also up slightly were Rays and Endless caves. Jughole is now largest hibernacula in Indiana, by a significant margin. Once the numbers are finalized and reported, full details and analyses of the numbers will be included in a future issue of the *IKC Update*.
- ❑ The IKC is collaborating with the USFWS Kentucky Ecological Service Field Station and Kentucky State Parks to potentially install a biota-friendly gate on Sauerkraut Cave in Louisville, KY to protect the rare Louisville cave beetle (*Pseudanophthalmus troglodytes*). The cave is one of only a few known sites for this species. If all parties agree, the gate will likely be installed this summer by IKC volunteers with excess proceeds for our efforts used to help fund our conservation and acquisition activities. As part of the agreement, a written access policy will be included.
- ❑ Several IKC members collect aluminum cans and occasionally get them to Keith Dunlap, who in turn, takes them to the recycling center approximately once a year with the proceeds going to the IKC. Our last “can run” (along with some scrap ferrous metal) brought in almost \$70.
- ❑ The IKC has gained four new members in the last quarter. Welcome Darrell Lahm, Wes Terrell, Joseph Powers, and Ana Schershel. The IKC membership currently stands at 197.

CAVE RIVER VALLEY POEM

by Tom Sollman

I was recently at Cave River Valley with its River Cave and Endless Cave and was struck by the silence, the sense of history, the ghostly feeling of abandonment.

In an old book with its dry leather binding cracked and loose, I found a remarkable poem that describes one person's same feelings there over a hundred years ago. At the time the poem was written, it was known as Clifty Valley with Wet Clifty (River) and Dry Clifty (Endless) caves. The mill with its village that once thrived, had long vanished.

Since the time of this poem, the valley had a remarkable cycle of rejuvenation, rebirth of activity, and subsequent abandonment. Will the valley wake again and go through another cycle under the current state ownership? Someone should write a 2015 verse.

From the *Centennial History of Washington County Indiana, It's People, Industries, and Institutions*, by Warder Stevens, published 1915, page 409.

The Old Grist-Mill by W.W. Stevens

1815
At Clifty creek, beneath the hill,
Stands stanch and firm the new grist-mill;
The mosses on the hillsides grow
Where trees their cooling shadows throw;
About the cave the elders sweep
Where rush forth waters clear and deep.
Adown the stream the wild ferns grow
With lilies sweet and white as snow –
While grinds the mill with rumbling sound,
Which water wheel turns round and round.

Adown the stream the muskrat dives,
Or basks in sun from summer skies;
The robin chirps his song of cheer,
While nesting sits the red-bird near;
The children down the glen play,
Where the slumb'rous shadows softly lay;
There's a buzz of bee and croak of frog,
And pheasants thumping on the log, –
While grinds the mill with rumbling sound
Which water wheel turns round and round.

The Bob White's calling, far away,

The squirrels in the nut tree play;
Far down the vale rings, sharp and clear,
The hunter's gun that kills a deer;
Adown the hill the farmers ride,
To hold the grist they sit astride,
And faint from far o'er hill and dale
Is heard the thud of threshers, flail –
While grinds the mill with rumbling sound
Which water wheel turns round and round.

1915

A century has passed away
Since mill was running night and day;
The timbers rot in rain and sun,
The wheels have crumbled, every one.
The waters ripple down the hill,
But now the millstones are still;
The owl still hoots the whole night long,
While whip-poor-will sings sweet song;
Those farmers sleep where wild flowers grow,
Who came to mill long, long ago –
Where ground the mill with rumbling sound
Which water wheel turned round and round.



River Cave (CRV) - Adam Haydock

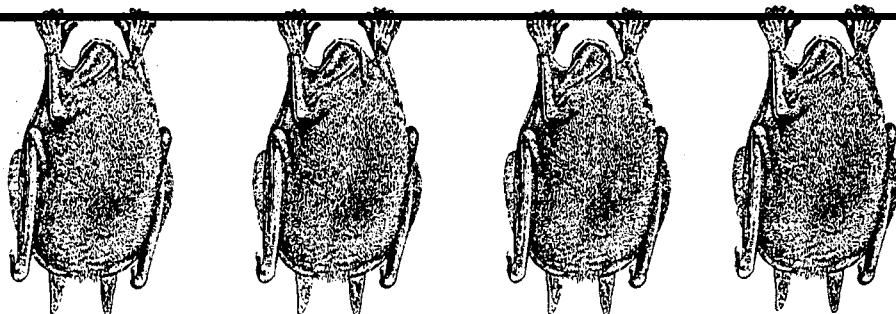
INDIANA KARST CONSERVANCY TREASURY REPORT

**Income/Expense Statement
From January 1, 2017 to March 31, 2017**

INCOME:			
Dues Apportionment and Residuals	763.75		
Donations - General	3,616.62		
Donations - Land Acquisition Fund	1,265.00		
Interest	<u>290.45</u>		
			\$5,935.82
EXPENSES:			
IKC Update (printing, production, mailing)	299.62		
Education / Outreach	0.00		
Stewardship/Conservation	0.00		
Business (SoS fees, meeting, donation fees, etc)	163.92		
Transfers to/from restricted funds/other adjustments	<u>1,476.35</u>		
			(\$1,939.89)
NET OPERATING EXCESS (DEFICIT) THIS PERIOD:			<u><u>\$3,995.93</u></u>

**Balance Sheet
March 31, 2017**

ASSETS:			
Cash in Checking / Saving Accounts / CDs	163,512.89		
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)	<u>13.16</u>		
			<u><u>\$623,526.05</u></u>
FUNDS & OPERATING EXCESS:			
Land Acquisition Restricted Fund	40,352.95		
Deferred Dues Restricted Fund (197 members)	4,650.00		
Stewardship Endowment Restricted Fund	56,949.95		
Previous General Fund (total)	57,577.22		
Net Excess (Deficit) This Period	<u>3,995.93</u>		
Current General Fund (unrestricted)		61,573.15	
Current General Fund (committed)	600.00		
Real estate liquidity (basis value)		<u>460,000.00</u>	
Total Liabilities & Operating Excess			<u><u>\$623,526.05</u></u>



IKC QUARTERLY BOARD MEETING MINUTES

Saturday, December 10, 2016, 2:00 PM EST – Ellettsville, Indiana

Board Members Present:

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

Board Members Absent:

none

The meeting was called to order by President Jerry Lewis at 10:30 AM EDT at the Ellettsville Branch, Monroe County Public Library, Ellettsville, Indiana. Jerry asked everyone to introduce themselves.

E-Mail Motions Since Last Meeting

On February 5, 2017, Keith Dunlap moved to accept and approve the following candidates to appear on the ballot for the March, 2017, IKC elections (listed below). Joy Baiz seconded the motion on February 5, 2017. Jerry Lewis allowed final discussion of the motion until February 6, and hearing none, called for the vote on the slate of candidates. On February 7, 2017, the motion carried with 14 Board Members voting to approve (Bob Vandeventer was currently on medical disability and was not polled). Jerry Lewis declared the motion approved.

President: Jerry Lewis
 Secretary: Sue Vernier
 Treasurer: Keith Dunlap
 Directors (four positions open):
 Bruce Bowman
 Eric Schmidt
 Matt Selig
 Bob Sergesketter
 Richard Vernier

December Meeting Minutes

The minutes from the December Board meeting were approved as published in the March, 2017 *IKC Update*.

Treasurer's Report

Treasurer Keith Dunlap reported cash assets totaling \$161,372.04 and land assets totaling \$460,000.00

for total assets of \$621,372.04. Funds include Stewardship: \$56,738.60; Deferred Dues: \$5,085.00; Land Acquisition: \$40,002.95; and General Fund (unrestricted): \$59,545.49. The IKC membership currently stands at 196 with renewals in 2017 of 147 and 49 yet to renew (deadline March 31st). Keith noted that eight new people became members in the previous quarter. Keith sent a copy of the IKC's 2016 IRS 990 to all Directors for review; he received a couple of responses. He will submit it to the IRS shortly.

2017 Elections

President Jerry Lewis requested nominations from the floor for the ballot. None were received. Keith Dunlap made the motion to close nominations, seconded by Dave Haun; motion accepted. Keith collected additional ballots from the floor. Jerry appointed Danyeale Green and Kevin Smith as election tellers to tally the ballots and the results were reported later in the meeting.

Property Manager & Cave Patron Reports

Keith Dunlap e-mailed copies of all property manager and cave patron reports to the Board for their viewing pleasure prior to the annual Board meeting. Copies of reports were also made available during the meeting.

Buddha Karst Nature Preserve – Jeff Cody reported a total of 6 trips with 42 people during 2016. A few trips did not go for various reasons, including trip leaders not being aware of the need for a ladder to access the cave. In the fall, the water connection was open and a few cavers managed a through trip. Jeff is concerned about the ladder placement; a short ladder may not be safe. A longer ladder (24 foot) would allow for placement on more level ground and eliminate the possibility of tip-over. Tom Sollman suggested adding a statement to the waiver that ladder placement and length must be a consideration for access to the cave.

Jerry Lewis advised that, after fifteen years, George Cesnik wishes to retire as Property Manager at Buddha. Jerry is looking for a replacement. Keith said the job involves routine surface maintenance (clearing trails, etc.). Keith takes care of the mowing since he has the equipment.

Orangeville Rise – Steve Lockwood's report covered the usual trash removal with no particular problems reported. Dave Haun asked about the geocache at the site, but Keith thought activity had dropped off enough to no longer create a noticeable path. The sign is in good shape.

Robinson Ladder Cave Preserve – John Benton's report mentioned the 2016 bat census and the return of a half dozen Indiana bats to Robinson Ladder. Keith Dunlap took the opportunity to discuss the results from



a recent bat census of caves which continues to show the relatively slow decline of Indiana bats. Their mortality in our milder climate is not as devastating as the northeast, but declines will probably continue for a long time. The Little Browns and Pips numbers are perhaps coming back up. The Big Browns are affected slightly or perhaps not at all.

The chestnut tree planting at Robinson Ladder in 2016 suffered significant mortality. Replacement tree planting will take place April 22.

Shawnee Karst Preserve – Dave Everton’s report listed 6 trips with 34 visitors. The entrance has stabilized and is now getting slightly larger. Jerry mentioned that some rutting of the gravel road has occurred, which may require the addition of more rock this year.

Sullivan Cave Preserve – Paul Uglum’s report has some nice graphs. There were 82 trips with 668 participants. Keith Dunlap advised that proper repair of the cave gate latch will require a welder – it’s on his “to do” list. The stiltgrass infestation will be addressed in August (the best time to eradicate it). He recommends putting a bolt cutter in the cave in case the lock gets messed up again, and the wood shed needs a new roof. Jeff Cody mentioned an interesting gate design at Blue Spring Cave, Tennessee, that allows anyone within the cave to get out without a key.

Wayne Cave Preserve – Dave Everton’s report listed 16 trips with 69 cavers. Tom Sollman reported for property manager, Robert Sollman. Everything is fine.

Indiana Creek Conservation Easement – Jamie Winner, along with Keith and Jerry, inspected the properties covered by the conservation easement. The ATV issue and invasive species were addressed in the inspection reports mailed to the owners.

Shiloh Cave – James Adams’ report showed 6 trips (maximum allowed) with 57 cavers. Tom Sollman believes the gate at the church entrance will eventually require some maintenance because logs and debris are detrimentally blocking inflow through the gate and slowly filling the entrance. Keith noted the 6 trips per year quota had been reached early in the year and asked whether we should negotiate an increase with the landowner. Keith also suggested that Jim could hold requests for 2-3 people to combine with another small group so as to maximize the number of cavers able to visit Shiloh. The consensus of the Board was to make no change for now to the permit quota.

Suicide Cave – Kevin Smith reported 7 trips with 68 cavers. The reworked gate still easily opens and closes and remains in good condition. The lock was replaced due to mud filling the mechanism. Kevin wanted a discussion on how to handle cavers who mishandle or fail to return a key. Jerry emphasized that the Cave Patron is empowered to decide proper action, including denying a key to a past

miscreant. The IKC will support the Cave Patron in his chosen method of handling waivers, permits, and keys.

Jeff Cody asked if permits were being displayed in cavers’ windshields? Jeff prefers to have waivers mailed to him prior to a trip before he sends the paper permit. He wondered if liaisons were issuing paper permits for people to display in their windshield. Keith said Buddha and Shiloh did require permits for vehicles. The gated caves do not necessarily need permits, but Keith will remind liaisons that it is required for DNR preserves and caves that are not gated. Keith mentioned the Southeastern Cave Conservancy is going to an on-line permit system for all of their extensive properties; but again, Cave Patrons are the face of the IKC organization and keeping them happy and allowing them freedom to handle each situation as they see fit works to the advantage of the IKC.

2017 Election Results

Jerry Lewis announced the election results as received from the election tellers. Jerry first thanked Bob Vandeventer for his many years of service on the Board. Bob did not run again due to health reasons. Jerry asked Dave Haun to convey our expressions of gratitude to Bob. Jerry advised that all Officers were re-elected. The four elected Directors are Bruce Bowman, Matt Selig, Bob Sergesketter and Richard Vernier. Keith Dunlap thanked Eric Schmidt for agreeing to run for a Director’s position. It was suggested that in the future new candidates running for positions should provide a brief bio, since not everyone will be familiar with the individual.

Bylaws Amendments Vote

The IKC website linked to the three proposed Bylaws amendments (changes to Membership, Elections, and Amendment of Bylaws) was in the members renewal and elections notice sent out in February and the proposals were also published in the March, 2017 IKC Update. Keith Dunlap gave a brief overview of each proposed amendment change. Bruce Bowman confirmed that a 2/3 majority vote (14) of all 20 members present is required to pass each amendment.

Keith made the motion to accept the change which states “Organizational members shall not have voting privileges”. Dave Haun seconded. Motion approved with 20 “yes” votes.

Keith made the motion to accept the change to the elections process under Article III as published in the Update. The change eliminates write-ins and nominations from floor at the annual meeting and clarifies ambiguous wording. Joy Baiz seconded. Motion approved with 20 “yes” votes.

Keith made the motion to accept the change requiring a motion/petition to amend the Bylaws from a Director or individual members must be approved by the Board before presenting the amendment to the mem-



bership. Everett Pulliam seconded. Motion approved with 20 “yes” votes.

Keith will issue a final copy of the approved changes to Bruce Bowman to put on the IKC website.

Sauerkraut Cave Gate Project Update

Jerry Lewis gave an update on the Sauerkraut Cave (Louisville, Ky) gate project. The USFWS habitat conservation plan entailed gating the cave to protect a cave beetle species that was being proposed for listing. The Louisville Grotto was contacted and the officers were understanding and supportive. Final measurements (30’ wide by 6-8’ tall) were taken for the gate, and Keith Dunlap will put together a design and bid proposal to the USFWS in the near future. If approved by USFWS, the gating will be conducted through the IKC and any excess funds will be used for future conservation activities. The project will take place in June or July on a weekend. The large gate will sit on a brick floor and has a “drive-up” entrance which simplifies the project. Keith will need approximately ten volunteers to help.

Stewardship Activities

Jerry Lewis reminded everyone of the April 22 tree planting at Robinson Ladder. Keith Dunlap said other stewardship activities (grapevine removal, etc.) can take place that day.

Keith hopes to have the Sullivan Cave gate maintenance done sometime this spring.

Spring Mill State Park Activities

Jerry Lewis met with the new naturalist at Spring Mill State Park. The naturalist wants guide training for staff running the boat trips. Dave Everton has volunteered to assist with the guide training for the seasonal help. Joy Baiz suggested that improvements might be made in the script that guides use on the boat tours. Jerry will inquire as to whether we could review and help revise the text the guides use to inform patrons. This will be considered part of our education and outreach.

Tom Sollman said he needs to meet with the naturalist. Tom wants to conduct a hand count of critters in Upper Twin Cave and would like to do this from a boat, which may require a permit. Jerry will provide a report to Tom on previous population counts.

IDNR Cave Access Update

Keith reported no change to the general IDNR cave access, but he plans to contact them to attempt to get permission for 3-4 led cave trips in Harrison-Crawford State Forest for Cave Capers. Perhaps this will prompt some action to update the overall policy.

Indiana Cave Symposium

The 25th annual Indiana Cave Symposium is April 29, co-sponsored by the IKC and Indiana Cave Survey.

Keith Dunlap made the motion to allocate \$150 for the IKC share of expenses. Bruce Bowman seconded. Board members voted unanimously to approve. The Symposium will be held at the Handy Meeting Barn, 2827 E. Moffett Lane, Bloomington. Full details are in the March, *IKC Update*.

Salisa Lewis will give a presentation on the history of the past 25 years of the IKC at the Symposium.

Land Acquisition Activities

Keith Dunlap tried to follow-up with the quarry south of Sullivan Cave, but received no response.

Keith Dunlap advised that the church camp at Scenic Hills could potentially be for sale (location of Eversole and Coon Cave). No further details were known.

Items from the Floor

Jerry Lewis was at the Binkley Cave incident and he wants the IKC to have a plan in place for each property that gives the protocol of who to contact, where to park emergency vehicles, etc., if an incident should occur. We need a management plan that can control the situation without destroying the preserve. Bruce Bowman said the NCRC trained at Sullivan, and the IKC might have received a recommendation from them on the issues to address. We need an emergency action plan that will particularly cover outside of the cave where we have some control. We should have a media spokesperson and Anmar Mirza should be consulted. Jerry asked for a committee to work on it (he will be the chair) and the following volunteered: Danyeale Green, Joy Baiz, and Scott Frosch. Jerry will contact Anmar and schedule a meeting in Bloomington.

Danyeale Green said an Orientation to Cave Rescue will be April 8 and 9. Day one will be in the classroom, and day two will take place in a cave.

Keith Dunlap noted that a new book on Cave River Valley had been published.

Kevin Smith presented a donation check from Hulman Memorial Way Foundation.

Next Meeting

The next meeting will be June 3, 2017, at Shawnee Karst Preserve at 1PM EDT. A work day at the Preserve will take place at 10 AM EDT prior to the Board meeting.

Adjourn

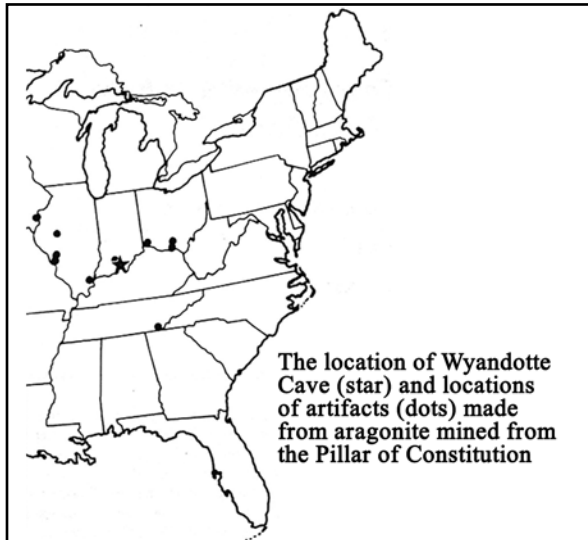
The meeting was adjourned at 1:10 PM EDT.

Respectfully submitted, Sue Vernier, IKC Secretary



...continued from page 8

and ashes. It is believed fires were built to convey heat to the aragonite, to fracture the stone, and pry it apart with the antler tines. No further archaeological studies were done until 1974 when Patty



Jo Watson conducted studies in Wyandotte along with her research at Mammoth Cave National Park. It is thought the caves were visited about the same time periods by prehistoric peoples. On a side note, the Wyandotte Indians, for whom the cave is named, probably never ventured far into the cave at all. For some reason over a few hundred years, the cave was not used as a source of minerals or exploration. Can you imagine what it would have been like to be a caver a few hundred to a thousand years ago? Were those people “special” to their societies?

Sources:

The Mineralogy of Wyandotte Cave Aragonite,

Indiana, and its Archaeological Significance, by Tankersley, C. Munson, P. Munson, Shaffer, Leininger; edited by Lasca and Donahue, 1990, pages 219-230; Geological Society of America.

Looking at Prehistory, U.S. Forest Service, Region 9, HNF, www.foresthistory.org

Prehistoric America magazine, Number 3, 2006.

Thanks to Art Gerber, Tell City IN, and Marty L. Benton, Roswell GA for providing information and guidance to printed literature.

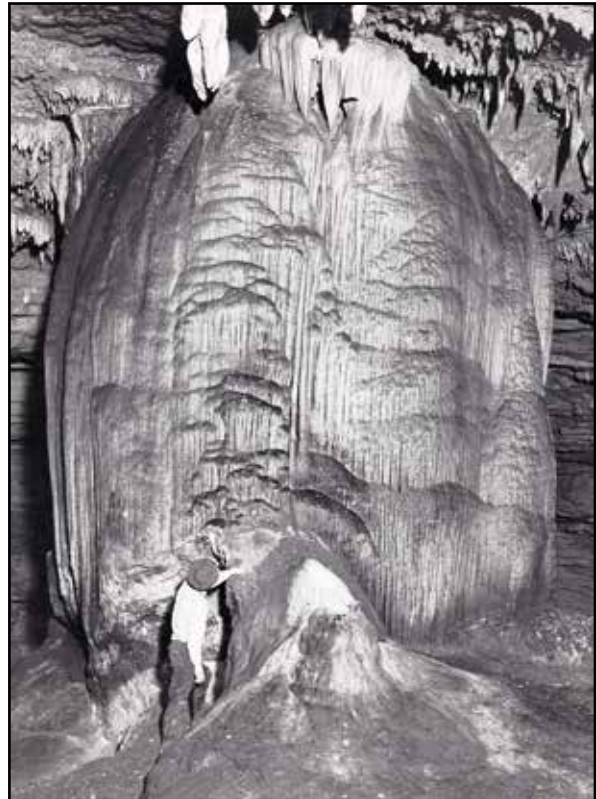


photo courtesy George F. Jackson

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.

