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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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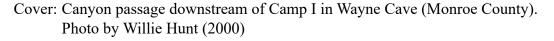
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IKC QUARTERLY MEETING REMINDER SATURDAY, DECEMBER 12th, 10:00 AM EST THIS WILL BE A VIRTUAL MEETING

The quarterly meetings are for the Executive Board to conduct business, and typically 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.

Preliminary Agenda: Recap of the falls stewardship/work projects and the promotion of upcoming projects at our various preserves; Financial reports; Membership statistics; Investment Committee update; Proxy list progress; Nomination/election process discussion; Membership questionnaire/feedback; Shawnee Karst Preserve expansion status and update; Other land/cave acquisition opportunities; Wayne Cave EQIP funding contract update; Mid-State Corridor Highway project; and more...

Note COVID precautions: The meeting will be conducted virtually, a first for the IKC. At press time, we are still working out the meeting details with an emphasis on accommodating Board members.



ACTIVITIES CALENDAR

Dec 12 – IKC Quarterly E-Board meeting (see above)

March?? - IKC Annual Business meeting (likely will be a virtual meeting)

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. Memberships and donations can also be made by credit card using our on-line services on our website (see the Join Us! tab in the menu).

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...

The subject of this ramble is property acquisition by the IKC, and some of the issues with properties. Despite COVID-19, on November 19th the IKC successfully finalized an acquisition in Lawrence County that is a significant expansion of our Shawnee Karst Preserve (SKP). The preserve expansion, which sits squarely over passages in Upper Twin Cave, accomplished removing two houses and their septic systems from the karst landscape above the cave. It also closes the gap between the IKC SKP and the DNR land containing the downstream entrance to the cave in Spring Mill State

Park (more about this in an article on page 7).

The IKC always has its antennae up with the intention of remaining aware of karst properties on the market that are good fits for the organization. What's a good fit? All property acquisitions become one of two things: an expansion of an existing preserve, or the creation of a new one. Concerning preserve expansions, all of our current properties are either based around a significant cave or karst feature, like the Orangeville Rise (the second largest spring in Indiana). Expanding any of them typically captures more cave passage (like the SKP preserve expansion), sinkholes in the recharge area,

and/or other karst features and landscape. That said, preserve expansions aren't as exciting as new acquisitions, which more often than not focus on a cave of some prominence. The IKC has come up with some real jewels, like Sullivan Cave in Lawrence County or Wayne Cave in Monroe County.

There are other criteria that have to be considered. The presence of a house on a property is usually a deal killer. The IKC has no interest in owning houses and we don't have any way to utilize a house. The closest we've come to owning a house is the shed on the new SKP expansion, which we can use to store a mower and other supplies. Our best strategy for a cave property with a house is to see if the seller will subdivide the parcel and sell the IKC only acreage, with the house sold to someone else. The downside of that is that it allows purchase of the land, but does nothing to remove the septic system or other disadvantages of human occupation adjacent to a preserve. The next criterion is how many acres is the property, and how much is the land worth per acre? That determines the ball park of the bottom line, although that cost then goes up with things like closing costs and taxes. The IKC also places money

in our Stewardship Fund for future use in property maintenance, which becomes another significant outlay of funds.

And the list of criteria continues. If it's a property with a cave, does it potentially need to be gated to prevent vandalism or protect fauna like bats? Gates are usually a lastditch way of managing a cave... They aren't free, they don't build themselves, and someone has to maintain them, keep the lock functional, as well as manage who gets keys, who doesn't get keys, and how to maintain key security. Sometimes they are a necessary evil, but gates are in general a royal pain and to be avoided if possible. And

what's the rest of the cave like? Is there vandalism that needs to be cleaned up? Are there hazards to be dealt with? Who is going to take the responsibility of being the Cave Patron?

The property itself is the next important consideration. What kind of shape is it in? Invasive plant management is becoming a major consideration. It is expensive and *very* labor intensive. We're finding from our invasive plant management project at the Wayne Cave Preserve that it is challenging to find volunteers willing to brave yellow jackets, ticks, briar patches, and heat exhaustion. It's hard, generally unpleasant work.



Jerry Lewis signing documents during the November

19th closing for the Shawnee Karst Preserve expansion.

Does a potential new acquisition have an access road? Will the IKC need to put in a road or trails? Roads and parking areas aren't free to build – the stone for the lanes costs over \$300 a truck load and usually lots of loads are involved. Someone has to have a tractor. And like everything else, roads require maintenance. Trails? They have to be blazed and then maintained as well.

As a case in point, this fall the IKC had the opportunity to purchase Ranard School Cave in Monroe County. This cave is well over a mile long, a passage length that put it in a club with only a few dozen members in Indiana. A sizeable chunk of acreage was attached to the property. Until now, the general consensus with the Board of the IKC was that the more property we could acquire, the better. That ideology is now being re-thought.

With the Ranard School Cave property, there were all the usual considerations, but some new twists. The first was the price. It was a large piece of property in the Bloomington area where land prices are high and we were probably looking at over three hundred thousand dollars. That in itself might not be a show-stopper, but the IKC is currently working on paying off a much more modest acquisition. Unfortunately, that is going a little more slowly than we had anticipated. One of the concerns discussed by the board members was how are we going to pay for a big property if we're not able to finish paying for a smaller one? Another concern was that part of the Ranard property had a lot of invasive plants (e.g., bush honeysuckle, autumn olive) that would have to be dealt with. Again, looking at our current situation, the IKC has a grant to do invasive plant control on the Wayne Preserve property. That has been somewhat of a checkered experience as volunteers willing to work on the property have not been as abundant as we had hoped. The consensus was that the IKC would not be able to muster sufficient volunteers to take on another property overrun with invasive plants.

For the entire time that I have been involved with the IKC in one capacity or another, the organization has been asking for members to step forward and become involved. In my view the IKC has now come to a tipping point, where as an all-volunteer organization, we have gotten to the point where we are not going to be able to expand our reach without more arms to help.

Looking further at volunteer property maintenance, during our September board meeting, I voiced the opinion that the IKC needed to start coming up with a plan for how to proceed into a future without Keith Dunlap. First, let me immediately say that to the best of my knowledge Keith is fine and good for a few more laps. However, on more than one occasion this fall when he and I were working together cutting invasives at the Wayne Preserve, we agreed that we were doing work better suited for someone younger. The reality of the situation is that Keith, a founding member of the IKC, is not going to be able to continue doing everything for everybody at the IKC preserves.

As a case in point, Keith was already the property manager at the Sullivan Cave Preserve, and when the property manager at the Buddha Karst Preserve vacated the position, no one stepped forward so he took over there as well. He also mows the trails on all the properties (e.g., a mile and a half of trail at Shawnee Karst Preserve, a mile trail at the Buddha Karst Preserve). He has done the lion's share of the work on the invasives control project at Wayne and our new Lowry preserve, as well. And on and on. If Keith is hit by a meteorite, who's going to volunteer to cut all the trails? That entails owning and maintaining a large brush mower, having the ability to transport it to the preserves, and the time and inclination. I suspect few people understand how much Keith really does for the IKC, and that's wonderful that he's willing and able, but the organization needs a plan for the future.

Another concern is funding. Everyone loves it when the IKC purchases a new cave, but how about paying for it? One of the things that I've struggled with during my time as president is maintaining the IKC's relationship with The Nature Conservancy (TNC). Why do we care? Off the top of my head, since I've been President of the IKC, among other things TNC gave over \$50,000 toward the purchase of the Shawnee Karst Preserve (half the cost), signed over the property expansion of the Robinson Ladder Cave (i.e., gave us their property for free...), provided almost \$13,000 towards our Wayne Cave expansion, and most recently donated \$5000 toward the acquisition of the Lowry Karst Preserve. While all that is going on, one of our former board members was railing against TNC about a perceived slight in management of the Lost River Cave (recall the presentation at the Indiana Cave Symposium?). The fact is that the slight was perceived, not real, and TNC was happy to hand over management of the cave to the IKC, it wasn't a big deal.

Now, the IKC board is discussing whether or not to allow rappelling at the big cliff at the Lowry Karst Preserve. It's a nice cliff and it would be a great place to rappel. That said, there are other considerations. Part of the process of obtaining funding from TNC is showing a representative the property. When Allen Pursell and I did a tour of the property the one thing that he was impressed with - more than the cave - was the plant community at the top of the cliff. I have guite a bit of experience with bluff communities, dating back to my days with the Illinois Natural Areas Inventory (in 1976). In Illinois, these cliff-top habitats include prairie plants and even arid-loving plants like prickly pear cactus, as well as the only population of scorpions in the state. At the Bernheim Research Forest near Louisville, the rarest animal known from the 16,000 acre property is a land snail inhabiting small pockets in a cliff. That blufftop habitat at Lowry is perhaps the best non-cave habitat that the IKC owns. To punctuate how unique it is, I requested an evaluation by the Indiana Natural Heritage Program and two botanists visited the preserve. Their recommendation was not allowing rappelling or anything else that

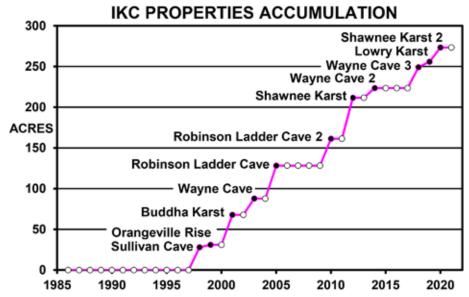
would degrade the cliff habitat and its community. After presenting this recommendation, the board still pursued discussion of allowing rappelling at Lowry. It stands tabled at the moment.

My point comes back to our partnership with TNC and their long-standing financial support - our biggest single source of financial support. The folks at TNC are not going to be amused that the board is even discussing allowing rappelling on (and thus destroying) the feature that cinched TNC funding to the IKC on the Lowry property after receiving multiple recommendations to the contrary. The IKC can't keep slapping TNC with one hand (e.g., the Lost River debacle, now Lowry) and sticking out the other hand to ask for funding. The IKC and its board is going to have to get straight on whether they want the organization to be a land trust focused on conservation, or a cave club focused on recreation. If it's the latter, so be it, but if so the IKC will never get another dime of funding from TNC.

Jerry Lewis

NEWS BRIEFS...

□ With the latest addition of the Shawnee Karst Preserve expansion, the IKC now owns 273.46 acres at seven preserves acquired through eleven transactions (four were expansions of existing preserves). Below is the time line of our acquisition.

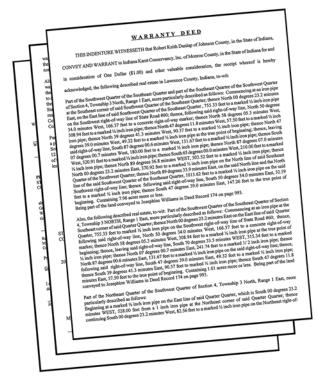


This year has been limited in organizing conservation workdays on IKC properties due to COVID, but it has provided many opportunities for volunteers to work solo or in small groups on our properties. In particular, this year has been the "Year of Invasives" where significant effort was put forth at our Wayne Cave Preserve (over thirty acres treated). Also all of the Lowry Cave Preserve (6+ acres), approximately five acres on our Sullivan Cave Preserve, several acres at the Shawnee Karst Preserve expansion, and most

SHAWNEE KARST PRESERVE EXPANSION

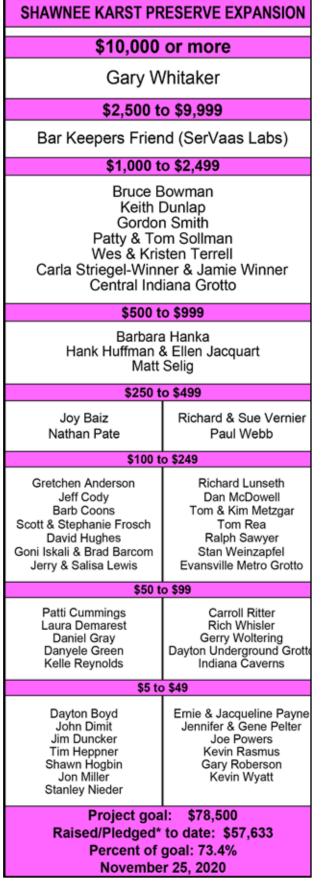
by Keith Dunlap

On November 19, the IKC took ownership of the 17.5 acres north of and adjacent to our 50 acre Shawnee Karst Preserve in Lawrence County. The closing was delayed twice with the title company moving their offer, then the office was closed two week for an outbreak of COVID-19. But in the end, the property was transferred and it is now all ours.



If you would like to see this new property, the street address is 3918 SR 60 E, Mitchell Indiana (about 1/2 mile east of the entrance to Spring Mill). Eventually we will install a gate on the access drive to minimize unwanted local mischievousness, but for now, just stop in and check things out (and for that matter, check out the rest of the Shawnee Karst Preserve to the south with two loop trail).

Since September, we have had many more donors added to the list which is great, but we are still about \$21,000 short of our goal to pay off the property. However, it is anticipated that the IKC will approve the funds to cover the \$7,000 Stewardship Fund contribution, and while we have not heard back definitively from our submitted grant requests, we do anticipate receiving at least partial financial support even if the full amount requested is not granted. So at this point, we think we are about \$10,000 away from general donors to reach our goal and we hope to wrap things up by the end of the year.



MORE PROBLEMS (HOPEFULLY) CORRECTED AT DOG HILL

by Jeff Cody

This article is a follow-up to the one written by Scott Frosch in the March 2019 *IKC Update*. New developments were stumbled upon recently that warrants this follow-up. As many know, Dog Hill Cave is part of the Dog Hill-Donnehue Cave system within the city limits of Bedford.

This is a well-known classic Indiana cave system with two parallel and separate stream passages connected by a single overflow passage. Both caves have sinking surface streams that feed their cave stream passages, with separate resurgences to the west, both draining to the White River. Unfortunately, the Dog Hill side of the cave system suffers from some of the typically problems you can find in caves that are located in urban areas. I can remember cave trips to Dog Hill in my early 1980s where a particular section of the stream crawl was exceptionally nasty. The beautiful passages further back near the connection climb-up area seemed to be the just-reward for negotiating the polluted crawl. I had heard all kinds of rumors of what was getting flushed into the cave from a nearby city water treatment plant. I had heard over the years it was the chemicals used in the water treatment, to back-flushing of the treatment plant's filters, to leakage from area septic systems. Deep down I knew whatever it was, it wasn't something someone wanted to go out of your way to get into. But I was young and invincible, and did not care. I visited this cave several

excellent resource for local cavers to know when there are issues of accidental discharge into a cave system. He had done some previous work on this particular problem and outlined this effort in his previous *IKC Update* article.

Recently I was contacted by fellow CIG caver Brittney Woods. She wanted to go on a trip and told me she had never been to Dog Hill. I was unable to contact Steve (the landowner where the entrance is located) ahead of time, but we decided to see if he was home, and if not we would go somewhere else. This trip was on Sunday October 25th. We pulled into Steve's driveway to find several cars. We were in luck as Steve was home. I spent some time talking to him. He told me he grew up near Buddha Cave. I told him that Indiana Karst Conservancy now owns this cave as a Nature Preserve and I manage access for the organization. He was pleased to hear the cave was being protected. After my usual gabbing, Brittney and I proceeded to the designated parking area near an outbuilding on this beautiful property. We suited up and made the short walk to the cave. Arriving at the entrance, Brittney noted how nice she thought the sinking stream entrance setting looked. We took a few photos with her phone at the entrance. We took our time and chatted a bit before entering the cave. Good thing we did. Just before entering, a rush of black water came down the previously mostly-

times back then. I had about a thirty year break from going through Dog Hill until Thanksgiving weekend 2018. I went with Scott Frosch, Dave Schaefer, and a group of Central Indiana Grotto (CIG) cavers. Scott had done some previous clean-up trips into the cave. We went that day and the nasty stream crawl was just as bad as I had remembered thirty years prior. Scott is a field investigator for Indiana Department of Environmental Management (IDEM) and is an



dry stream bed. The flow got bigger and bigger. I told her this could be some kind of treated waste, or maybe some kind of chemical used in water treatment, but not sure. I suggested we wait to see if it got worse before entering. We walked away from the Dog Hill entrance and checked out a spring on the same property near where we parked, while we waited. About twenty-five minutes later, it appeared this discharge had stabilized in intensity, and maybe even slowed a bit, so we decided to enter. I am not young anymore, like I was in the 1980s, but still sometimes feel invincible. I told Brittney we would go in, but may have to come back out if things looked bad.

We entered and was mostly able to stay out of the stream and made our way further into the cave. We stopped a couple times as she noticed some interesting features. I noted how this passage reminded me of parts of the main stream passage in the adjacent Donnehue Cave. She agreed as she had recently been in that part of the system a few times. She noticed a smell, but I did not. At one point she asked me, "Is this sh*t?" I replied, "I cannot say it is, and cannot say it is not." She is young and fearless, so we continued on being able to mostly stay out of the water except for some shallow wading here and there. We continued in until we reached this stream crawl that I had always remembered to be very inhospitable. A short inspection revealed this crawl was more like a bathtub with water much deeper than I remembered, even from my most recent trip almost two years ago. The bottom seemed to be soft and nasty like I had remembered. I looked ahead and noticed maybe six to eight inches of airspace. That did not look right to me and I feared we may still have more of whatever it was coming in and feared we could get sumped in. I do not think Brittney was excited about going any further so we decided to retreat. We exited the cave without incident. The whole time Brittney was wondering if we were crawling in "poop". We joked around about it for a bit and made it out of the cave just as Steve was backing his truck up to the shed where we were parked. The influx of this discharge had stopped by time we got out. We chatted with him telling him about what we experienced. Steve told me it happens about once a week. We changed and left the property and stopped at the Mexican restaurant in Bedford before returning to Indianapolis. That evening I sent Scott Frosch a message and described what we saw. Scott asked me what time I had noticed this flow began. I

gave him a close estimate. This turned out to be the "missing link" to figuring out where this was coming from, as no one had been at the entrance at the time this flow began, or if they were there, they had not reported their observation to Scott.

After getting my report, Scott contacted the City of Bedford reporting what I had told him. According to Scott, the water treatment plant on 29th street now discharges the back flush water consisting of mud and floc into the city sewer. The plant claimed they no longer discharged that water on the surface as they once did. The other speculation was that the problem could still be from a nearby apartment that had been the source of previous issues at the cave (see March 2019 IKC Update). Here is the important part, the time estimate I gave Scott matched up with the pumping schedule of the treatment plant. So the city decided to send a sewer camera down the line in question and discovered the top of the sewer main had blown out. This created a situation when they pumped their back flush water into the sewer line, it was coming back to the surface, leaving the plant via a ditch and eventually draining to the cave instead of ending up at the sewage treatment plant. Scott said there were a few houses on that line so there likely was some human sewage in it too (so yes Brittney, we could have been in some "poop"), but the majority of the flow was just back flush from the drinking water plant. Scott went on to say silt and algae and mud from the processed river water likely was the smell Brittney had noticed. The city has scheduled prompt repair of this issue. The city sometimes has questionable infrastructure, but they do care and with a little prodding from a state agency will get this done. Scott said without our report to him, this may of gone on for who knows how long until it was discovered. Scott has suggested we wait for some time after the repair is made (he can confirm this) and allow a few rain cycles before we return to the cave. I hope both Brittney and I can be part of this trip and then we can feel good about ourselves and our lucky timing in being the missing link to solving this problem. Also neat to see two current IKC Directors with direct involvement in this. Maybe we can finally correct this issue once and for all, but we will see. Thanks to Brittney for suggesting this cave, and also thanks to Scott for his work, as without him, this repair likely would never be made and this polluted flow would continue into this cave.

WOULD YOU CONSIDER BEING A BOARD MEETING PROXY?

by Carla Striegel-Winner and Keith Dunlap

The IKC is governed by a fifteen-member Executive Board. When a board member cannot attend a board meeting, the board member can appoint a "proxy" to serve in their place. The proxy participates in the discussion, votes, and otherwise represents the board member at the meeting.

Being a proxy is a great way to help the IKC and even a better way to become more familiar

ing, they can review the list and contact a member of their choice to be their proxy. If contacted and available, you may agree or decline. Once you have agreed to be a proxy, it is important that you follow through by attending the meeting. Once the agenda is available, the board member will discuss their thoughts on the topics with you. Remember that you are representing that board

with the organization. Or for long-time members or retired board members. to remain active with the organization. Whether you just want to volunteer to help out, are curious how the IKC functions, or think you might like to run for a board position sometime in the future, being available to serve as a proxy would be much appreciated. The board has been looking at various

Article IV: Management of the Conservancy

4.3.3 Proxies

When a Board member cannot attend a meeting, a proxy can be appointed by the Board member to attend the meeting and vote in his/her absence. In order to appoint a proxy, the Board member must notify the President prior to the meeting or send a signed letter with the proxy to the meeting. The proxy must be a Conservancy member. A Board member or proxy can not represent more than one vote.

View our full by-laws: *ikc.caves.org/bylaws*

ways to better engage our members and serving as a proxy seems like a great solution, rather than having the same few people be proxies every time.

So, we are creating a "proxy list" and are soliciting IKC member to be on that list. Then when a board member cannot attend a meeting and needs a proxy for an upcoming board meetmember when voting, if the board member has expressed an opinion and instructions on the topic.

Typically we need one or more proxies per each board meeting. Although our by-laws state "...a proxy can be appointed...", typically it is understood that board members will get a proxy, so that the board is fully represented at the meeting. Are you ready to help

out? Please consider helping us start this list by volunteering and thank you for doing your part in the governance of the Indiana Karst Conservancy!

To be added to the proxy list or if you have questions, contact board member Carla-Striegel-Winner at *carlastriegel@gmail.com*.

... continued from page 6

of the Orangeville Rise Nature Preserve were treated. In treating invasives, it is just not a "one and done" situation. Some properties require multiple passes in the same year as different invasives require different herbicides and methods of treatment. And while the first year require the most effort, a second and usually third year of systematic attention is usually needed to be effective, and thus we still have much work ahead.

In addition to the invasive eradication, in 2020 we also worked on reducing grapevines on fifteen acres at the Wayne property and about five acres at the Buddha Karst Preserve.

- □ The IKC wishes to thank Ryan Demarest for redesigning/updating the IKC's information/membership brochure. It looks fantastic and very professional! Be sure to download, share, and encourage your caving friends to join the IKC. You can find it here: *ikc.caves.org/sites/default/files/docs/brochure.pdf*
- □ The IKC has gained eight new members in the last quarter. Welcome Nick Anderson, Jasper Beavers, Darwin Brack, Cody Jobe, Tyler Maggard, Zachary Snyder, Timothy Stahl, and Joe Wilkins. The IKC membership currently stands at 229.

THE CURRENT STATE OF THE BATS: WHITE NOSE SYNDROME, WIND FARMS, AND BEYOND

by Goni Iskali

It has been approximately fifteen years since White Nose Syndrome (WNS) was first detected in the US and ten years since it was first detected in Indiana. The initial five years since detection were full of anxiety and updates, but now we rarely hear about WNS. However, the disease continues to spread, and it's now present in most states (see map on page 12). At one time, biologists hoped that the western bat populations would not be exposed due to the geographical divide of the Rocky Mountains, given that the main transmission vector is from bat to bat, and different climate that is less hospitable for the fungus. However, in 2016 the disease was detected in a little brown bat in Washington state and has since spread to other western states. One encouraging fact is that mass casualties, like those documented in eastern states when the disease was first encountered, have been less common out west. I think this is partly because western bats do not hibernate in equally large clusters, the length of their hibernation is usually shorter due to milder climates, and bats in southern states hibernate in caves that are too warm for the "cold loving" fungus and/or have a higher chance of feeding during the winter months if they do come out of hibernation.

The number of species that are affected by WNS is also increasing as the disease spreads. It was initially thought that the disease mainly affected cave-hibernating bats such as *Myotis* species and tricolored bats. However, WNS and/or the fungus that causes WNS have been detected in non-cave-hibernating bats. Luckily, these species are more likely to be carriers of the fungus rather than be affected by the disease. Currently, WNS has been detected in twelve species of bats and an additional eight species are carriers of the fungus, but have not shown diagnostic signs of WNS. Five of these twenty species are federally endangered or threatened.

The fact is that, WNS is here to stay, and our bat populations may never rebound to pre-WNS populations levels. I am reminded of this fact when I read older bat biology books that state that the little brown bat is one of the most common species of bats in the US. Now this bat is rarely detected out east. The good news is that bats that survived the initial wave of WNS seem to be less susceptible to the disease and are starting to rebound. This has been documented in little brown bats. Studies are focusing on what genetic attributes or qualities that made these bats more tolerable or immune to the disease. As far as a "cure", a reliable one that can be applied broadly to whole populations and natural environments without causing havoc is yet to be identified, but the search continues.

Other bat-specific threats include wind energy. While renewable energy is necessary to offset the effects of climate change on all species, including us, it doesn't come without a price. It is now largely known that wind farms can literally have an impact on bats. Wind energy also affects other winged creatures such as birds, but not to the same degree as bats. Bird fatalities, for instance, are not only fewer in number, but also they are spread across more species, and therefore less likely to have significant population impacts. Bats, on the other hand, seem to be more affected by wind energy. It is hypothesized that bats are attracted to wind turbines, and this explains the higher risk to bats compared to birds. The hypotheses proposed as to why bats are attracted to wind turbines include: 1) exploration as a possible food or water resource, 2) insects that may be attracted to turbines due to lighting (although lighting is typically reduced to the greatest extent possible), and 3) exploration as a possible mating site, or a combination of these. The bat species that are most affected by wind turbines include mainly four to five species and luckily these are not the same species that are affected by WNS.

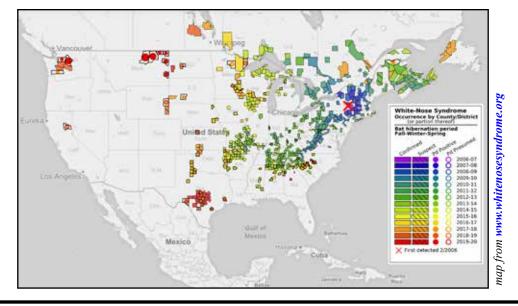
Lastly, deforestation and habitat depredation are major threats to all bat species. Bats need a variety and combination of habitats to roost, feed and mate such as forest and forest edge habitat, riparian corridors, open areas such as grasslands and croplands, rocky outcrops, caves, etc. As these habitats continue to become fragmented and unavailable, it disrupts migration, mating and other general life aspects of bats. Current conservation is focusing on connecting a variety of these lands with the goal of providing the most diverse, healthy, and connected habitats for bats, which will also benefit other species.

What can we do to help bats?

1) Disinfect or buy new gear for caving if you are caving in an area that doesn't have WNS yet or

when you are caving multiple areas outside your home area. Multiple strains/variations of WNS have been identified and it is unknown if they are unique to certain areas or if bats respond to these strains differently. I'm not discouraging disinfecting between any caves, but it is certainly more important to do so if you are caving outside of the state or your local region.

- 2) Clear trees during the winter season (October to April) when bats are not expected to use them. Bats use the trees to roost and raise their pups during the summer and they can hide really well under bark and tree cavities. Bats can also roost in a variety of tree species and sizes (as small as two inches in diameter).
- 3) Put up a bat house in a southern facing wall that gets sun. Put the bat house at least six feet off the ground and make sure that it is away from any structures that would make it easy for predators (es. racoons) to access it. Don't be discouraged if bats don't use it right away because it may take months or years for the bat house to be occupied. You can also try relocating the house each year if it isn't being utilized. Bats are very specific about where they roost and sometimes it takes a moment to find the bed that is just right.
- Donate to help save bats. Bat Conservation International is one good option (*www.batcon. org/join-us/other-ways-to-give*)



A LOOK BACK AT INDIANA KARST

by John M Benton

This issue's Look Back is an interview with longtime caver Ernie Payne conducted on October 1st. I've known Ernie for a long time and it was a pleasure to capture this bit of history.

How did your caving career begin? Do you recall your first cave trip? I began caving in September, 1959, when I first enrolled as a junior at IU Bloomington. The Indiana Daily Student printed a notice of a meeting of the IU Memorial Union Spelunking Club. Don R. Martin was President. After the meeting, Don sold me a new Guy's Dropper carbide light at his wholesale cost - I think it was \$4.00 for the light and a MSA Comfo-Cap. A few evenings later, Don lead my first cave trip to May's Cave off the Rockport Road. We had to climb a pole in a small waterfall to the upper level. I saw a few bats. The cave was small, but I was hooked. The next year I was elected President of the IMU Spelunking Club.

You have a low NSS number, 4996. When did you join? What other organizations have you been involved with? I joined the NSS early in 1960 and later became a Life Member and a Fellow. I also joined the Bloomington Indiana Grotto (BIG) in 1960. Later I joined the Evansville Metro Grotto (EMG) around 1971. There I met June and Don Shofstall. Don was a founding member of the EMG. I helped Don publish the *Petroglyph*, and over time, I became the editor for some seventeen years, along with holding all officer positions within the EMG at one time or another. I have been a member of the Indiana Karst Conservancy since 1986, the year they were founded. I was also an IKC Board Member from 1988 to 1994.

Please talk about your background, where you grew up, attended schools and worked? My hometown was Evansville, where I live today. My Dad was from Benton, IL – an underground coal mining area. As a boy visiting in Benton, I heard coal miners talk about the mines and things that occurred there. I believe that led me to be interested in mines and caves. I graduated from IU with a BS and MS in Education. After teaching junior high school history for six years in Ohio, and spending the summers in Bloomington, I moved back to Evansville, and soon became an employment counselor with the Indiana State Employment Ser-

vice. By retirement, I had worked my way up to being the Office Manager.

What has been some of the caving projects/areas you have worked? As a member of the BIG, my first mapping experience in 1960 was in Salamander Cave, and then in Binkley Cave. Some other cavers at the time were Dave Howell, Bob Nicoll, Tom Arnold, and Jim Langhammer. We mapped the upper level passage off the Mountain Room and some downstream in Binkley. For

many years the EMG explored and mapped caves in western Kentucky. At some point the EMG began working in Roppel Cave in central Kentucky.

Do you have a favorite cave or area? Having spent many years in western Kentucky, I have felt an attachment to that area. However, southern Indiana, central Kentucky, Tennessee, and Alabama have great caves too, so it is hard for me to pick a favorite.

What are your most memorable cave trips – could be good or bad or both? My worst cave trip was with Don Martin and others to help recover our friends Tom Arnold and Ralph Moreland who had drown in Showfarm Cave in July, 1961. Don and I, and two other cavers pulled Tom Arnold on a stretcher through a long, low bathtub with water flowing toward us. Once out of the bathtub, oth-

ers took over removing their bodies out of the cave. After they entered the cave on Sunday afternoon, a great thunderstorm completely flooded the cave and it wasn't until about midnight on Monday before the water level drop enough to enter the cave. While the recovery was going on, the State Police had a radio connection with the Evansville airport radar to warn of more thunderstorms.

I have had so many good cave trips it's hard to name just one. A few are Roppel, Camps Gulf, Cumberland Caverns, Tumbling Rock, Glover Cave, and the Twin Level system. I remember the good times and caves at NSS Conventions, Cave Capers, MVORs, and Speleofests. Seeing millions of bats fly out of the Bracken Bat Cave

> in Texas was amazing. I was awarded a green honorable mention ribbon at the 1989 Sewanee NSS Convention Photo Salon for my multi-flash slide "Inviting" (see photo on page 21).

> Who have been your caving mentors? Don Martin, now living in Las Cruses NM, got me started caving and into cave photography. Since he was a guide at Cumberland Caverns, Roy Davis allowed the two of us to explore and sleep in the cave between semes-

ters in 1961. This opened my eyes to Tennessee caves. Richard L. Powell taught me much about karst and caving and how to pan fine gold from glacial drift in Indiana.

Your wife, Jackie, is also an NSS member. Was she a caver before you all met? No, I introduced her to caving. She entered a painting in the Fine Arts Salon at the 2010 Vermont NSS Convention and a song "Down in the Hole" at the 2007 Indiana NSS Convention's Cave Ballad Salon.

I presume you started as a carbide caver? Do you still have your lamps? I started with my Guy's Droppers and I have used Justrite, Autolite, and Premier lamps. And yes, I still have my lamps including a new unfired Autolite. I still prefer carbide lamps to the new electric lights. Jackie won't go caving without her carbide light.



ORCHARD RIDGE CONSERVATION PROJECT, PART II

by Jeff Cody

Last May I was part of a conservation project on Orchard Ridge in Harrison County. This article is a follow up to my previous write up that appeared in the June 2020 IKC Update. This property contains both Hell's Hole and King Leo Cave. Both caves have pit entrances with significant cave on bottom. On the first work day, we fenced around most of King Leo, but we ran out of fence material leaving us about five feet shy of completion. We also began to stage material for Hell's Hole for a return workday. Ticks were pretty bad in the spring. This time the workday was October 18. This gave us a chance to escape the oppressive summer conditions and hopefully give the ticks a chance to thin out a bit. A couple weeks before the workday, IKC Director Danyele Green announced the event on the Bloomington Indiana Grotto Facebook page. I promptly responded as she was wanting to limit this group to no more than a dozen participants due to COVID considerations.

Sunday October 18th came and I left around 8:30 AM making the drive down in a little over two hours. The meet up time was 10:45, and I arrived right about on time. Much to my surprise, I found most of the group already there, very un-caver like. We had a good group consisting of Danyele, Laura Demarest, Cris Seuell, Chris Parks, Nick Anderson, Raymond Moul, and myself. Also, we had four college students from Purdue University and one other gentlemen with Chris, all whose names complete the fence, and the tools to do so, and also to finished the step-over "gate" (see photo below). This would complete the fence there. The plan was to get the surface work done at both pits, then drop King Leo and visit whatever cave on bottom that we had time to do.

I joined Laura, Cris, Nick, and the Purdue students going to Hell's Hole. The original plan was to start constructing the fence there, but the dry conditions were not ideal for driving posts, so our revised plan was to just haul materials to the entrance. The stash of long wooden posts and shorter metal T-posts were already at the parking area, so we just needed to move these to the work site. We each grabbed posts from the pile and began the hike (see photo on page 15). It was a bit awkward walking through the woods with the long, heavy wooden posts. We hiked the two logging roads, then had to scout the way to the pit. Laura and I dropped our posts at this point and began the trek downhill a bit to locate the pit. We both knew we were fairly close. The rest of the group stayed with the posts at the "end" of the second logging road. I had been to the pit many times, but it had been ten or more years for me, Laura was there last May. After about ten minutes of scouting, Laura hollered out that she found it. We met up and then went back up the hill to meet the rest of the group. Laura led them back to the pit while I stayed

I never got. It was nice once again to see three **IKC** Directors participate on this project. Needless to say, the parking area was much dryer this time than in May. Danyele suggested we split into two groups working at both pits simultaneously. This would facilitate social distancing. We geared up at the vehicles, then split up to go our separate ways.

Danyele, Raymond, Chris, and his friend went to King Leo. The King Leo group took the needed materials to



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there to wait for Nick who had gone back to the parking area to retrieve another wooden post. After a few minutes. Nick returned and I led him down to the entrance. Once at Hell's Hole we stacked the fence posts in a single pile and scouted out what might be the best layout, getting a better idea if we had the right number of posts. We surmised we did.

Work done, Laura then began to rig the pit and I assisted. Laura has had quite a bit of rescue training and I had 35

years of pit rigging experience. We exchanged ideas on rigging and what we felt were the best knots for the situation and why. Looking back on it, we should of got the younger vertical cavers involved in the discussion teaching them but we did not. They were putting on gear. I then went to the opposite side of the pit to assist with pad placement getting a better overview of things. The pit was rigged and the rest of the group began to rappel, while I got some great photos of everyone getting on and off rope. I had done this pit at least ten times over the years, so I did not feel like I was missing anything. I was wanting to drop King Leo later. It took quite some time to get everyone up and down. After this, we figured Danyele and her group would be back to us, but they was not there. We decided to de-rig the pit and I led most of the group back to the cars while Laura and Cris stayed at the pit to wait for Nick to bring another post down from where we left it on the logging road. Danyele and her group did eventually show up on our walk back. I led most of my group back to the cars to wait.

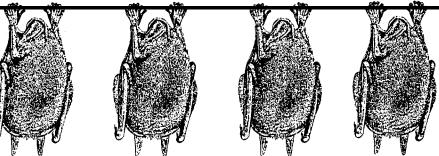
The walk from the cars to King Leo is all along logging road and not as far as the hike to Hell's Hole. The distance between both pits as the crow flies is only about 1200 feet, but much longer via the logging roads. We returned to the cars and got drinks and waited a bit for the others to return. After a bit of a wait, they did return, but it was getting late for my planned return time. The rest of our group did want to go drop King



Leo as most of them had not seen it. I decided to lead them down to King Leo to get photos of the completed fence, then return home. I stayed to watch a few rappel in, then headed back to the vehicles. After arriving back, I chatted a bit with a local older gentleman who drove up. I picked up some trash near the parking area before leaving.

We still have to construct the fence around Hell's Hole when soil conditions improve, but we did get all of the posts moved to the site. Danyele and her group were able to complete the fence around King Leo. We are using donated fence materials, so if anyone reading this has any fencing mesh (chain link or similar) they work like to donate, that would be great and much appreciated. I look forward to helping however I can on any future work on this property. This property has given me much joy in the past and I feel it to be rewarding to give back and hopefully build goodwill with the landowner and keep these caves open to cavers. We also need to do more cleanup on the property as there is an old couch and other dumped trash needing attention. The parking area is out of view of houses, so I am sure locals use the parking area as a party and dumping spot. According to the 1992 NSS Convention guidebook, Hell's Hole once had a fence around it, but I have not see any evidence of this. There is also still sporadic exploration in Hell's Hole and I am told there is at least one lead left in King Leo. The map of both caves show passages overlapping each other, but not sure what the connection possibilities are.

Income/Expense Statement From July 1, 2020 to September 30, 2020			
INCOME:			
Dues Apportionment and Residuals		841.25	
Donations - General		670.00	
Donations - Land Acquisition Fund		9,009.00	
NRCS grant Investment Earnings		1,549.05 128.45	
	-	120.45	\$12,197.75
EXPENSES:			¢12,101.10
IKC Update (printing, production, m	ailing)	282.98	
Education / Outreach		34.43	
Stewardship/Conservation		679.83	
Business (PayPal fees, postage, se	curity box rental)	103.57	
Land Acquisition Appraisal		400.00	
Transfers to/from restricted funds/ot	ner adjustments	8,719.99	(\$10,220.80)
			(\$10,220.00)
NET OPERATING EXCESS (DEFICIT) THIS PERIOD:			\$1,976.95
В	alance Sheet		
Sep	tember 30, 2020		
ASSETS:			
Cash in Checking / Saving / CDs / I	Brokerage acc'ts	250,201.02	
		200,201.02	
Robinson Ladder Cave Preserve	(73.48 acres)	162.000.00	
Robinson Ladder Cave Preserve Wayne Cave Preserve	(73.48 acres) (57.59 acres)	162,000.00 188,000.00	
Wayne Cave Preserve Shawnee Karst Preserve	(73.48 acres) (57.59 acres) (50.31 acres)	162,000.00 188,000.00 105,000.00	
Wayne Cave Preserve	(57.59 acres)	188,000.00	
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres)	188,000.00 105,000.00 29,000.00 72,000.00	
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00	
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00	
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00	¢946 214 19
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme FUNDS & OPERATING EXCESS: Land Acquisition Restricted Fund	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre)	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme FUNDS & OPERATING EXCESS: Land Acquisition Restricted Fund Deferred Dues Restricted Fund (224 Stewardship Endowment Restricted	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre) 4 members) Fund	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16 105,021.42 4,860.00	\$846 <u>,214.18</u>
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme FUNDS & OPERATING EXCESS: Land Acquisition Restricted Fund Deferred Dues Restricted Fund (224 Stewardship Endowment Restricted Previous General Fund (total)	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre) 4 members) Fund 64,250.63	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16 105,021.42 4,860.00	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme FUNDS & OPERATING EXCESS: Land Acquisition Restricted Fund Deferred Dues Restricted Fund (224 Stewardship Endowment Restricted Previous General Fund (total) Net Excess (Deficit) This Period	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre) 4 members) Fund 64,250.63 1,976.95	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16 105,021.42 4,860.00 74,105.18	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme FUNDS & OPERATING EXCESS: Land Acquisition Restricted Fund Deferred Dues Restricted Fund (224 Stewardship Endowment Restricted Previous General Fund (total) Net Excess (Deficit) This Period Current General Fund (unrestricted)	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre) 4 members) Fund 64,250.63 1,976.95	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16 105,021.42 4,860.00	\$846,214.18
Wayne Cave Preserve Shawnee Karst Preserve Buddha Karst Nature Preserve Sullivan Cave Preserve Lowry Karst Preserve Orangeville Rise Nature Preserve Indian Creek Conservation Easeme FUNDS & OPERATING EXCESS: Land Acquisition Restricted Fund Deferred Dues Restricted Fund (224 Stewardship Endowment Restricted Previous General Fund (total) Net Excess (Deficit) This Period	(57.59 acres) (50.31 acres) (36.84 acres) (28.00 acres) (6.66 acres) (3.01 acres) nt (valued at \$1/acre) 4 members) Fund 64,250.63 1,976.95 1,100.00	188,000.00 105,000.00 29,000.00 72,000.00 33,000.00 7,000.00 13.16 105,021.42 4,860.00 74,105.18	\$846,214.18



IKC EXECUTIVE BOARD MEETING MINUTES

September 26, 2020 - 4:00 PM EDT, Sycamore Shelter

Ferdinand State Forest - 7985 S 600 E, Ferdinand, IN

Board Members Present:

Jerry Lewis, President Marc Milne, Secretary Keith Dunlap, Treasurer Jeff Cody* Laura Demarest Scott Frosch Danyele Green Dave Haun* Goni Iskali Bob Sergesketter Tom Sollman* Carla Striegel-Winner Richard Vernier Sue Vernier * represented by proxy (see below)

Board Members Absent:

Matt Selig

Call to Order

The meeting was called to order by President Jerry Lewis at 4:00 PM at 7985 S 600 E, Ferdinand, IN, at the Sycamore Shelter within Ferdinand State Forest. Jerry asked everyone to introduce themselves.

Acceptance of Proxies

Salisa Lewis for Tom Sollman

Jamie Winner for Dave Haun

Phyllis Sergesketter for Jeff Cody

Approval of Previous Minutes

The minutes from the June Board meeting were approved as published in the September 2020 *IKC Update*.

E-mail Motions

On June 25, 2020, a motion was brought forth by Danyele Green to approve the COVID-19 guidelines as listed on the IKC website at *ikc.caves.org/covid-19-update*. The motion was seconded by Marc Milne on June 25, 2020. President Jerry Lewis called for the vote on June 25, 2020. The motion passed on June 25, 2020 by a vote of 14 (yes) – 1 (no). Lewis declared that the motion had passed.

On August 6, 2020, a motion was made by Sue Vernier to offer the seller \$70,000 for the purchase of the property specified as an expansion of the Shawnee Karst Preserve, in Lawrence County. The motion was seconded by Danyele Green. President Jerry Lewis called for the vote (also on August 6, 2020). The motion passed on August 7, 2020 by a vote of 14 (yes) with 1 recused from the vote. Lewis declared that the motion had passed.

On August 31, 2020, Keith Dunlap made the motion: "The Board delegates Jerry Lewis, President of the IKC, to act on the IKC's behalf, including signature authority, pertaining to the acceptance of the Specific Distribution to the Indiana Karst Conservancy from the 1986 Living Trust dated October 24, 1986 and the Restatement of that Living Trust executed on June 7, 2017." Laura Demarest seconded the motion, and Jerry Lewis called for discussion. After hearing from the majority of the board with all positive responses on the motion, Lewis called for the vote. On September 1, 2020 the last vote was cast, and Lewis declared the motion passed by unanimous decision on the part of the board.

Treasurer's Report

Keith outlined the current financial status of the organization: Cash assets totaling \$247,691.09 and land assets totaling \$596,000.00, for total assets: \$843,691.09. Funds include Stewardship Endowment: \$73,994.19; Land Acquisition: \$102,921.42; Deferred Dues: \$5,456.25; and General Operating Fund (unrestricted): \$65,319.23.

Membership: Currently stands at 222 members. Twenty-two members were dropped for non-renewal, few of which were long-time members. The IKC had 11 new members in the last quarter.

Status of the Bequest

The details of the bequest will be revealed after legal matters are settled, sometime in early 2021.

Shawnee Karst Preserve

The kiosk is on hold until the pandemic dies down and work restrictions are lifted.

Keith updated the board about the expansion acquisition. He stated that the official papers will likely be signed in a couple of weeks. He recently received an e-mail from the closing company, informing him that closing will now likely occur next month. Currently, the title search is done, and they are now in the process of typing the title commitment document up. However, their office is moving, so processes are delayed.

Keith relayed information about fund-raising for the Shawnee Karst Preserve expansion acquisition. Specifically, that the total project will cost approximately \$78,600. This amount includes the cost of the land, the two appraisals (\$900), closing costs (\$700), and a 10% contribution to the Stewardship Fund (\$7,000). So far, there have been \$55,000 in donations at this point, mostly from the 2019 Gary Whitaker bequest.

Keith stated that the IKC has submitted three grant requests. These requests are to the NSS, the National Speleological Foundation, and the Central Indiana Grotto, potentially totaling \$8,000. Optimistically, we are currently about 85% towards the goal of completely funding this property acquisition. We need to raise about \$12,000 more to complete fund-raising. Jerry asked the board to please give now!

Instead of discussing the Management Plan for the property with the board, Jerry said that he will first look it over, expand it, and bring it to the next IKC meeting for the board to review.

It was decided that a discussion about the related Stewardship Fund contribution will be tabled until the next meeting.

The board briefly discussed a name for the new cave on the property. Jerry suggested naming it "Whitaker Cave" after Gary Whitaker. If it turns out to be an entrance to the larger Upper Twin Cave system, it would then be the "Whitaker entrance" instead. Multiple members claimed that the cave is 75 - 100 feet in length.

Sullivan Cave

Keith discussed stewardship activities at Sullivan Cave. He said that earlier this year, the IKC had its 5-year reinspection with the DNR, one year early as the property had been selected for a routine audit. The takeaway from DNR was that a western area of the property (uphill of the outhouse) needed some work. Specifically, the DNR said that the multiflora rose needed treatment in that area. After this assessment, Keith spent two days treating the multiflora rose with herbicide with more work needed. Since the last meeting, Dave Schaefer has mowed twice, and Keith has sprayed the camping area for stiltgrass. Laura stated that a mint-like plant is starting to take over part of the property.

Keith stated that he had planned to over-seed the camping area with grass seed, but it's currently too dry at the moment, so he will wait until rain is likely. The port-ojohns have not been switched out, but Keith stated that he will wait until fall to do so because there was not much traffic this summer due to COVID.

Wayne Preserve

Danyele discussed the status of the EQIP invasive species work. The IKC had the Year 2, Tract 1 inspection on Aug. 27th and we passed with flying colors. The payment for that track has been received. Tract 3 contract was for \$14,000. We received approval to proceed with the contract on Tract 3 on July 21. The southeast area of Tract 3 is very bad with invasives and needs the most work. Keith stated that we need to have the Year 1 obligations for Tract 3 done by August 2021. Jerry stated that the previous owner liked deer and hinged-cut many of the smaller trees at waist height, which subsequently allowed the autumn olive to flourish. We therefore may need to eventually perform additional Timber Stand Improvements on a lot of the other trees on that property. Danyele stated that the plan is to potentially make the one open area pollinator habitat. Danyele said that we have two new volunteers that are verse in invasive species management and are helping to control invasives on the property. Danyele said that Nick was very knowledgeable and was a big help in determining invasive species on the property. Keith suggested that if Jack continues to volunteer, we should mention his invasive removal business on our Facebook page to give him some free exposure.

Keith stated that if we're comfortable completing Tract 3 by August 2021, we could apply for Tract 2 invasive management this fall in order to also complete it by the end of next year. If we go this route, we will have until December to apply for the grant.

Danyele said that if we have something in by December or January, NRCS should be fine with it. Laura said that the Farm Bill funding can affect their ability to give grants in a timely manner.

Danyele discussed work days at the Preserve. Keith is attempting to visit the preserve at least one morning each week. Jerry and Keith will go this Thursday. Keith said that if anyone wants to go out at other times, he can accommodate a trip for an hour or two. He said that flagging the autumn olive while the leaves are still on is also an important activity at the preserve so they can still be located for later treatment after they drop their leaves. The southeast corner of Tract 3 has a lot of invasives and needs a good deal of work.

Buddha Karst Preserve

Keith discussed the stewardship activities at the preserve and said that he recently mowed and will mow again one more time this fall.

Robinson Ladder Cave Preserve

Keith said that Jaime recently mowed the property. He said that he visited the property today and that the chestnuts were looking decent. Ten of the fifty were hit by ambrosia beetles last spring. He will potentially treat the trees for the beetle infections in the spring. He said that there were no nuts produced by the chestnuts yet. One tree is over 20 feet tall. As for the other trees in the planting, Keith said that the walnut trees are the biggest, the butternuts are looking okay, but the red oaks aren't doing as well. Danyele commented that all oaks aren't doing well because of the late freeze. She asked if there is anything we can do for the lane on the property so that it won't have to be mowed? Keith said that we could put rock down, but the quarter-mile would be a few thousand dollars in cost. Jerry suggested that we could create a parking area closer to the entrance gate and make visitors walk to the cave.

Carla stated that it may be too narrow and that it may be a right-of-way that we cannot modify. Keith stated that he

spoke to two different surveyors about the "right of way" and that the bottom line is that we can maintain it and we have the right to use it, but we may not physically own the lane. Carla asked if we would still have to mow it even if it's rocked. Keith said that we would just have to mow it much less. He also suggested that we could also pay somebody to mow it, but that would probably cost \$200 -\$300 per year. He said that he had the impression that Jaime wasn't interested in mowing anymore. Jaime retorted that he could mow lanes twice a year, but the two open fields grow so fast that twice a year is too long of a time between mowing; trees grow in that time span that make it difficult to mow. Carla suggested that maybe a member in the area could mow it rather than us? Jerry stated that we tried to make the field a prairie and we failed. Keith said that there is a new house next to the property and that the more we let the field grow, the less that house will be seen.

Orangeville Rise

Carla commented on the stewardship activities at Orangeville Rise. She admitted that she hasn't been there in a while, but the last time that she was there, at the beginning of July, she ran into Sarah Burgess, who was doing water monitoring there. Sarah mentioned that their project was ending in December and Carla asked her for an update on her project. Carla proceeded to read a detailed email update from Sarah Burgess about her project. Jerry said that the communication from Sarah basically means that there are sulfur springs that are in contact with the water going to the Orangeville Rise. Laura said that out west, caves are often formed from sulfuric acid rising up from below and that this may also be happening in Indiana, which is interesting. Jerry stated that with limestone, classical carbonic acid is working to form karst, but it could be that some sulfuric acid working too. Carla commented that Sarah is also interested in another project at Orangeville Rise. She stated that they were also working at the Lost River Watershed using a 319 grant and that maybe we could work on invasives under the same grant?

Laura said no, a 319 grant is commonly granted only to study water quality, not for invasives. However, small projects (1k - 2k) for a field border of cover crop could possibly be available.

Lowry Karst Preserve

Keith, on Ray's behalf, talked about stewardship activities at Lowry Karst Preserve. Ray has gotten a third load of rock down for the lane, including a turnaround area. Also, a potential tenting area is now available for a small group. Ray hasn't yet rocked to back of property and will wait until we see how much the property is used.

Keith updated the board about the Lowry funding. He said that the funding drive for Lowry is complete except for the \$5k pledged by The Nature Conservancy. We should receive that money within the next few weeks. He said that Tom Sollman also sent a check to help fund

Lowry and the Shawnee Karst Preserve expansion.

Jerry stated that he will do a bioinventory of the cave next week.

Jerry spoke about the evaluation of the plant community by IDNR and their recommendations for conservation. In March/April, Roger Hedge and another botanist from the Division of Nature Preserves walked the property and have a complete species list but couldn't check bluff because the creek was flooded. They can provide us that species list. They recommended that nobody be allowed to rappel on the bluff because of the sensitive plant community that exists in that area. Carla said that Muscatatuck County Park allows rappelling and that is nearby, so people can use that instead.

Laura asked if we could designate a single spot on the bluff to rappel from and keep all other areas off limits. She said that during vertical training, we're always looking for good spots for training cavers on rappelling. Jerry said that the IKC is not a cave club. Laura said that watershed protection is important, but a lot of our members are cavers that are looking for opportunities to use our properties. Carla commented that there are rare plants on the cliff faces and it's not just because they thrive in those places, but it's because the bluffs are undisturbed, so we shouldn't rappel there. But she suggested that perhaps a spot could be designated for training on specific days by specific people. She also suggested that we could in the future purchase another property that has a disturbed cliff face and use that for training rather than this particular property. Jamie suggested that we revisit this later when we could get another specialist or botanist to find a location that would be good for rappelling. Laura said that we should keep recreational ideals in our decision-making as many members are recreational cavers and that's why they are donating to our conservancy. Jerry retorted that once you destroy that cliff face habitat, it's gone. Those plants won't come back. Scott suggested that we table this motion until we can see the property. Keith agreed that the motion should be tabled. He said the recreational part of this is a problem because there's no easy way to get back to the top, so this is a moot discussion at this point.

Land Acquisition Activities

In the last month, Ranard School Cave has the potential to come up for sale. The cave is on a 66-acre tract of land and may sell for 300k - 330k, so it would be expensive. The IKC could be interested if the owner would subdivide the property, but the owner did not want to entertain that option. Danyele commented that the cave is fantastic. Jerry said that the cave description sounds horrible. The cave is about 7000 feet, making it a rather large cave.

Education and Outreach Report

Jerry said that not much outreach has been done due to the pandemic. The Proceedings of the National Cave and Karst Management forum last year will be out on October 1st as a written volume and will contain the presentation about the IKC by Salisa.

Laura said that she e-mailed the draft of the new IKC membership brochure to the board. She needs more people to look over the brochure to give comments, edits, and suggestions.

Executive Board Election Committee Report

Carla said that at the last meeting it was discussed methods of how IKC recruits and retains our board members and we asked if we're doing that in a manner that's best for our organization. Last meeting, we also decided to put together a committee consisting of Laura, Keith, and Carla. They developed a statement. Carla proceeded to read a statement about the suggestions of the Executive Board election committee. Part of the solution was to increase communication and member involvement. Changing bylaws are difficult, but perhaps we could change them to have some appointed board members rather than all elected board members. The committee is investigating how other organizations' boards are composed, run, and created. The committee also thought we needed more written guidelines for the Nominating Committee. Laura stated that there's a lot of language in the bylaws on how to conduct an election and that those need to be boiled down into instructions and guidelines for the Nominating Committee. Carla said that the committee will create suggested guidelines by the end of October to give to the board for an e-mail discussion. Hopefully, these guidelines will be ready for a formal vote by the December meeting and then ready for the Nominating Committee to use for the next election cycle. Keith mentioned that guidelines could be revised every so often and should not be set in stone.

Carla stated that we should also create a proxy list to get more members involved in the board ahead of time and to prevent scrambling for proxies when board members need them at the last minute. Additionally, the folks on the list could possibly be recruited by the Nominating Committee. Jerry said that a proxy list would be a good idea. Board members often think that he is responsible for finding proxies, but he isn't. Salisa (Tom's proxy) said that a proxy list would be a great way to generate more interest in the board and the IKC in general. Carla stated that we could also have appointed non-voting advisors visit board meetings to encourage interest in being a member of the executive board. Feedback from members is welcome. Danyele said that Bill Tozer (an IKC member) sent her feedback from Jerry's Rambling article. Danyele proceeded to read an e-mail from Bill that suggested having appointed board members was not a good idea.

Scientific Use Application/Permit for IKC Properties

Jerry stated that he amended the research permit application form from the last meeting. He said that the

revised copy is available here at meeting. The main change was that he made it gender neutral. We could use Orangeville Rise researchers as first permit-requesters. Sue Vernier made a motion to approve the modified research permit application form. Keith Dunlap seconded the motion. Jerry called for a vote and the motion passed unanimously (14-0).

Danyele said that she has access to a free account for a program that helps create online forms and that she can get that information to Jerry to help him create an online version.

Zoom Access

Jerry said that he anticipates holding the December and March 2021 IKC board meetings virtually. He said that Zoom is the preferred program to hold such a meeting. However, free accounts only allow conferences for ~45 minutes. Danyele, Goni, and Marc all stated that they all have professional Zoom accounts that the IKC board could use instead. Jerry said that we will want to have a trial meeting before the actual December meeting. Keith asked that since this will be a virtual meeting, do we want to promote participation by outside non-board members beyond just the announcement of the meeting? Carla suggested promoting the meeting as much as usual and to have attendees RSVP to receive a link to the meeting room. Laura said that this could be a good opportunity for long distance members to attend. Carla said that virtual meetings are often shorter, so if we have non-board members attending then that shouldn't make the meetings too much longer. We can mute people if needed. We may have members wanting to call in by phone, will that be a problem? Goni said that that's not a problem.

Volunteer Liability Permit

Jerry reached out to Cassie Hauswald from TNC about volunteer liability. Cassie said to use common sense, but don't let volunteers use power tools or chemicals. She said that TNC only allows certified individuals to use power tools. Keith said that stump treating is pretty safe, and he doesn't think we need to worry about that with volunteers. However, he thinks that spraying with chemical where there could be drift may be a different matter. Jerry responded that if Property Managers are not comfortable with it occurring on their property, don't allow it to happen.

Strategic Plan for IKC

Jerry stated that the *IKC Update* explained the need for a strategic plan for IKC. We need to make future plans without depending on specific individuals. Our current plants are not sustainable in the far future. In December, he will ask all Property Managers to come up with a plan by the annual business meeting for each of their properties. Laura asked if this strategic plan overlaps with succession planning, specifically the hierarchy of passing off of duties onto other members. Jerry said that we don't have that either and that we need to create a plan for the far future.

Mid-State Corridor Highway Update

Keith stated that there was a rally today in Jasper against the Mid-State Corridor. Additionally, a Mid-State Corridor fact sheet was sent out to all of our members. Laura asked what route they are leaning towards. Keith said he wasn't sure, but they are currently delaying the decision because INDOT regulations require a specific number of public meetings to be held prior to the project moving forward and that number has not been met yet due to COVID restrictions. A group out of Jasper is attempting to justify why the route is necessary. Laura asked if our properties are safe from any impact. Keith said for the most part, but there may be long-term impacts. Laura asked if they could invoke imminent domain on our properties. Keith said yes, if they wanted to, but it more likely they would just shift the alignment slightly to reduce the conflict.

Items from the Floor

Carla asked if we should create a Safety Committee? Perhaps we could discuss this at the December meeting? Emergency signage could be covered by such a committee.

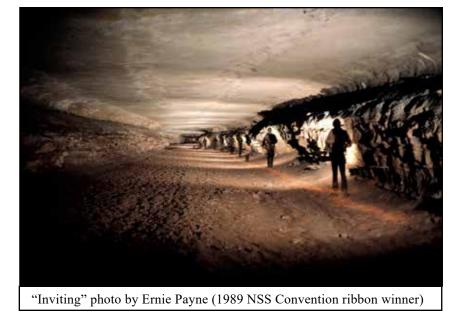
December Meeting

The next Board meeting will be on December 12th, 2020. The meeting will be held virtually over Zoom at 10 AM EST.

Adjourn

Meeting adjourned at 6:17pm

Respectfully submitted by Secretary Marc Milne.



donation restricted to a specific IKC project. Please specify:

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.

\$_____

I know of an area worthy of protection. Please contact me.

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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.