

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.

EXECUTIVE BOARD

President

Jerry Lewis (2019) 812-786-1744 LewisBioConsult@aol.com

Secretary

Marc Milne (2019) 757-338-1080 MilneM@Uindy.edu

Treasurer

Keith Dunlap (2019) 317-882-5420 Keith.Dunlap@juno.com

Directors

Bruce Bowman (2020) 317-539-2753 Bruce.Bowman@tds.net

Laura Demarest (2021) 812-320-5973 LadyLauraDemarest@gmail.com

> Danyele Green (2019) 317-370-7891 DCottrel@iu.edu

Dave Haun (2021) 317-517-0795 DEHcave@onet.net

Everett Pulliam (2019) 317-745-7816 SpeleoRat@aol.com

Matt Selig (2020) 317-258-9983 MSelig@hotmail.com

Bob Sergesketter (2020) 812-482-5517 CableBob@insightbb.com

Tom Sollman (2021) 812-753-4953 TPSollman@gmail.com

Carla Striegel-Winner (2019) 812-367-1602 CarlaStriegel@gmail.com

Richard Vernier (2020) 812-385-5058 rsavcaver2@gmail.com

Sue Vernier (2021) 812 385-5058 rsavcaver2@gmail.com

Jamie Winner (2019) 812-367-1602 JAWinner@gmail.com

COMMITTEES / CHAIRPERSON

Education/Outreach Salisa Lewis 812-967-7592 FirstFeed@aol.com

Web Technologies Bruce Bowman (see E-Board list)

IKC Update Editor/Publisher Keith Dunlap (see E-Board list)

Hoosier National Forest Liaison Jerry Lewis (see E-board list)

Buddha Karst Property Manager Keith Dunlap (see E-board list)

Orangeville Rise Property Manager Carla Striegel-Winner (see E-board list)

Robinson Ladder Property Manager John Benton 812-389-2248 JMBenton1952@gmail.com

Shawnee Karst Property Manager Jerry Lewis (see E-board list)

Sullivan Cave Property Manager Keith Dunlap (see E-Board list)

Wayne Cave Property Manager Robert Sollman 812-753-4953 BobSollman@gmail.com

Indian Creek CE Monitor Jamie Winner (see E-board list)

GROTTOS & LIAISONS

Bloomington Indiana Grotto* Dave Everton 812-272-2300

Central Indiana Grotto* Keith Dunlap 317-882-5420

Dayton Underground Grotto Mike Hood 937-252-2978

Eastern Indiana Grotto Brian Leavell 765-552-7619

Evansville Metro Grotto* Steve Weinzapfel 812-4630-7995

> Louisville Grotto* Susan Wilkinson 317-910-8023

Near Normal Grotto* Ralph Sawyer 309-822-0109

Northern Indiana Grotto* Jennifer Pelter 260-456-3374

St Joseph Valley Grotto* Joy Baiz 574-286-9404

Sub-Urban Chicago Grotto Gary Gibula 630-791-8020

> Windy City Grotto Phil Goldman 847-917-1290

*grottos with liaison agreements

MANAGED CAVES / PATRONS

Buddha Cave Jeff Cody 317-888-9898 codyjpme@att.net

Robinson Ladder Cave John Benton 830-305-1026 JMBenton1952@gmail.com

> Shiloh Cave James Adams 317-945-8604 JKAdams@aol.com

Suicide Cave Kevin Smith 317-412-3667 FreeWheeler2Go@yahoo.com

Sullivan Cave Paul Uglum 317-417-5596 Paul.A.Uglum@gmail.com

Upper Twin Cave Dave Everton 812-272-2300 DEverton@indiana.edu

Wayne Cave Dave Everton 812-272-2300 DEverton@indiana.edu

Cover: The cave crayfish (*Orconectes inermis*) in Fredericksburg Cave, Washington County, Indiana. Photo by Aaron French, October 2018.



IKC QUARTERLY MEETING REMINDER

SATURDAY, DECEMBER 1st, 10:30 AM EST BLOOMINGTON, INDIANA MONROE COUNTY PUBLIC LIBRARY, ROOM 2A

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/stewardship projects and promotion of upcoming 2019 projects at our various preserves; Insurance update; Kiosk(s) activities; Education and Outreach activities; Financial reports; Investment discussions; Land acquisition activities; Nomination Committee, and more....

Directions to the meeting location: The Main Library is located in downtown Bloomington at 303 E Kirkwood Avenue between Lincoln and Grant Streets. The parking lots are accessible from 6th Street. If you are travelling northbound on Walnut street, turn right on either Kirkwood or Sixth Street and go east two blocks. If you are traveling southbound on College Avenue, turn left on either Sixth Street or Kirkwood Avenue and go east three blocks.

ACTIVITIES CALENDAR

Dec 1 – IKC Quarterly Executive Board meeting (see above)

March?? - IKC Annual Business Meeting (date & location to be determined)

Spring ?? – Orientation to Cave Rescue (sponsored by the IKC)

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...

Basically, we were

speeding up a "sur-

vival of the fittest" scenario to allow the

more robust trees to

further prosper...

It would be difficult to miss the fact that the IKC has been hard at work this fall. This IKC Update has articles detailing the work of our Education and Outreach Program at the national Natural Areas Conference in Bloomington, and a myriad of workdays on our IKC preserves. The article on the latter activity details the facts and figures about all the work that's been accomplished... I'll be rambling about some of the philosophical issues involved.

Perhaps all of the stewardship activities at IKC properties look like they just happen as a matter of fact, but that is not the case. Workdays always require enlisting people, and sometimes Board approval and funding. Some of the workdays are indeed more perfunctory than others. Although it was labor intensive getting the 1500foot driveway lane at Shawnee Karst Preserve ready to be re-stoned – a couple days of trimming

back and in some cases, cutting down trees along the drive with chainsaws - it's important to maintain access to the properties and keeping the roads in shape is just part of that task.

We had a particularly vexing management chore at the Buddha Karst Nature Preserve, cutting down trees that just a dozen

years ago we spent time and money planting. As counter-intuitive as that sounds, this was actually the result of a successful program to reforest a preserve that was largely a fescue pasture when we acquired it in 2001. During the early days of planting trees at Buddha, for a workday we'd buy 500 trees from the state nursery and consider it a good day to get them all planted. Then, planting trees seemingly became more popular and we had so many volunteers that we doubled, or more, the number of trees that we could plant in a day. During that era, Salisa and I were involved in the small Borden Scout troop, and that always produced some kids and their parents to help plant trees. So now, years later, the older plantings are starting to mature and we find ourselves with too many trees (in specific areas). As part of participating in the DNR's Classified Forest program, we receive inspections and guidance on the management of our plantings, and Janet Eger, the District suggested that perhaps it was time to thin some of the thicker plantings. So, a couple weeks ago

I found myself in the company of Jamie Winner (who is also a professional forester), chain-sawing some of the trees that we had planted. Basically, we were speeding up a "survival of the fittest" scenario to allow the more robust trees to further prosper, while also making the area look more like a natural forest and less like a tree plantation.

Back at Shawnee Karst Preserve, we've been struggling for some time about what to do about our cave entrance, or lack thereof. To refresh everyone's memory, back in 2011 we learned that the property was for sale and started the process of purchasing 50 acres, centered around an entrance to Upper Twin Cave. This was a real plum of an opportunity and I was ecstatic when we closed on the purchase in January, 2012. Everything was fine for a couple years until the unthinkable occurred, in late 2015 the hillside above the entrance slumped and buried the entrance.

> There has been much discussion in our Board meetings about whether or not it's even appropriate for a conservation organization to be digging out sinkhole floors. To my thinking, we didn't buy the property for a sinkhole floor (although sinkholes are interesting as hotspots of biological diversity...), but for the cave

entrance that had been there before it became just a flat spot on the bottom of a sink. The majority of the Board agreed with this and we subsequently hired a company with a track-Bobcat to come in and excavate the floor of the sink. That had the merit of being able to not only dig out the slumped soil, but to also be able to transport it out of the sink entirely. The lion's share of the excavating was done mechanically, and then with hand-digging we were able to re-open the entrance, once again providing access to the cave.

All was well and good until this past spring when the hillside slumped and we once again had a sinkhole floor instead of a cave entrance. In the interim since the last collapse, Board member Jamie Winner had purchased a backhoe attachment for his tractor and we had a much less expensive option for digging. This was a trade-off of sorts, in that with the Bobcat, the accessible slumped soil could be removed from the sink entirely, but it wasn't really possible to dig down into the previous vertical slot entrance, so the rest had to be hand dug. With a backhoe it was possible to dig further vertically down through the soil fill, but with a backhoe it was impractical to remove slumped soil out of the sink. That said, in a single morning of work with the backhoe and a little manual shovel work, the entrance was re-opened on October 24th.

And then the next week we had a big rain and the entrance slumped shut again. Good grief. The Board has been agonizing over whether or not to put a culvert or some other temporary or permanent structure in the entrance to keep it open, and now that discussion will have to continue. From my perspective, there's more to the entrance than just a place for the occasional cave trip to use as an entry point. There are lots of the cave's natural inhabitants...bats, salamanders, crickets, moths, to name a few...that also rely on the entrance. I've seen all of these animals in the "entrance room" and now

it's no longer an entrance room, but a room 3800 feet upstream from another entrance. Personally, I'd be in favor of reopening the entrance next year and placing a section of culvert in it to keep it open. This is objectionable to some as it means putting an

ugly culvert in the entrance, which makes it look more like the entrance to a sewer than a cave. But... at the moment all there is to look at is a lot of very wet mud. If we put in a culvert that would allow both people and other animals access to the cave, and if eventually we or Mother Nature succeeded in opening the entrance more, we could always take out the culvert. If you have an opinion on this, let me know (my e-mail address is on page 2) or even better, come to the December 1st meeting!

Finally, as I write this, just yesterday we spent a workday doing another stewardship chore at the Shawnee Karst Preserve. When we bought the property, one of the perks beside the cave entrance was an area of native warm-season grass. In other words, prairie grass, and some other prairie plants. It's questionable whether this was historically a small "barren" area, but regardless of the origin, the area is filled with head-height stands of prairie grasses. At Robinson Ladder

Cave we had spent a considerable amount of time, effort and money in trying to establish a small prairie tract, a venture that was frankly a miserable failure. So, it was great that we had an established grassland, but grasslands don't remain that way without active management.

Prior to the settlement of Indiana there were large areas of prairies in the great glacial plains of the northern half of the state, as well as smaller, but still significant stretches of "barrens" in the shallow karst soils of southern Indiana. Prairies are widely mis-understood because many people think that they are just a bunch of grass and weeds. Quit mowing the backyard and come back in a couple months and there will be a prairie, right? No. The native tall-grass prairies in Indiana were mixtures of several kinds of grasses, and over a hundred other species of flowering plants. If you've ever

seen a native prairie in full bloom (like the one in the photo to the left), it's unlikely you'd forget it or mistake it for an overgrown back-yard... carpets of coneflowers and cornucopia of other kinds of plants. And with this distinctive plant community, birds like

the Henslow's sparrow that only nest in prairies.

Almost all of Indiana's prairies are gone, victims of the agricultural fields that replaced grasses with corn, or highways, homes, schools, and other signs of human presence. And a less obvious, but no less destructive problem for maintaining a grassland... fire suppression. Decades of Smokey the Bear telling us about the evil of fires went a long way toward the destruction of remnant prairies. Now it's constantly in the news that some place in the western United States is burning down, a symptom of too much suppression of natural fires that kept the availability of natural tinder in check. And in the prairie region, the fires that kept cedars and other trees from crowding out the grasslands have been suppressed. So now, to maintain a prairie either a controlled fire/prescribed burn has to be conducted, or alternately (but not as effective), the trees can be cut out by hand. Because the native grassland at Shawnee Karst Preserve spreads across to our neighbor's property, conducting a burn is problematic to control. Perhaps in the future we will find a solution to that problem, but in the interim, periodically it's necessary to spend a day cutting back the cedars and poplars that sprout among the grasses.

Prairie grass and Henslow's sparrows not your thing? Well, consider this for a moment... when we purchased the Shawnee Karst Preserve, the Indiana Chapter of The Nature Conservancy funded half the purchase. And they are all about preserve management. Whereas some of the IKC's members and donors are strictly focused on our caves (and that is more than fine), as a "conservation"

organization, it's also important for us to recognize that for some of our partners, the surface plant communities and their management, are equally important. Thus, activities like the reforestation at Buddha, or the grassland management at Shawnee, are what elevate our level of professionalism in the eyes of other like-minded organizations that sometimes also become our funding partners.

And keep in mind that the IKC is an all-volunteer organization with lots of members with diverse interests. We have lots of workdays and another pair of hands is always welcome... we can always find something for you to do!

Jerry Lewis

NEWS BRIEFS...

- One of the largest IKC business obligations that your dues help to fund is our General Liability insurance policy for our six preserves. We have been with the same insurer for twenty years and unfortunately we had to file our first claim this past May. Not unexpected, we were informed by our insurer that they were subsequently dropping us. This initiated a search not only for a new General Liability policy, but also an extensive discussion by the Board on what other coverage we should have to better protect the organization. After working with several brokers and soliciting advice from several others more knowledgable with insurance, we decided on purchasing three policies through the Conserve-A-Nation program offered by the Land Trust Alliance. So in addition to a standard General Liability coverage we had in the past, we also now have a Directors & Officer/Employment Practices Liability policy, and a Volunteer Accident policy. This last policy will provide added benefits for any volunteer who might be injured (or worse) while performing volunteer work for the IKC. Of course this new insurance package significantly adds to our operational costs. Last year our premium was \$820 (30% of our annual dues revenue). For 2019 we will be paying \$1,790 (65% of our annual dues revenue). All the more reason your donations, in addition to your dues, are important to keep the IKC running.
- ☐ The IKC Executive Board elections are coming up in March and the Nominating Committee will be soliciting members who would be interested in running for a Board position. If you have an interest or would like to know more about serving, contact Jerry Lewis by mid-January and he will put you in contact with the Nominating Committee.
- ☐ In 2016, in cooperation with The American Chestnut Foundation, the IKC planted fifty hybrid chestnut trees (most 18" to 24" seedlings), along with 150 trees of other species at our Robinson Ladder Cave Preserve. Most of the chestnut trees have survived with a few doing exceptionally well. The photo to the right shows one of the chestnut trees that is now 13 feet tall and should be producing nuts in another year or two.
- ☐ The IKC has gained five new members in the last quarter. Welcome Elliott Burnette, Bill Roth, Jim Duncker, Jake Yegerlehner, and Judy Semroc. The IKC membership currently stands at 191.



RECENT STEWARDSHIP ACTIVITIES

by Keith Dunlap

In the President's Ramblings, Jerry Lewis mentioned some of the recent stewardship activities with a slant on why. I'm going to concentrate more on the who, what, when, and where in this article...

Robinson Ladder Cave Preserve

Earlier in the summer, Jamie Winner spent most of a day bush-hogging the majority of the

lower open field to retain some bat habitat diversity on the property. He also mowed the camping area in the upper field. Jamie also used his tractor to repair a couple of low spots in the wildlife pond embankment on the Campbell tract so it will be able to hold more water longer. In late October, Keith Dunlap and Bambi Dunlap mowed our Chestnut tree plantation that was planted in 2016.

Buddha Karst Preserve

In August and again in November Keith Dunlap mowed the hiking trail on the property. Also in November, Jamie Winner, Jerry Lewis, and Keith Dunlap culled approximately 100 oak trees (white, red, and chinkapin) from an overpopulated area that was manually planted in 2006.

Wayne Cave Preserve

In late June we had a workday with volunteers mowing the camping area, removing some invasives, picking up trash along Gardner Road, and maintaining the trail to

the cave entrance. Also in June, Keith Dunlap treated the parking area with herbicide. In August, Keith Dunlap, Tom Sollman, and others in-

stalled t-posts with PVC covers along the southern property line of our new expansion tract to better delineate the boundary.

Sullivan Cave Preserve

In July, Keith Dunlap mowed the camping area. In early September, Keith Dunlap sprayed the upper half of the camping area to control

> the infestation of Siltgrass (the lower half was treated last year).

Shawnee Karst Preserve

In July Keith Dunlap and Bambi Dunlap mowed the two loop trails and did some invasive control. In September, Jerry Lewis, Tom Sollman, and Keith Dunlap spent a day clearing the encroaching trees along the driveway lane in preparation for rerocking the lane. In early October, Jamie Winner brought up his tractor and blade while Jerry Lewis and Keith Dunlap supervised the spreading of six tri-axle truck loads (130 tons) of crushed stone to re-harden the drive. Later in October, Jamie Winner returned with his tractor and backhoe attachment to dig out the slumped (and closed) Upper Twin cave entrance. Tom Sollman and Keith Dunlap assisted with some manual labor, temporarily re-opening the entrance, only to have it re-slump a week later due to heavy rains. Finally in early Novem-

ber, Jerry Lewis, Tom Sollman, and Keith Dunlap removed undesirable cedars and poplar trees from the native grass opening on the property.







IKC ROLES AT THE NATURAL AREAS CONFERENCE

by Jerry Lewis

This year the national Natural Areas Conference (NAC) was held at Indiana University, Bloomington. Early on, the IKC received a request to participate from John Bacone, the Director of the Indiana DNR Natural Heritage Program. The IKC arose to the occasion in multiple ways. I first committed to conducting a karst field trip and a symposium on the conservation of karst. Next in April, I proposed that the organization become a sponsor of the conference, a request that was granted by the Board that had the benefit of putting the IKC logo prominently on all of the conference materials next to the other sponsors.

The first major hurdle was to build the foundation of the karst symposium, which as defined by the NAC was to consist of five invited speakers. Generally, at a large national conference like this one, the presentation sessions are open to anyone

who wants to submit an abstract on any relevant topic. The NAC symposia were structured differently... first the concept of the symposium had to be approved by the organizing committee since they allow a limited number. Next, speakers had to be invited. As we were flying the flag of the IKC over the symposium, I elected to invite myself to

be the kick-off speaker and I have a passing knowledge of karst. I then invited four colleagues who I felt represent different niches of karst conservation in different karst regions of the USA, with the common denominator that I considered each to be among the best in the field in the country. These were Scott Johnson, Indiana DNR; Wil Orndorff, Virginia Natural Heritage Program; Rick Olson, Mammoth Cave National Park; and Mike Slay, The Nature Conservancy, Arkansas. Their presentation abstracts were solicited and received for publication in the NAC program.

The next thing to prepare for was the field trip. My concept was to conduct the field trip at Spring Mill State Park. Early discussions suggested an all-day field trip, which was then cut back to a time period between lunch and dinner. Subsequently the duration was cut even more to allow everyone

to return in time for the awards banquet, but this allowed less than three hours at Spring Mill after the field trip participants travelled to and from Bloomington. The first piece of the puzzle was to enlist Wyatt Williams, the Naturalist at Spring Mill, to co-lead the group. Between the two of us, we decided to focus the field trip on the Shawnee Cave System, specifically those parts accessible from the Twin Cave/Donaldson Woods parking area. Wyatt would handle the arrangements with the park, including the equipment to enter the caves, as well as the tour boats. Over the course of time we met three times to plan the field trip and do trial-runs to work on preparing activities that would fit in the allotted time.

Another detail of preparation was to compose a guide booklet for the field trip, which contained topographic maps, cave maps, lists of the cave

fauna of the Shawnee Cave System, photos of the cavefish and crayfish, and a travel guide with karst features to view on the trip to the park from Bloomington. This was prepared and Salisa Lewis and I took it to the FedEx copy center in Louisville where she received a 75% discount through her employer, which saved the IKC about \$200 in copy

charges. We ran the copies ourselves, collated them and placed them in report binders ready to hand out to the field trip participants.

The field trip date arrived – Wednesday, October 24 – and we were lucky enough to have beautiful fall weather (we didn't have a rain plan). Wyatt Williams waited at the gate to Spring Mill to escort the two vans full of field trip attendees back to the Twin Caves parking area, so we wouldn't lose any valuable time to the drivers getting lost in the park. The group departed Bloomington at noon, and they arrived at the meeting spot just a little after 1:00. I welcomed them on behalf of the IKC and the state park, did introductions to Wyatt and the other helpers on the field trip – Salisa Lewis, Tom Sollman, Keith Dunlap, and Wil Orndorff (a friend from the Virginia Natural Heritage Program) – and we handed out helmets and lights, and the field trip guidebook.



First we went a short distance into Donaldson Woods, the virgin forest tract across from Twin Caves, and showed everyone what karst used to look like before Indiana's forests were cut (old growth forest is a rarity in Indiana now). Wyatt talked about forest composition, age of the trees, and other management information while standing at the base of an enormous tree that had prob-

ably been growing for over 300 years.

Next we walked over to the Bronson karst window entrances, where we stopped at the sinkhole above the caves where I talked about sinkhole ecology and karst fauna. And then the highlight of the trip for many of the participants... we entered the downstream Bronson entrance. Wil Orndorff,

Salisa, and I had arrived early and spent an hour finding examples of isopods, amphipods, flatworms, and crayfish, placing each in a labelled plastic bowl (to be released later). We stopped just inside the entrance and showed everyone the cave critters, and then went in to a riffle area where Salisa demonstrated stream censusing with a Surber sampler. Then we inspected the deep

pools below the riffle and as if on cue, a cavefish appeared. Several people told me this was the best part of the field trip, and one of the main reasons I chose that spot to conduct the field trip, since the fish are usually fairly predictable there. Finally we pulled some pitfall traps that we'd placed in the cave the week before and looked at the various cave

invertebrates that had sacrificed themselves to science so that everyone could have a look at them.

We spent about an hour in the cave, and then exited and made our way over to the boat landing at Upper Twin Cave. The boats were loaded to capacity so all of the leaders except Wyatt opted to remain behind on dry ground. Wyatt took them on the standard interpretive Spring Mill cave boat ride, and more cavefish and crayfish

were seen, as well as phoebe and swallow nests from last summer, and even a couple cave beetles were observed on mudbanks.

Upon their return, everyone on the trip seemed to be very happy with everything they'd seen. I received a lot of positive comments/feedback and the field trip was considered a complete success.

The following day was the symposium on karst

conservation. I welcomed everyone to the symposium and expressed that it was presented as a function of the IKC education and outreach program. The room was full, with people standing along the walls. I counted over sixty in the audience. After my introductory talk on karst landforms and associated animal communities, Scott Johnson took

the podium and discussed his work with woodrats and bats in Indiana caves. Both have been in decline in Indiana and Scott talked about management strategies to attempt to combat the problems these animals have suffered. Next Rick Olson discussed myriad aspects of managing Mammoth Cave, the worlds largest cave with over 400 miles surveyed. After a short break, Wil Orndorff talked

about endangered Appalachian cave animals and the challenges of managing species that occur mostly in unprotected ownership. Finally, Mike Slay gave us an Ozark perspective with a discussion of his experiences in managing caves and their inhabitants across Missouri, Arkansas, and Oklahoma.

Unlike many meetings where people talk about

cave animals, we weren't necessarily preaching to the choir at this one. The room was filled with attentive listeners, but not filled with karst land managers or experts on various aspects of cave fauna, thus we reached a different audience than usual. The karst symposium was well attended, I heard a lot of positive comments on it, and the IKC received recognition for putting on a successful field trip and symposium.





BRIAN LEAVELL, NSS 21862FE (1950-2018)

by Jeff Cody

Indiana cavers lost another great friend on August 11, 2018 with the passing of Brian Leavell. Brian's contributions to Indiana caving are too numerous to mention in a single obituary. Not only was he a respected caver, but more importantly, he was a beloved father to his two daughters Sara and Stacey, and his seven grand-children. He will be missed by his family and an entire generation of Indiana cavers.

Brian was born on October 4, 1950 and spent all his life living in his hometown of Elwood, Indiana. He was raised on a farm and was a member of Future Farmers of America (FFA) in his youth. He was close to his father who preceded him in passing

in 1999. Prior to retirement, he worked at Airfoil Textron and also enjoyed previous work in the printing industry where he had been proud of his craft. In addition to caving, Brian also enjoyed fishing and spending time with his daughters and grandkids. Thoughts also go out to Edna Litaker, her daughter Jesseca, and Edna's grandchildren who Brian spent twelve years with as his adopted family. Edna always opened her home to the grotto providing a great meeting place with lots of room for camping.

His contributions to caving were numerous. I first met Brian back in the 1980s going to regional caving events. He and his group of friends always were camped near my group and we soon became friends. Brian, along with his longtime friend Jerry Litaker, surveyed many caves, especially in the eastern karst region of Indiana. I always remembered Brian driving his blue S10 pickup with Jerry in the passenger seat doing the navigating and following them to our ridge-walking and caving destinations all over Indiana. His small stature made him a great ridge-walking partner as he always got suckered into entering the small holes we found. A bit later, Brian was instrumental in establishing the Eastern Indiana Grotto (EIG) where he served as its chairman for many years.

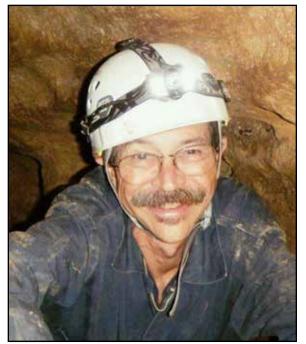
In addition to his exploration and survey work, Brian also led many conservation projects in Indiana. A few that come to my mind were the cleaning of Carcass Crypt Pit and a fence installation at McAllister Pit to accommodate a landowner who was concerned about grandchildren falling in. Also a fence installation at Storms Pit done after my suggestion, seeing the state of the previous fence. This effort led to a better relationship between the landowner and local cavers. His most recent conservation project was the cleaning of the sinkhole near the entrance to Salts Cave. This was a massive, multi-weekend project led by Brian with the help of many EIG members. He also help

organize many Ohio Valley Region annual conservation projects when the OVR was active.

What may be his most important contribution to caving was the work he did with Scout groups: organizing cave trips and getting Scouts involved in cave cleanup trips on camping weekends at Edna Litaker's place. About ten years ago he began to work with Troop 303, introducing some of the new Scouts to caving and sending a message of conservation of nature. Former Scouts now in their twenties have com-

mented on the impact Brian had on their lives, teaching them a respect for nature and how to cave safely. Many weekends with the Scout groups were planned at Edna's beautiful property on ten acres down in Indiana cave country near Judah. All were welcome as the Scout leaders would cook a dinner after caving with the group camping at Edna's place. His outreach efforts to these young kids was very important to him.

I found it amazing he had the time to do all he did. He was a dedicated caver and a more dedicated parent and grandfather. He was a fellow of the National Speleological Society and also a Kentucky Colonel. Brian was known on the NSS Cave Chat forum as "Grandpa Caver" symboliz-



ing his dedication to his family. Anyone who had ever been around Brian was influenced by him and could look up to him as a role model. I sure did. I will miss him greatly.

MY REFLECTIONS ON BRIAN LEAVELL

by Dave Everton

Brian Leavell was one of two persons who greatly influenced my involvement in organized caving. I met him and Jerry Litaker (NSS 21808FE, deceased in 2006) in late 1983 or early 1984, and they immediately took me under their wing. Although each of them equally had a great impact on me, I'll focus on Brian's influence here.

Brian was an independent/unaffiliated NSS caver at the time I met him, and had been up to that point. However, he was very well connected to organized caving, in spite of not being a part of a grotto. In my opinion, experience should rarely be measured in years, but instead on the investment of time and how much one has done. When I first met Brian, he was already very experienced at both horizontal and vertical caving. He regularly caved in Indiana, but also caved in other areas, sometimes as part of attending various regional caving events including MVORs, TAG events (SERA, etc.) and SpeleoFests (which at that time, rotated location each year), and at other times on his own. It was because of Brian that I joined the NSS in 1985, about a year after meeting him.

Although he was laid back and soft-spoken, Brian was very outgoing and capable. He shared much knowledge and equipment with me, allowing me the chance to visit caves I'd never otherwise would have been able to. In the days long before social media, it was hard work to do the network-

ing that one had to do in order to visit a lot of caves, and he amassed a long list of places he'd visited. However, I recall him telling me that it wasn't always a smooth ride! When I look back now, I believe that he and Jerry would have had a much easier time, had they affiliated themselves

with an Indiana Grotto of the NSS. My personal experience with the two of them and other independent cavers (whether by their own choice or otherwise) has strengthened my personal resolve to make every person who has come my way (including through grottos) to feel welcomed into the caving community. It should be noted that

Brian and Jerry later formed the Eastern Indiana Grotto, which remains active today.

In my opinion, Brian exemplified many things a caver should be. He cared about the caves, he cared about the land and landowners, and he cared about the cavers. He was a strong proponent of extending the opportunity to youth of discovering and nurturing a love of caves and caving. He devoted much time and effort leading Scout groups and other youth ventures.

Brian did so much for my interest in caving early on, that it has always meant a lot to me that I was able to introduce him to an aspect of caving he hadn't had the chance to do before meeting me. I became intensely interested and involved with cave surveying around 1986, and introduced him and Jerry to it. He really took to it, and with Jerry went on to do a lot of survey and documentation of Indiana caves, especially in the eastern karst region of southern Indiana. He was directly involved in submitting cave information to the Indiana Cave Survey for more than 200 caves.

He surveyed in roughly 130 different caves, the maps of which represent more than eight miles of horizontal passage. Considering that only eight of those caves were between 1000 and 2000 feet long; only four were over 2000 feet; and only one was over 3000 feet, that is a pretty incredible



A LOOK BACK AT INDIANA KARST

by John M Benton

Inside a shallow niche in Marengo Cave in Crawford County, Indiana, is the name Bill Clifton and six dates, the first June 6, 1913, and the last June 6, 1963. Every ten years since he inscribed his name and the first date, "Willie" Bill Clifton paused in his underground world to etch another decade of his life. In 1963 at age 77, Willie was probably the oldest active cave guide in the United States. For over 50 years he guided tourists through the halls and passageways of Marengo Cave. By estimates of long-time cavers and past owners of Marengo Cave, Gary Roberson and Gor-

don Smith, Willie Clifton walked over 75,000 miles during those 50 years he guided in the cave.

Willie Clifton was born in Crawford County in 1885, not far from Marengo Cave. He was hired by his friend and then current Marengo Cave manager, J.M. Weathers. While guiding at the cave, he lived within earshot of the cave, and via a clanging cast iron bell, he would often be summoned to the cave in his off time. Upon hearing the prescribed number of chimes, Willie knew there was a tour party awaiting at the cave, and he would stroll up to the cave to be the waiting party's guide. In his early guiding days before electric lights (the

lights were installed in 1923), Willie used a kerosene lantern with a large reflector attached. Willie passed in 1980 at 95 years old, and was buried in the cemetery adjacent to Marengo Cave park.

In June of 1963, in honor of Willie's 50th Anniversary as a Marengo Cave tour guide, "Bill Clifton Day" was held. Special "Clifton Tours" were offered for 50 and 75 cents. His antique kerosene lantern with its huge reflector was on display. Willie prided himself as being a cave 'musician'. He tinkered around in his spare time, tapping on stalactites and formations in the cave with a wooden mallet to the enjoyment of tourists,

treating them to various melodies. Willie retired from the cave in 1965 at age 80, reportedly, somewhat under protest. He lived another 15 years.

Willie started guiding in 1913, just 4 years after the entrance adjacent to the visitor center was dug and put in use. Marengo Cave was discovered in 1883 (when Willie Clifton was 2 years old) by brother and sister, Orris and Blanche Hiestand, and their original entrance was used the first few years for tours. Most of Willie's tours lasted about an hour, but if he detected a genuine interest in the party, depending on how visitors reacted to his cave

history, the tour may have lasted considerably longer!

Evidently, Willie Clifton did a fair amount of wild caving around the Marengo area. In caves such as Moons Cave and others, one can find Willie's initials "W.C." and a date, usually in the 1920s, 30s and 40s. His initials are also found in an obscure side lead in Marengo Cave's New Discovery of 1992. It is believed that Willie entered via another entrance. His caving companions were Henry King, or one of the Stewarts (Henry was also a Marengo Cave guide and the Stewart family was an early owner of the cave). The Clifton Group Center, used for groups staying at

50-YEAR CAVE MAN . Bill Clifton, 77, who scratched his first official mark in Marengo Cave

50-YEAR CAVE MAN . . Bill Clifton. 77, who scratched his first official mark in Marengo Cave as a guide in 1913, hasn't missed a season there since. He is holding an antique kerosene lantern used in guiding parties through the cave before his time.

the cave, is named after Willie Clifton.

Earlier this year, long time Marengo Cave owner (and IKC member) Gordon Smith (and his wife Judy), passed the torch and stewardship of the cave, by selling Marengo Cave to Gordon's long time employee Steve Calhoun who is continuing the stewardship that Smith and previous co-owner Gary Roberson started. Marengo Cave remains in capable hands.

Sources: Crawford County Democrat, June 14, 1963 ad; Louisvile Courier-Journal June 16, 1963, "Marengo Cave Guide Has Made His Mark"; Louisvile Courier-Journal October 4, 1995, Dale Moss column.

INDIANA KADOT	CONSERVANCY TRE	ACLIDY DEDODE
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Income/Expense Statement From July 1, 2018 to September 30, 2018

INCOME:

Dues Apportionment and Residuals	766.50
Donations - General	772.50
Donations - Land Acquisition Fund	168.00
Interest	421.60

\$2,128.60

EXPENSES:

IKC Update (printing, production, mailing)	293.63
Education / Outreach	580.00
Stewardship/Conservation	135.28
Business (credit card fees, etc)	3.25
Wayne Cave Expansion (excludes surveying costs)	101,450.00
Transfers to/from restricted funds/other adjustments	-101,016.34

(\$1,445.82)

NET OPERATING EXCESS (DEFICIT) THIS PERIOD:

\$682.78

Balance Sheet September 30, 2018

ASSETS:

Cash in Checking / Saving Accounts / CDs		158,375.50
Robinson Ladder Cave Preserve	(73.48 acres)	162,000.00
Wayne Cave Preserve ¹	(57.59 acres)	188,000.00
Shawnee Karst Preserve	(50.31 acres)	105,000.00
Buddha Karst Nature Preserve	(36.84 acres)	29,000.00
Sullivan Cave Preserve	(28.00 acres)	72,000.00
Orangeville Rise Nature Preserve	(3.01 acres)	7,000.00
Indian Creek Conservation Easement (13.16	

\$721,388.66

FUNDS & OPERATING EXCESS:

Land Acquisition Restricted Fund ²	29,451.45
Deferred Dues Restricted Fund (190 members)	3,945.00
Stewardship Endowment Restricted Fund	58,333.37

Previous General Fund (total) 65,976.06

Net Excess (Deficit) This Period 682.78

Current General Fund (unrestricted) 66,658.84

Current General Fund (committed) 4,100.00

Real estate liquidity (basis value) ____563,000.00

Total Liabilities & Operating Excess \$721,388.66

NOTES:

- 1) Value of the Wayne Preserve increased by \$103,000 to reflect the 25.74 acre expansion
- 2) Excludes \$12,870 in outstanding pledges for the Wayne Cave expansion

IKC EXECUTIVE BOARD MEETING MINUTES

Saturday, September 22, 2018, 4:00 PM EST, Ferdinand State Forest, Ferdinand, Indiana

Board Members Present:

Jerry Lewis, President

Marc Milne, Secretary

Keith Dunlap, Treasurer

Bruce Bowman

Laura Demarest (proxied by Salisa Lewis)

Danyele Green (proxied by Bambi Dunlap)

Dave Haun

Everett Pulliam

Matt Selig (proxied by Phyllis Sergesketter)

Bob Sergesketter

Carla Striegel-Winner

Richard Vernier

Sue Vernier

Jamie Winner

Board Members Absent:

Tom Sollman

Call to Order

The meeting was called to order by President Jerry Lewis at 4:00 pm EST at Ferdinand State Forest, Ferdinand, Indiana.

Acceptance of Proxies

Salisa Lewis was accepted as a proxy for Laura Demarest. Bambi Dunlap was accepted as a proxy for Danyele Green. Phyllis Sergesketter was accepted as a proxy for Matt Selig.

Approval of Previous Minutes

The minutes from the June Executive Board Meeting were approved as published in the September, 2018 *IKC Update*.

E-Mail Motions Since Last Meeting

No e-mail motions were made.

Treasurer's Report:

Current finances: Keith outlined the financial status of the organization: Cash assets totaling \$158,437.83 and land assets totaling \$563,000.00 for total assets of \$721,437.83. Funds include Stewardship: \$58,333.37; Land Acquisition: \$29,281.45 (note, this does not include a pledge of \$12,870.00 from The Nature Conservancy); Deferred Dues: \$4,425.00; and General Fund (unrestricted): \$66,398.01.

Membership: Currently stands at 185 members. Eleven members were dropped for non-renewal. Two to three of these are expected to renew at a later date.

Stewardship fund investment options: Keith Dunlap spoke to Ted Kays of National Speleological Foundation, who said that NSF could take, manage, and invest

our money for us. We have the option of contracting them to invest the money however we want at the level of risk we are comfortable with. The NSF invests only in mutual funds. For legal reasons, the NSF cannot provide us with their past earnings history, but it is estimated that their long-term return would be better than the 1-2% we have been earning via CDs. Another option for investment is similar to what they have done with the NSS permanent endowment fund where we transfer the ownership of the money to the NSF and in return they guarantee an annual growth. Keith suggested that it might not really be the time to be investing in mutual funds, although trying to time the market is also problematic. April 2019 is the earliest that we could invest because our funds are currently invested in a CD which will mature then. The decision to invest and the parameters of the NSF contract must be a Board decision. Keith thinks that long term we could do much better than 2%, but it comes with some risk, especially short term. Since Tom was not present and he brought this agenda item up in the last meeting, it was decided to delay the discussion until the December meeting at which time we will discuss it more thoroughly.

Shawnee Karst Preserve:

Entrance slumping status: Keith and Jerry examined the slumped/closed entrance recently. Even though the area recently received five inches of rain in one day, the rain did not "flush" the soil slumped on the entrance into the cave, although there was also not much evidence of new slumping observed. On a digging attempt last spring, the mesh installed on the hillside above the entrance to prevent more erosion into the entrance has since washed down and is in the hole, making digging more difficult. Currently, an 8-9 foot pile of mud is on top of the entrance. Jerry stated that there are likely three options: 1) do nothing and see what naturally occurs, 2) dig it out ourselves, or 3) use Keith's excavating contact to give us a quote on clearing the entrance. Richard Vernier suggested that we install a culvert once the entrance is cleared so that water could be redirected and the entrance is protected from future collapse. Keith estimated that - including inside the entrance – the column of dirt is approximately 12-13 feet high. Jaime suggested using a post-hole auger to dig a hole through pile of mud. After an initial hole is dug, it would then be more likely for water to wash the mud through the cave. Jaime also suggested that if we go for an excavation, that we should also install a culvert. Keith suggested creating a lean-to that would cover the entrance but allow for drainage. Carla suggested that we do nothing because digging out cave openings is not part of our mission. Keith stated that the cave has been closed for six months since the entrance collapsed. Jerry asked for suggestions of viable options to dig down into the mud. Keith stated that by hand the process would likely take 2-3 hours of digging if/when it's dry. Jaime stated that a major issue for using larger equipment would be getting the vehicles or equipment into the sinkhole as it would be difficult. Keith stated that we would need to ensure that we stabilize the entrance once it is opened up, that a lean-to would be less invasive, and would be easier to remove. It was decided to not take any action and to wait for the area to dry to see if simpler options become available.

Road maintenance workday: Jerry stated that at a prior meeting (September 2017) we voted to allocate funds for crushed stone to renovate the road, but it had not yet been done. Jerry stated that we would need a viable road in order to get equipment to the entrance of the cave. Salisa stated that it is our job to maintain the road. Keith stated that the current road needs maintenance. Bruce also stated that the road should be maintained to prevent future damage and costs. Keith said that we still need to cut back a good bit of the over-hanging trees so that we can get trucks in to rock the road. Jaime stated that we should keep maintaining the road. Jacqueline Payne asked if we could install wood "curbing" along the side of the road to strengthen the road and prevent rutting. Jerry stated that the cause of the road degradation has been mostly addressed with additional ditch cutouts and it's not a big issue at the moment. Jaime stated that we could re-crown the road so that the water better runs off to the sides. He suggested that we wait for a dry time to do this work. Jerry suggested that we hold a workday to address clearing overhanging trees and get the rock delivered and spread. Jerry also suggested another workday later this year to clear cedars and smaller trees from the of the grassland area.

Update on the stream census project was postponed in lieu of Tom's absence.

Kiosk design, placement, and funding: Jerry stated that he gravitated towards a kiosk with a single 4 x 8 panel (rather than something larger) located on the circle. Jerry stated that he could build it in his garage this winter and then get reimbursed for the cost of building the kiosk through the IKC (probably more than \$100, which was already allocated for the project). Jerry suggested approving \$1000 for the kiosk to reimburse for the construction. Keith suggested using cedar posts for the kiosk. Bruce moved to approve up to \$1000 for construction of kiosk. Everett seconded. The motion passed unanimously.

Sullivan Cave

Stiltgrass control: One year ago, Keith treated the lower half of the camping area and it worked well. However, the treatment also killed the other grass. The upper half of the camping area was also covered in Stiltgrass. Danyele suggested that he change the concentration of herbicide to just kill the Stiltgrass. Keith then changed

concentrations and treated it; we'll have to wait and see if it worked. He wants to seed the camping area with tall fescue which is hardier than the bluegrass used last time. The herbicide was the same that Danyele used (Clethodim). At the proper rate, this herbicide will kill annual grasses (like Stiltgrass) rather than perennial grasses. He also sprayed the area near SR 54 as it also was getting infested with Stiltgrass.

Port-a-john update: Keith was going to have it serviced in June, but it wasn't used very much, so he is planning to have it serviced in November.

Kiosk: Jerry said that a kiosk is needed at Sullivan and he suggested that he could build one similar to the one he is planning for the Shawnee Preserve.

Wayne Cave

Kiosk status: Keith said that there is no progress on the wording of the sign for the kiosk. He and Tom hopefully will make progress before the next meeting.

Preserve expansion: Jerry said that the IKC received an e-mail from the TNC indicating the funding was being processed. Keith said that we closed on the Wayne Cave expansion property on July 19th. All papers have been signed. However, the assessments are still not correct because they erroneously show that the \$350,000 home is on our part of the sub-divide. Keith has talked to the Assessor's Office and it will be corrected. The Classified Forest paperwork has been completed and submitted.

Stewardship: Keith said that the southern boundary of the expansion was delineated with T-posts / PVC covers to visually mark it. Railroad spikes in the ground mark the access easement. Keith suggested flagging a path for a loop foot trail during the winter and have IKC members approve the trail route prior to clearing it. He also wants to remove the fences/barbed wire and T-posts during the winter by using a puller in early December, especially since Classified Forests are not supposed to have interior fences. The previous owner wants the T-posts back. Carla said that recycling centers will take barbed wire, but they won't pay much for it.

Invasive species assistance contract: Keith stated that we could apply for a NRCS grant/contract to help clear autumn olive and multi-flora rose in spring 2019.

Management plan for Wayne: Keith stated that the Wayne Management Plan has not been updated since 2003 and needs to be revised to incorporate the 12-acre and 27-acre expansions. Bruce Bowman volunteered to examine the existing plan and to draft revisions. Bruce requested a copy of the agreement with TNC to more accurately revise the plan. Keith stated that TNC does not have a conservation easement on the property.

Robinson Ladder Cave Preserve

Jaime mowed a good deal of the lower field. Most of the field is open and the rest is seceding into a young forest. He also added dirt to the pond dam. Keith said that he did not do the second spraying around the chestnut tree planting this summer, but his goal is to mow it after the first frost and then spray next spring. Jerry asked if we need to replant trees and if the trees will make it. Keith said that the Chestnut trees will likely make it to ten years and then after that it is a toss-up to see whether or not the chestnut blight takes them or not. Regardless, the other species of trees (red oak, black walnut, and butternut) planted at the same time should do well.

Land Acquisition Activities

Wayne Cave Preserve expansion completion: (covered previously)

Shawnee Karst Preserve potential expansion: Keith explained that the person that lived in the house near the preserve passed away in March 2018. The man had four daughters and one of them contacted the IDNR about the property (17.5 acres plus the house) and subsequently Janet Eger (Lawrence County District Forester) contacted Keith. Keith contacted the daughter to see if they would be interested in splitting the property as we would be interested in approximately 16 acres, but did not want the house. They have since responded that they were not interested in splitting the property. We may still pursue buying the whole property then splitting off the house, although this complicates things. There are other complications including an older house on the 16 acres that would need to be demolished and some surveying costs if we split the house away from the 16 acres.

Keith also sent an inquiry letter to a landowner adjacent to the Wayne Cave Preserve property to see if they might be interested in selling. No reply was received.

IKC Preserves Emergency Protocols

Update was postponed in lieu of Danyele's absence. All of our owned properties have the signs up. We still need to install signs at Shiloh and Suicide caves.

IKC Website Status

Bruce said that Alex Sproul is the webmaster of NSS's web server where the IKC's website is also hosted and Alex reported that there has not been a lot of progress regarding the migration of the NSS web services to a new server. Alex said that until NSS migrates, there won't be much progress migrating or dropping support for the IKC website. Bruce said that we are currently waiting to see what happen, but that the IndianaKarstConservancy. org domain is still available, but Bruce doesn't think we need to do much until we get further word from the NSS. Bruce said that it seems likely they will transfer the NSS server in the middle of 2019. Keith assisted Bruce in putting all of the IKC Updates back issues online.

Education and Outreach Report

Spring Mill State Park cave weekend: Matt Selig, Laura Demarest, and Tom Sollman gave presentations at

the Spring Mill Karst weekend. Unfortunately, none of them were present to provide details about the event. Jerry added that the talks were lightly attended according to the park's naturalist, Wyatt Williams. There were some questions on the effectiveness of the promotion of the event. Carla suggested next year informing IKC members of these public talks done by IKC Board members. Regardless, we did satisfy our commitment with Spring Mill on volunteer presentations as part of our access agreement with the DNR.

Book: Subterranean Fauna of Indiana. Jerry said that this is a project that he had been working on for three years. Jerry said that the book will have 45 years of his cave fauna records in Indiana. He also said that Allen Pursell has indicated interest by TNC in supporting publication of the book, which Jerry suggested as an IKC publication. He said that a significant part of the book will be about subterranean invertebrate fauna and where it occurs. He said that he envisions that Tom Sollman will also contribute to the book in a population ecology section. Another section will be on vertebrate cave fauna.

Natural Areas Conference field trip and symposium – funding: Jerry stated that the field trip had a limit of 16 people and all slots are now taken. He explained that Wyatt indicated that the Spring Mill will charge \$5 for each of the participants on the trip (for park entry and the boat tour) and they would like that money up front (\$80). The IKC will pay, then hopefully receive reimbursement from the conference organizers. A booklet for the participants will be provided and the IKC will pay for that out of general reimbursements.

T&E / SWAP Meeting: Jerry explained that he presented at a regional endangered species conference a couple days ago and he did so under the banner of the IKC.

TNC Trustees meeting: Jerry said that Allen Pursell (TNC) asked Jerry and Keith to present to the Indiana TNC Trustees meeting about cave conservation, which will be done in January.

Orientation to Cave Rescue status: Jerry explained that Jess Deli was contacted about the Cave Rescue Orientation training approved at our June Board meeting, but due to several complications, they have not yet confirmed a date, but likely next spring.

Items from the floor

Keith Dunlap: This summer, TNC purchased the approximately 900-acre Wallier Woods in Harrison county. Jerry and Keith have been working with Dawn Slack, steward for the property, on appropriate signage, an alarm system, and data loggers for the bat hibernacula on the property. Keith and Tom will be installing these items next week and the IKC funded purchase of the materials (<\$100). Keith recommended against installing a gate because TNC doesn't have enough

information about bat movement or winter visitation. Part of the property will likely have a bat mitigation easement placed on it. Limited access to the cave during the summer may be possible.

December meeting

It was collectively decided that the December meeting will be held on December 1st (Saturday) at Ellettsville (Monroe Co. Library, Ellettsville Branch) at 10:30 am. Jerry stated that he will send out a notice to confirm

information about meeting and that the back-up location is Monroe Co. library in Bloomington. [note, it was later determined that the Ellettsville Branch was unavailable and the meeting will be in Room 2A at the main branch in Bloomington]

Adjourn

Meeting adjourned at 6:07 pm.

Respectfully submitted, Marc Milne, IKC Secretary

...continued from page 11

effort for the period of about fourteen years or so that he was actively surveying. Those figures don't represent all he surveyed, although they account for the majority. Much of his project caving was done in Jennings and Jefferson counties, although he worked in other counties as well.

Our paths diverged sometime after I introduced Brian to surveying, although not intentionally. He and Jerry got involved with the EIG and surveying as mentioned above, while I got involved with other survey projects and cavers. Our paths diverged even further when I got married in 1990 and took on the role of husband and stepfather to two people who tried to like caving, but simply didn't, resulting in about a ten-year hiatus for me. I resumed caving after my step-daughter grew up, and Brian was of course still at it, and periodically throughout the years since

then, our paths crossed. We were involved in the same projects from time to time as Brian had a big interest in cave cleanup and conservation.

Sometimes relationships can evolve in the most interesting of ways. Brian was very good friends with Edna Litaker, who had previously been married to Brian's long-time friend Jerry Litaker. Prior to that, both Jerry and Brian were friends of Edna's through her spouse Doug Bennett, who was a regular caving partner of theirs (and mine) in the early to mid-1980s. I have known Edna for a long time, and my heart goes out to her; she lost Doug first, then Jerry in 2006, and now most recently Brian in 2018.

I am grateful in so many ways to have known Brian. We didn't have the same closeness or relationship that he had with others, but he was a part of me nonetheless. I am so grateful for, and will forever cherish the memories I have of knowing and spending time with him!!

ADDRESS IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapol IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organized for the indianapol IN 46206-2401.	I would like	e to help the IKC protect Indiana's unique caves and	other karst features. Enclosed is:	
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 Make checks payable to the Indiana Karst Conservancy, Inc. and mail to to IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapol IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organized.	\$	for IKC membership dues at \$15 per year (dues	expire March 31st of each year, please pro-rate @ \$1.25/month).	
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