

# IKC UPDATE

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# INDIANA KARST CONSERVANCY, INC

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[ikc.caves.org](http://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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# IKC QUARTERLY BOARD MEETING REMINDER

**Sunday, September 8th, 1 PM EDT**

**Sullivan Cave Preserve**

**2088 SR 54 W, Springville, IN**

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 cave and karst conservation, and related topics. Past, present, and future IKC projects are discussed to solicit comments and input from our members and the caving community as a whole. The meetings are informal, and everyone is encouraged to attend and participate. The IKC Board wants your input.

**Preliminary Agenda Items:** Financial reports; Recap of recent preserve work projects; Promotion of upcoming preserve projects; Education/Outreach/Field Days updates; Indiana Cave Symposium; Electronic scheduling and waiver system; Cave/land acquisition activities; and more...

**Meeting Details:** The meeting will start promptly at 1 PM. If rain is forecasted to be likely, the meeting may be moved to a neighboring property with an outbuilding (1992 SR 54 W). The decision will be made by 11 AM. If you have questions about the meeting, please contact Matt Selig (see contact information on page 2).

**Pre-Meeting Stewardship Activities and Lunch:** The pre-meeting stewardship activities on the property start at 10 AM. Tasks include installing a gate post, invasive spraying, firewood splitting/stacking, and woodshed roof painting. We will also have a pitch-in lunch at 12:30 with grilled hot dogs and brats. Please bring a side dish or dessert to share. If you have questions contact Joe Kinder (see contact info on page 2).

## ACTIVITIES CALENDAR

**Sept 8 – IKC Quarterly Board Meeting/Stewardship (see above)**

**Oct 12 – Big Day Birding Hike at Robinson Ladder Preserve (see page 16)**

**Nov 9 – Winter Tree ID Hike at Shawnee Karst Preserve (see page 5)**

**Dec ?? – IKC Quarterly Board Meeting (date and location TBD)**

**April 26 – Indiana Cave Symposium, Orange County Community Center**

For more information on the Indiana Karst Conservancy, visit our website at [ikc.caves.org](http://ikc.caves.org), our Facebook page at [www.facebook.com/IndianaKarstConservancy](http://www.facebook.com/IndianaKarstConservancy), 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 may also be made electronically by credit card or PayPal using our on-line services on our website (see the Join Us! tab in the menu) or [ikc.caves.org/join-the-ikc](http://ikc.caves.org/join-the-ikc).

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. Back issues can be found at [ikc.caves.org/ikc-updates](http://ikc.caves.org/ikc-updates).

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## RAMBLINGS FROM THE PRESIDENT...

For most of my life, I was a “hermit caver”. What are hermit cavers? Loners. Obsessives. Secretive dreamers. Like old-time prospectors in search of vast and looming natural limestone cathedrals underneath the hills of southern Indiana.

Other cavers might jump our claim. They might ruin our relationship with a landowner. Or worst of all, they might scoop us, and take all the credit for discovering the next amazing, long, intricate, and massive cave we found.

So, we ridgewalked, we “ridgetalked”, we headed off into the hills and climbed in pits, crawled in springs, surveyed, mapped, pushed, and explored to the point where cave mud flowed through our veins, and we moved like eyeless crayfish as we wound our way through virgin cave passages.

As such, I was never much of a “joiner” of caving organizations. I enjoyed the occasional IKC workday and I found the grottos useful in terms of helping recruit people to survey, dig, and haul equipment. But these cavers often tired of an endless succession of 50-foot long muddy Indiana belly crawl caves and I would explain, “It’s a numbers game. We will find a big cave eventually, trust me!”

Fast forward to the 71st Cave Capers where I heard an old timer tell a young caver, “You may touch my Suunto compass. It is a sacred relic.”

It made me think how caving has changed so much in my lifetime. I remember how amazed I was when I got my first carbide lamp in the late 1970s. That was prime caving technology at the time. It was orders of magnitude better than the D-cell battery flashlights we were trying to use.

Now I have a light-weight headlamp with a rechargeable lithium battery that will last an entire cave trip and flood the cave with light, illuminating nooks and crannies that would have been lost in the flickering shadows cast by my trusty carbide lamp.

There has been a technological revolution in caving gear – lights, helmets, vertical equipment, kneepads, packs, caving suits. My old Suunto

Tandem compass and inclinometer and a 100-foot reel tape once epitomized the height of precision and data measurement. These analog tools have been replaced by the likes of Disto-X laser survey equipment and computer software that can make museum-quality 2- and 3-D maps of caves.

Like the spy who came in from the cold, I began to find myself attracted to caving organizations and got involved with the IKC because I believed in our conservation message and respected the hard work this organization does to protect and conserve Indiana’s caves.

My hesitation about joining organized groups of cavers has been replaced by my experience with our vibrant grottos that are active in getting their members underground and doing so in a safe, responsible, and conservation-minded manner.

Cave Capers is of course, hosted by the Central Indiana Grotto, but I also met members from the Bloomington Indiana Grotto, the Evansville Metro Grotto, the Northern Indiana Grotto, the Eastern Indiana Grotto, the Saint Joseph Valley Grotto, the Windy City Grotto, the Near Normal Grotto, and the Shallow Grotto.

There was also a strong cave rescue and training presence at Capers. Far developed from the early days when some cavers

were willing to go find lost or injured people in caves, at Cave Capers there were multiple instructors from the National Cave Rescue Commission (NCRC) who were there to enjoy caving and interact with cavers.

There were also many cavers who have undergone various forms and levels of NCRC training, many of whom attended classes sponsored by the IKC. We believe promoting safe caving is in the caving community’s and the IKC’s best interest.

Regarding cave sciences, I was impressed on Saturday night at Capers by the presentation about research in volcanic and ice caves located on major volcanoes in Washington State. This research highlighted just how much remains



Spike Selig

unknown about caves in the United States, the world, and even on other planets.

Likewise, I was delighted to go caving with a cave researcher from Purdue University who is analyzing cave deposits to study “paleomagnetism”, the history of Earth’s magnetic fields. Cave sciences remain young and there is still much work to be done. There are scientific questions yet to be asked that will be answered with information we will find in caves.

I was also heartened to see a strong conservation presence at Capers. I had the pleasure of meeting people from the Karst Conservancy of Illinois and unlike the early days of the Indiana Karst Conservancy, when our work was controversial, I got the sense that the IKC and cave conservation work is now held in high regard by our caving community. More than half the caves open for visitation during Capers were either IKC-owned or managed. Recreational caving and conservation are not activities in conflict with each other.

These developments in our caving community reflect my own movement from solitary and isolated caving efforts to joining a supportive community of cavers. A fellowship that believes it is

important to develop a culture of safe and responsible caving, data collection for a growing scientific discipline, and a shared responsibility to conserve and preserve our karst assets.

I write this Ramblings the day after Capers as I nurse sore muscles, wash the dirt from my caving gear, and consider how we can continue to grow as a community. We have resources and tools we couldn’t imagine fifty years ago. We have a vibrant community of caving organizations that is excited about our mutually supporting work.

And at the IKC, we have an Exempt Purpose that directs us to protect, study, and educate. We are cavers who work for the benefit of caves, cavers, and cave landowners.

I am sure there are still hermit cavers out wandering the hills of southern Indiana searching for undiscovered caves. I believe we need them, cloistered as they are. But we are also at a point where technology, training, and advocacy have created something special. Joining this congregation of cavers and cave organizations at this year’s 71st Cave Capers was a powerful experience.

*Matt Selig*

## WINTER TREE ID HIKE AT SHAWNEE KARST PRESERVE

**NOVEMBER 9**

**10 AM EST to NOON (hike)**

**12:30-1:30 (optional stewardship activity)**

For the last of our four 2024 field events, join DNR District Forester Janet Eger for a hike and learn how to ID trees in the winter! We will also focus on our surface management of this preserve and how we utilize the assistance of resource people like our District Forester to make sure we are managing the preserve properly. *We will have an optional stewardship opportunity if you are able to stick around after the hike. A light lunch will be provided for anyone who stays.* Registration opens October 4, but you may go to [IKCFieldTourNovember2024.eventbrite.com](https://www.eventbrite.com/e/ikc-field-tour-november-2024) at any time and have a reminder sent to you.



The planned stewardship activity is cleaning up a small old dump site of trash and recyclables on the preserve so come prepared to make good things happen!

For questions on the above event, contact Outreach/Education coordinator Carla Striegel-Winner at [IndianaKarstConservancy.info@gmail.com](mailto:IndianaKarstConservancy.info@gmail.com) or 812-639-9628.

# 2023 FLORISTIC REPORT: WAYNE CAVE PRESERVE

by Nicolas Garza

*Editor’s note: The IKC applied and was funded for a bioinventory grant through the Indiana Academy of Science (IAS) and Indiana Land Protection Alliance (ILPA) to contract with a taxonomist for our Wayne Cave Preserve. In order to better manage the property, we wanted a good plant list for our sinkhole swamp, wanted to know if the microclimates in some of our larger sinkholes might hold different species than the surrounding surface forest, and our Property Manager wanted to better assess a non-forested open area of the property as well. Bloomington area botanist Nic Garza was recommended and we contracted with him for the project. The following is Nic’s report, minus the appendices and plant lists. Please find the entire report on the IKC website in the documents section of our Wayne Cave Preserve [ikc.caves.org/wayne-cave-preserve](http://ikc.caves.org/wayne-cave-preserve) under Garza, N, “Floristic Report: Wayne Cave Preserve”.*

## Site Overview

The Wayne Cave Preserve is a property owned and managed by the Indiana Karst Conservancy (IKC) just southwest of Bloomington, Indiana. It hosts multiple karst features of intrigue, including access to an expansive cave system that draws many visitors. The Wayne Cave Preserve is



Figure 1: Soils map of Wayne Cave Preserve. Caneyville silt loams (CaD and Cb) are limestone derived. Zanesville and Wellston (TIB and WeC) are sandstone-derived (map from NRCS Web Soils Survey).



Figure 2: LIDAR map of Wayne Cave Preserve revealing numerous karst features and detailed elevation (map from USGS).

located in the Escarpment Section of the Shawnee Hills Natural Region, defined by Homoya’s “Natural Regions of Indiana” (Homoya 1984). This section represents a dynamic edge between the Mitchell Karst Plateau and the Crawford Upland sections. Sandstone-derived soils cover the hills and limestone-derived soils are present in lower elevations. The maps shown in Figures 1–3 display the soil types dominant at the Wayne Cave Preserve and the varying elevation of the property. The variable soils present on the property are conducive to higher vegetative diversity. The author observed a wide range of plant species occurring on the property indicative of low and high pH soils and various moisture preferences.

## Project Overview

The author was contracted by the Indiana Karst

| Map Unit Symbol                    | Map Unit Name   | Acres in AOI | Percent of AOI |
|------------------------------------|---|--------------|----------------|
| CaD                                | Caneyville silt loam, 12 to 18 percent slopes                   | 29.4         | 50.0%          |
| Cb                                 | Caneyville-Hagerstown silt loams, 2 to 18 percent slopes, karst | 19.2         | 32.6%          |
| TIB                                | Zanesville silt loam, 2 to 6 percent slopes                     | 6.3          | 10.7%          |
| WeC                                | Wellston silt loam, 6 to 12 percent slopes                      | 3.9          | 6.7%           |
| <b>Totals for Area of Interest</b> |   | <b>58.8</b>  | <b>100.0%</b>  |

Figure 3: Map Unit Legend for soil types map shown in Figure 1.



Conservancy in 2023 to conduct floristic inventories around the Wayne Cave Preserve in Bloomington, Indiana. On April 17, 2023, the author and a site manager walked the property. Three sites were chosen for floristic inventories and another two were chosen for vegetative plot assessments. A floristic quality assessment was conducted and is summarized in this report. Excel files containing the full results of the floristic quality assessment will be included with this report.

**Methods**

**Floristic Inventory Methods:** Three sites on the Wayne Cave Preserve were selected for floristic inventories. Each site was visited on April 25, June 17, August 27, and November 12, 2023. Visiting the sites during different parts of the year ensures that all plant species are recorded regardless of phenology. The results of these inventories and their assessments can be found in Appendix B and in the accompanying excel files. Each site was traversed several times during each visit to record every plant species present.

The first site (Upland) was chosen as an example of a typical upland habitat on the property. The author used reflective flagging to demarcate four corners of a 25-pace x 25-pace (roughly 19m x 19m) square in which the inventory would be con-



Figure 4: The Sinkhole pond site.

ducted. Species were identified and recorded in the marked square only. Every species was recorded within the marked square.

The second site (Big Sinkhole) was selected by members of IKC to represent a typical sinkhole feature on the Wayne Cave Preserve. The largest sinkhole was chosen, and the author was asked to separate this site into three sections (Rim, Slope, and Bottom) to observe the differences in flora



Figure 5: Cypress Knee Sedge (*Carex decomposita*) is a state-threatened species of sedge that occurs on rich humus in sinkhole ponds. Cypress Knee Sedge has been collected very sparsely in the state, and few populations are known to still exist. Photograph accessed via the consortium of Midwest herbaria ([midwestherbaria.org](http://midwestherbaria.org)).

between elevations. The sections were delineated roughly by slope and a unique species list was written for each section.

The final site (Sinkhole Pond), Figure 4, was chosen for its high conservation quality and ecological stability. The author collected the state-threatened *Carex decomposita*, Figure 5, from this area in June of 2021 which led to a number of professionals visiting the site to observe the surrounding



habitat. The survey area was determined using general soil moisture indicators such as soil saturation and plant species' wetness ranking.

**Vegetative Plot Assessment Methods:** The author surveyed two areas using vegetative plot assessments. These areas were visited on June 17, 2023, and their results and assessments are included in Appendix B.

The property managers expressed interest in monitoring the development of a fallow field over time and after experimenting with different management techniques. The author also elected to survey a bottomland area adjacent to the fallow field site. Since the bottomland plot is slightly lower in elevation than the fallow field, it could incur nutrient runoff from management events occurring at the site and would be sensitive to any changes in hydrology that may occur at the site. Vegetative plot assessments were employed because they are simple to replicate and allow for changes in floristic integrity to be easily monitored. On June 17, 2023, the author randomly placed three  $\frac{1}{4}$  m<sup>2</sup> quadrats, Figure 6, throughout each area and recorded the species present and their densities. Using floristic quality assessment, the average C-value of the plots can be calculated. The quadrats' coordinates were recorded and red flags were placed in the southwest corner of each quadrat so that they may be

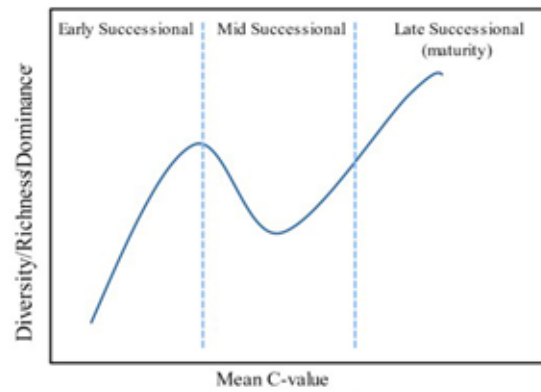


Figure 6: An example of a  $\frac{1}{4}$  m<sup>2</sup> quadrat used in vegetative plot sampling at Wayne Cave preserve. This quadrat contained numerous mesic woodland species.

revisited at a later date. Monitoring the change in mean C-value over time is useful to determine that management techniques are successful. Although fewer species are recorded in vegetative plot assessments, they provide much more useful metrics for monitoring change over time than inventories.

### Floristic Quality Assessment and Coefficients of Conservatism

Floristic quality assessment was originally developed by Gerould Wilhelm (1977) and later expanded on by Wilhelm and Ladd (1988). It was conceived to measure and analyze floristic quality without the ambiguity of diversity indices, as often high-quality sites may be lower in species richness (diversity) than degraded sites. This phenomenon is illustrated below in the Floristic Integrity Curve by Justin Thomas (2015). Diversity is not directly correlated with floristic quality.



Chaotic Complexity (instability) ←→ Organized Complexity (stability)

Floristic quality assessment has become widely adopted and has been developed in some form in over 30 states. The measurements provided in these assessments may refer to coefficients of conservatism, or C-values. C-values are numeric values ranging 0-10 prescribed to native plant species by a group of experts in a certain region and refer (generally) to chances out of 10 that the species occurs in high-quality natural areas. The data set used for this assessment was the 2019 update to Rothrock and Homoya (2005). Averaging C-values (Mean C-Value) in an area provides a number that can be monitored over time to determine whether the area is stabilizing or degrading. As habitats succeed ecologically and nitrogen (a primary driver of succession) is expelled, species of higher conservation value can grow. For example, in southern Indiana, a woodland may be clear-cut and immediately respond with a thick growth of briars (*Smilax*) and blackberries (*Rubus*). Nitro-





gen would be abundant, and the mean C-value of this area would be low (<2.0). As this habitat succeeds over time into a mature oak-hickory forest, available nitrogen would decrease, and its mean C-value will rise in tandem. A more thorough explanation of the C-value system can be found in Ladd and Thomas (2015). Mean C-values rarely exceed 5.0 and almost never exceed 6.0. Included in floristic quality assessments is a floristic quality index. This measurement is problematic as it involves richness and is difficult to apply across sites of different scales (Spyreas 2019). Therefore, it is omitted from this report.

Also included as an output of the floristic quality assessment is mean wetness. Each plant species is assigned a wetness value (W) from -5 to 5 with -5 indicating a preference for abundant moisture and 5 indicating a preference for dry sites. Mean wetness can be used to delineate wetland areas and can also be a useful measurement to monitor changes in hydrology over time, especially as a result of management.

### Results and Management Discussion

All of the floristic inventories conducted resulted in a diverse species list of medium to high conservation value. Clearly, many areas at Wayne Cave Preserve are ecologically intact and representative of healthy habitats in the Shawnee Hills natural region.

The **Upland** site inventory contains 113 species and a mean C-value of 3.4. Species indicating both sandstone and limestone-derived soils occurred in the sampling area. There were very few stems of invasive species present. These populations currently are easy to control and should be treated in a way that promotes as little disturbance as possible. Cut-stump treatment on woody invasives such as Multiflora rose (*Rosa multiflora*) and Callery pear (*Pyrus calleryana*) and dormant season foliar-spraying on evergreen vines such as wintercreeper (*Euonymus fortunei*) and Japanese honeysuckle (*Lonicera japonica*) should be employed.

The **Big Sinkhole** site was divided into three sections based on elevation. The uppermost section, the rim, had 61 total species and a mean C-value of 4.5. Its mean wetness was 2.2, indicating a slightly dry upland habitat. The middle section, the slope, contained 52 species and also had a mean C-value of 4.5. Its mean wetness was also 2.2, indicating little change in wetness between the rim and the overall slope. The bottommost

section had 26 species and a mean C-value of 4.4. Its mean wetness was 1.6, indicating a significantly wetter habitat than the slope and rim. Species that occur in more than one section will be highlighted in the corresponding excel files. The author observed a concentration of glade fern (*Homalosorus pycnocarpos*) and silvery spleenwort (*Deparia acrostichoides*) in the bottom of the sinkhole and small populations of smooth hydrangea (*Hydrangea arborescens*) and early meadow rue (*Thalictrum dioicum*) growing on rocks exposed by the sinkhole formation. Management is most likely not needed in this area, but if enacted should promote as little disturbance as possible. The steep slopes of sinkholes are especially vulnerable to soil erosion which can be exacerbated by uprooting large plants. The very few woody invasives here can be treated as mentioned above, using cut-stump treatment.

The **Sinkhole Pond** site contains 36 species and has a mean C-Value of 4.4. An extremely conservative grouping of plant species is present including state-threatened cypress knee sedge (*C. decomposita*) and halberd-leaved tearthumb (*Persicaria arifolia*). Two species observed, *C. decomposita* and greater marsh St. Johnswort (*Triadenum walteri*), were newly recorded for Monroe County in 2021 by the author. This area is of very high quality and should be trafficked as little as possible. There are no threats present that are pertinent enough to risk degrading this habitat. The area directly up-slope should be monitored, and invasive species should be prevented from colonizing it using minimally-disturbing methods such as cut-stump treatment and dormant-season foliar spraying. In the immediate vicinity of this pond, if needed, it is best to use only herbicide labeled for aquatic habitats as there is a very healthy amphibian population in the pond who are especially susceptible to herbicide damage in certain stages of their lives.

The **Fallow Field** vegetative plot assessment revealed a mean C-value of 1.6. The richest ¼ m<sup>2</sup> quadrat contained 17 species; 28 total species were recorded amongst the three quadrats. The fallow field is mostly dominated by non-native cool-season grasses such as Kentucky bluegrass (*Poa pratensis*) and orchard grass (*Dactylis glomerata*). Aggressive species such as old field blackberry (*Rubus alumnus*) and multiflora rose (*Rosa multiflora*) are scattered in dense populations throughout the field. Both of these species are ni-



trophilous; they will naturally reduce over time as available N is expelled from the system.

Any cut-stump treatment should be carried out in late fall so that excess N can leach from the system over the dormant season. If intended to be kept open, a single annual mowing using a tall deck-height or a prescribed fire should be executed in the dormant season. Leaving some areas undisturbed can provide habitat for overwintering insects. Using herbicide treatment to control cool-season grasses during the growing season could result in an excessive flush of N leading to invasive species encroachment. This area should be resurveyed annually or biannually to monitor management effects to floristic quality.

The **Bottomland** vegetative plot assessment has a mean-C value of 3.4 and 29 total species were present. Although both the Bottomland and Fallow Field plots had similar floristic diversity (29 and 28 species, respectively), their mean C-values reflect significantly different levels of floristic integrity and ecological health. Bottomland habitats are especially vulnerable to changes in hydrology and eutrophication. As a result, their flora can change significantly in short spans of time. Invasive species along the nearby tree line can continue to be removed using cut-stump treatment in the dormant season. The author observed dense patches of an uncommon grass species, American beakgrass (*Diarrhena americana*) in the bottomland section. This section should be resurveyed annually or biannually to monitor changes in floristic quality.

### Conclusion

Wayne Cave Preserve is connected to a large tract of contiguous forest (5,000+ acres) that undoubtedly buffers the preserve from threats of invasive species monocultures and provides an ample number of plant species available for recruitment after disturbance events. Each survey site, despite their small sizes, included a relatively large number of plant species.

The floristic inventory conducted in the upland site yielded a large sample-size and was straightforward to collect data from. This method should be replicated in other areas throughout the property to reflect site-wide ecosystem health. The floristic inventory conducted in the big sinkhole, albeit interesting, would be difficult to extrapolate from given the unique topography of the area. This inventory suggests that the variable wetness created by karst features could lead to suitable

habitat for moisture-loving plants. The sinkhole pond floristic inventory cataloged significant conservative plant species in a rare habitat. Any habitats of similar conservation value managed by IKC should be surveyed to document their diversity and floristic integrity before any large disturbance events take place that could negatively affect them. A site-wide inventory, beyond the scope of this project, would have undoubtedly resulted in many more plant species being documented and could have led to more notable collections such as those found in the sinkhole pond.

The vegetative plot assessments are essential for monitoring the effects of management practices and should be conducted whenever significant management is planned for a natural area. The vegetative plot assessments detailed in this report will only become useful when replicated over time. Larger plots would have yielded more accurate data but would have been beyond the scope of this project. Even so, the small size of these plots will still be useful for the purposes described.

### Works Cited

- Bowles, M. and M. Jones. 2006. Testing the Efficacy of Species Richness and Floristic Quality Assessment of Quality, Temporal Change and Fire Effects in Tallgrass Prairie. *Natural Areas Journal* 26(1) 17-27.
- Endangered, Threatened, and Extirpated Plants of Indiana - in.Gov, Indiana DNR, 31 July 2023, [www.in.gov/dnr/nature-preserves/files/np-etrplants.pdf](http://www.in.gov/dnr/nature-preserves/files/np-etrplants.pdf).
- Homoya, Michael A, et al. The Natural Regions of Indiana. *Proceedings of the Indiana Academy of Science*, vol. 94, 1985, pp. 245–268, [journals.indianapolis.iu.edu/index.php/ias/article/view/8352/8324](http://journals.indianapolis.iu.edu/index.php/ias/article/view/8352/8324)
- Ladd, D. and Thomas, J. 2015. Ecological Checklist of the Missouri Flora for Floristic Quality Assessment. *Phytoneuron*: 12: 1–274
- Rothrock, Paul E, and Michael A Homoya. An Evaluation of Indiana's Floristic Quality Assessment. *Proceedings of the Indiana Academy of Science*, vol. 114, no. 1, 1 Jan. 2005, pp. 9–18.
- Spyreas, Greg. 2019. Floristic Quality Assessment: a Critique, a Defense, and a Primer. *Ecosphere*, vol. 10, issue 8.
- Thomas, J.R. 2015. Penn-Sylvania Prairie Floristic Integrity Report. Reported to the Missouri Prairie Foundation by the Institute of Botanical Training.
- Wilhelm, G.S. and D. Ladd. 1988. Natural Area Assessment in the Chicago Region. *Trans. 53rd North American Wildl. & Nat. Res. Conf*: 361–375.

## VISITING OUR OLD FRIEND WYANDOTTE CAVE

by Carla Striegel-Winner

*I have to say it was probably the best tour of the cave I've been on, and I learned several tidbits I'd never heard before. I have a lot of great memories of trips in here over the last 30+ years and it was like a visit with an old friend. What a fun day underground! Many thanks to the IKC for this trip!*

— IKC Member Chris Schotter

What could I possibly add to that quote? Our private IKC field tour on June 30 in Wyandotte Cave with a bunch of cavers and IKC members was a positively fun experience. Wyandotte is truly one of Indiana's premiere gems of cultural and natural history, so to spend the morning in the cave guided by O'Bannon Woods State Park Property Manager Stanley Baelz, who has a true passion for Wyandotte, was a real treat. Add in IKC Board members Keith Dunlap and Tom Sollman, who have assisted and explored the cave for decades. Then sprinkle in participants like IKC members Chris Schotter and David Roach who were able to share their own memories, as well as resuscitating forgotten stories. Every time I take a tour, I learn something new, and this trip was no exception.

In addition to much of the two-hour standard tour narrative, Stanley added details and was able to expound upon those while answering plenty of questions. Keith provided everyone with a map of the tour route and talked about bat use in the cave over the years. Tom could be seen studying his notes and map, and we really enjoyed looking at an 1887 photo of the "Cut-Off" and finding that same location in the cave (see more about that in John Benton's article starting on page 12).



Travis Templin, Wes Roeder, and Tom Sollman studying the 1887 photo at the "Cut-Off"

photo courtesy Carla Striegel-Winner



Stanley Baelz in the Junction Room explaining how Native Americans used shagbark hickory tree bark for torches to navigate through the cave

photo courtesy Carla Striegel-Winner

Tom also shared that he partook in a restoration camp in the 1990s and actually pressure-washed the helectites and other formations in the Pillared Palace area. Previously, they had been blackened by decades of candles, torches, and magnesium flares which were lit to brighten the rooms for tourists before electric lighting was added. Twenty-plus years after Tom's restorative task, they continue to gleam white. And in addition to an impromptu talk about the Easter Pit Connection, Chris Schotter shared that he built the stone wall along the onion barrels in the Counterfeiter's Trench passage, also part of a restoration camp in the 1990s.

Since Stanley was our guide, and is a trained EMT, wildland firefighter, and all around excellent cave guide, I left my facilitator role on the surface, relaxed, and blissfully enjoyed my tour without another thought of the time. Last year's Cave Capers and Evansville Metro Grotto private tours in the cave each went long, so I planned on three hours in cave for this one. I was happily in participant mode, and had not noticed that we indeed spent almost **four** hours in the cave. Oops! Needless to say, our tour lasted so long that we did not have time for the planned stewardship activity afterwards. Several of us stayed for our picnic lunch anyway and hung out in the cool (literally and figuratively) shelter house on that sweltering day, chatting until 3 PM, when we ended our time together going on the 30-minute Siberts Cave (Little Wyandotte) tour with excellent veteran guide Kelly Kuchenbrod. A good time was had by all!

## A LOOK BACK AT INDIANA KARST

by John M Benton

### Comparing the Cut-Off Passage in Wyandotte Cave, 1887 and now

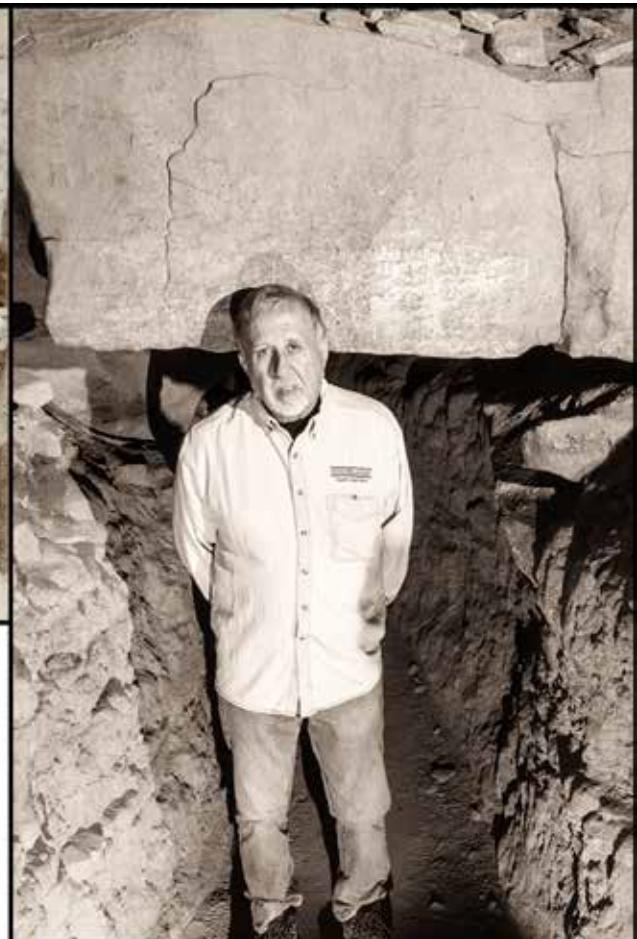
Starting in 1887 and a few years after, New Albany, Indiana photographer Ben Hains took a series of black and white “3D” stereoviews (the precursor to the popular 20th century View-Master, and now Virtual Reality goggles) inside and around Wyandotte Cave. It is believed he produced at least 62 stereoview scenes of the cave. One of these Hains photos appeared in a 1905 magazine article, but was erroneously labeled, “*Coming Through the Auger Hole in Wyandotte*”. IKC member Tom Sollman noticed the error and pointed it out to other Indiana cave historians. The picture was actually taken at a passage in Wyandotte known on cave maps as the Cut-Off, which connects the north end of Counterfeiter’s Trench (just before Rugged Mountain) to the Junction Room. The Cut-Off was first shown on some of the early maps such as the John Collett’s 1878 map, and saved several minutes of travel time, instead of crossing over Rugged

Mountain and turning right to reach the flint quarries that were known and mined extensively by prehistoric Native Americans some 4,000 years ago. This shortcut passage wasn’t known to the pioneer explorers until after 1850, but the Native Americans knew of it, and used it to access the prized flint for making tools. However, this shortcut passage was initially a low belly crawl necessitating rubbing the ceiling with ones body, giving the passage ceiling a worn, smooth patina that is still obvious, if one looks for it. However, today the passage is walking height for the average tourist, and is traveled by all visitors in Wyandotte Cave that tour the “new cave” route and the fabulous Rothrock’s Monument Mountain, which has been featured in *Ripley’s Believe It or Not!* It isn’t known for sure when the Cut-Off passage was dug out, but it is believed to have been around 1880, when the Rothrock family (owners of the cave from before 1850 until 1966) likely had the passage enlarged to save backtracking on one of the cave loops and provided an easier tour route to the southern part of the cave.

*Text continued on page 14...*

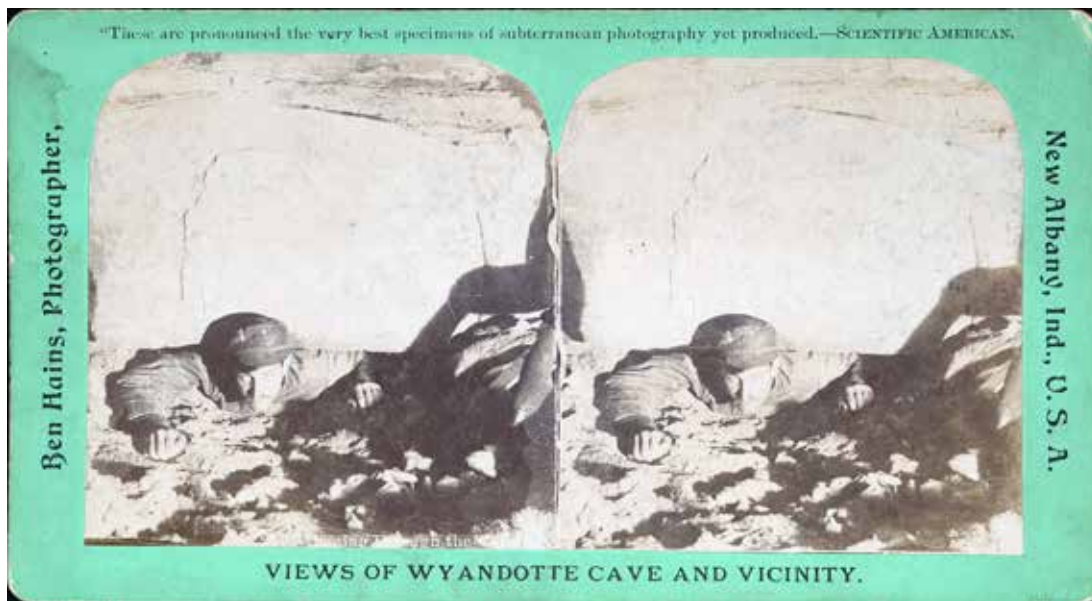
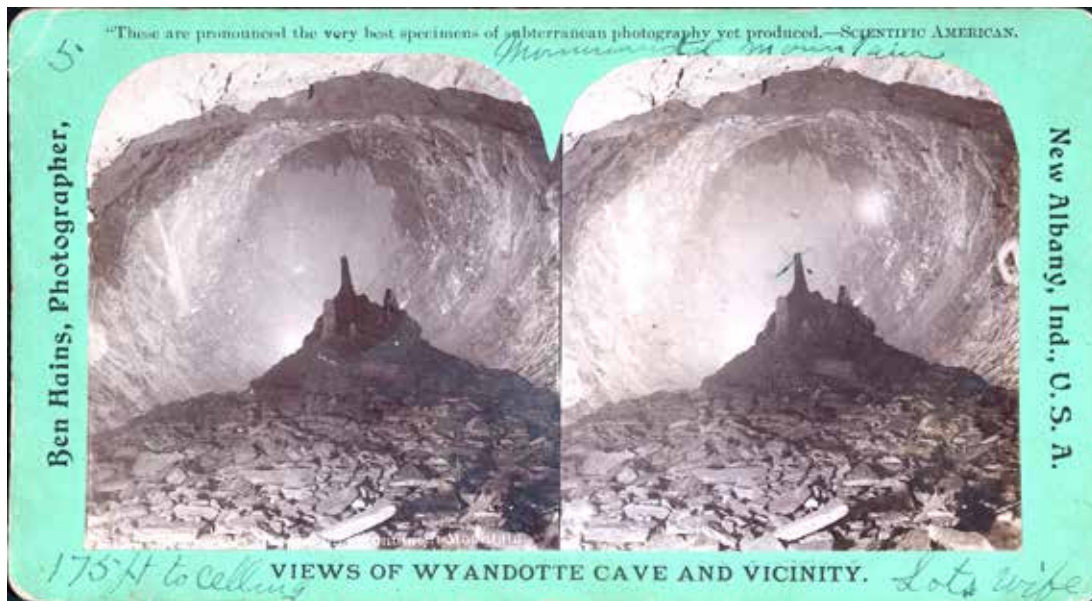
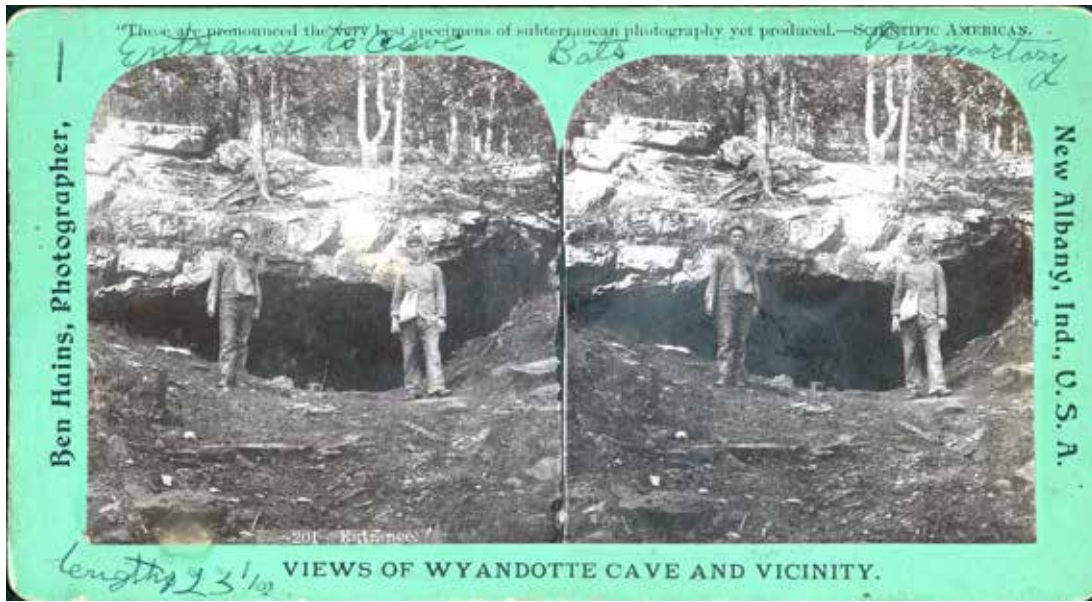


**Above: The Cut-Off crawl, August 1887**  
Photographer Ben Hains, New Albany



**Right: John Benton in the same location (dug out), July 2024**  
Photographer Richard Vernier





Stereoviews courtesy National Cave Museum



...continued from page 12

In June 2024, IKC members Keith Dunlap and Carla Striegel-Winner saw the original stereoview picture and schemed to do a re-creation of the photo. Since the Cut-Off is on the current Wyandotte Cave tour route, they asked and obtained permission to do the re-creation photo from O'Bannon Woods State Park Property Manager Stanley Baelz, who manages the cave. Carla and Keith then enlisted IKC member and photographer Richard Vernier to do the camera work.

On July 21, accompanied by guide Liam Stroud (whose great-great-great-grandfather was also a cave guide in Wyandotte), Keith, Carla, Richard, Sue Vernier, and myself went to the location in the cave to

re-create the photo with a "model" in the same position. Pictured is myself compared to Hains' original right stereoview image, taken some 137 years ago. Richard was able to match the features and cracks on the rock above to get nearly the identical angle and shadows to show in the 2024 picture. Little has changed, with the exception of the current walking height under the Cut-Off.

*Editor's note: A special thanks to Gordon Smith at the National Cave Museum (Park City, KY) for providing the high resolution scans of multiple Ben Hains stereoviews for us to select from.*

## THIS IS FOR THE BIRD(ERS) – TWEET!

by Danyeale Green

I've never pretended to know bird calls by heart, the flight patterns of certain birds, or how they shake their tail feathers (ha!), but what I do know is we have some very well educated IKC Board members (and former Board member) who know their stuff. Several seasons over the last few years, Richard and Sue Vernier have come out to the Wayne Cave Preserve to spend some time birdwatching to see what we have at different times of the year.

Check out their Spring/Summer/Fall 2023 Bird Count on our website ([ikc.caves.org/wayne-cave-preserve](http://ikc.caves.org/wayne-cave-preserve)). The summer count for 2024 came in with 18 species observed by sight and/or sound:

- Red-bellied Woodpecker – 3
- Eastern Wood-Pewee – 2
- Acadian Flycatcher – 6
- Yellow-throated Vireo – 3
- Red-eyed Vireo – 5
- Blue Jay – 1
- American Crow – 2
- Carolina Chickadee – 1
- Tufted Titmouse – 8
- White-breasted Nuthatch – 4
- Carolina Wren – 3
- Wood Thrush – 2
- Louisiana Waterthrush – 1
- Kentucky Warbler – 1
- Common Yellowthroat – 1
- Hooded Warbler – 1 \*\*
- Scarlet Tanager – 1
- Northern Cardinal – 2



Adult Female Hooded Warbler

photo courtesy Richard Vernier

**\*\* Note: The Hooded Warbler is an Indiana Species of Greatest Conservation Need. It is listed as a State Special Concern species.**

The observations were made on June 16 between 9:30 to 10:30 AM EDT with the temperature range of mid-70 to mid-80 degrees.

Comparing this list to our Summer 2023 list, where 23 species were identified, we still had the Hooded Warbler found in both years. This is exciting!

For the amateur, I highly recommend the free Merlin Bird ID App ([merlin.allaboutbirds.org](http://merlin.allaboutbirds.org)) for your phone which has a pretty darn good ability to tell you species by sound function. Download it and check it out next time you go hiking out to a cave or walking around the trails at one of our cave preserves. Let us know what you find!

## NEWS BRIEFS...

- ❑ Save the date for the Indiana Cave Symposium: Saturday, April 26, 2025 at the Orange County Community Center in Paoli. The event is co-sponsored each year by the IKC and Indiana Cave Survey to highlight current cave exploration and scientific research in Indiana. Anyone having a suggestion for a presentation can mention the idea to an ICS Board member. Also check out the new and improved ICS public website which ICS/IKC member Aaron Valandra has been rolling out: [wp.indianacavesurvey.org](http://wp.indianacavesurvey.org).

- ❑ The IKC had a booth again this year at Indiana Cave Capers (August 15-18), which was held at Camp Rivervale in Lawrence County. The event and the booth were well attended. The booth featured IKC preserves close to the event. Our membership brochure and other educational handouts were available. IKC stickers were also sold on the honor system, and were quite popular! Huge thanks to the CIG for allowing us such a nice booth space at the Caver Central pavilion.



photo courtesy Carla Striegel-Winner

- ❑ Speaking of stickers.... we unveiled our new and improved logo sticker and our new IKC Preserves sticker at Capers. We purchased these from caver and graphic artist Charlie Vetter's Organic Robot Designs. Charlie designed our popular IKC Preserves t-shirt design a couple of years ago and now it is in sticker form. Our new stickers are of a very nice quality and should hold up better on that water bottle, vehicle, and other cave paraphernalia. You can see and purchase them here: [ikc.caves.org/ikc-promotional-items](http://ikc.caves.org/ikc-promotional-items) or come to an IKC event to get your stickers.

- ❑ Every one of our IKC preserves have maintenance items that need done periodically. The farmer's 16-foot gate at Buddha came with the property in 2002 and was old and rusty even back then... we are guessing it was 20-30 years old at that point! Over the past 22 years, it had accumulated more rust, and lichens had encrusted the gate due to the added shade from adjacent trees. So the time had come to give this gate a face-lift. On July 18th the weather was perfect for summer work, so Bambi Dunlap took on the task. First using a battery-powered grinder with a wire brush to prep the surfaces, then wiping the gate down with mineral spirits, then priming with a "rusty surface" primer, then finally putting on a green top coat. Start to finish was about 6 hours! Also note the oil-based primer and paint were donated from the reuse area of a local Solid Waste Management District. With volunteer labor and free paint, this made for a very inexpensive, but worthwhile project.



photo courtesy Keith Dunlap

- ❑ The IKC participated in the Limestone Fest in Bloomington for the second year in a row. The IKC was represented by Board members Goni Iskali and Brandon Chasteen. Brandon's son, Jake, also volunteered. The Limestone Fest is an event held to seek and explore the geological, historical and artistic heritage of Indiana limestone. This is a family-focused event held right outside the Indiana Geological and Water Survey on the IU campus, and this year it took place on June 15, 2024. One of the additional perks offered this year included access to the Indiana Geological and Water Survey Learning Lab, which we would highly recommend visiting because of their excellent collection of fossils, rocks, etc. The event was less well-attended compared to last year, but the IKC still reached a number of families and about 50 individuals overall. The primary interest or questions for the IKC by the attendees were related to how to get access and be prepared to go caving. We directed those asking these questions to organizations and information sources such as local grottos and the NSS.



We also welcomed participants to visit the IKC preserves, either for above ground, or underground exploration with permission. The IKC will consider participating in the event again next year, to hopefully continue to spread the word about cave conservation in the Bloomington area.

- ❑ We are excited to announce that Board member/Sullivan Property Manager Joe Kinder and Board member Brandon Chasteen both submitted applications and were selected to attend a three-day Safety and Woods Worker (SAWW) Chainsaw Training Course in November. Both of these dedicated volunteers (along with ten other land trust applicants) will get the course, lodging, and meals at no cost thanks to the Indiana Land Protection Alliance funding the class via a generous Environmental Action Grant! We are excited to be able to have our dedicated volunteers professionally trained to safely do this much-needed stewardship work on our properties! Congrats and thanks to both!
- ❑ Just a reminder that September 1st is the start of recreational caving closures on the Hoosier National Forest and numerous bat hibernacula caves such as Robinson Ladder, Endless, River, and Langdons. Please respect the bats who depend on the caves for their survival and the organizations and agencies who manage them.
- ❑ The IKC has gained ten new members in the last quarter. Welcome Caue Borlina, Katie Edmonds, Erika Fowler, Jack Little, Matt McNeer, Stephanie Morrissette, David Myrick, Kenny Owens, Bryson Pea, and Patrica Ruback. The IKC membership currently stands at 294.

## BIG DAY FOR THE BIRDS HIKE AT ROBINSON LADDER CAVE PRESERVE

**SATURDAY, OCTOBER 12 – 9 AM to 11 AM EDT**

You are invited to the Third Annual Birding Outing sponsored by Indiana Audubon and Indiana Land Protection Alliance. Join expert birding guide Jeff Sells of nearby Washington County as well as our Robinson Ladder Cave Preserve Manager John Benton on this morning hike to become familiar with the birds at our Crawford County preserve near Milltown! Jeff is a self-described retired birder who has been birding most of his life and conducting a breeding bird survey route for the last 15 years. Land trusts throughout Indiana are hosting similar hikes on this day! Our Robinson Ladder Cave Preserve hike is designed to be enjoyable for beginner and expert alike. To keep it an intimate experience, the hike is limited to 20 participants, thus registration is required for this event. For registration information, go to [indianaudubon.org/2024/08/19/october-big-day-hikes-with-ilpa](https://indianaudubon.org/2024/08/19/october-big-day-hikes-with-ilpa) or contact Indiana Audubon Outreach Manager Whitney Yoerger ([wyoerger@indianaudubon.org](mailto:wyoerger@indianaudubon.org) or 765-205-1255) for details.





**INDIANA KARST CONSERVANCY TREASURY REPORT**

**Income/Expense Statement  
From April 1, 2024 to June 30, 2024**

|  |          |                          |
|--|----------|--------------------------|
| <b>INCOME:</b>                                       |          |                          |
| Dues Apportionment and Residuals                     | 1,036.25 |                          |
| Donations - General                                  | 1,835.00 |                          |
| Donations - Land Acquisition Fund                    | 1,755.00 |                          |
| OCR training   | 950.00   |                          |
| General Investment Earnings                          | 2,070.99 |                          |
|  |          | \$7,647.24               |
| <b>EXPENSES:</b>                                     |          |                          |
| IKC Update (printing, production, mailing)           | 671.23   |                          |
| Education / Outreach                                 | 721.09   |                          |
| Stewardship / Conservation                           | 726.00   |                          |
| OCR training   | 1,550.00 |                          |
| Business (PayPal fees, renewal letters, etc)         | 182.39   |                          |
| Property taxes                                       | 371.33   |                          |
| Transfers to/from restricted funds/other adjustments | 1,755.00 |                          |
|  |          | (\$5,977.04)             |
| <b>NET OPERATING EXCESS (DEFICIT) THIS PERIOD:</b>   |          | <u><u>\$1,670.20</u></u> |

**Balance Sheet  
June 30, 2024**

|   |                   |                              |
|---|-------------------|------------------------------|
| <b>ASSETS:</b>  |                   |                              |
| Cash in Checking/CD/Brokerage accounts                  | 769,156.88        |                              |
| Wayne Cave Preserve <sup>1</sup> (77.46 acres)          | 393,000.00        |                              |
| Robinson Ladder Cave Preserve (73.48 acres)             | 162,000.00        |                              |
| Shawnee Karst Preserve (67.78 acres)                    | 175,000.00        |                              |
| Buddha Karst Nature Preserve (36.84 acres)              | 29,000.00         |                              |
| Sullivan Cave Preserve (30.00 acres)                    | 88,000.00         |                              |
| Lowry Karst Preserve (6.66 acres)                       | 33,000.00         |                              |
| Orangeville Rise Nature Preserve (3.01 acres)           | 7,000.00          |                              |
| Indian Creek Conservation Easement (valued at \$1/acre) | 13.16             |                              |
|   |                   | <u><u>\$1,656,170.04</u></u> |
| <b>FUNDS &amp; OPERATING EXCESS:</b>                    |                   |                              |
| Land Acquisition Restricted Fund                        | 81,957.38         |                              |
| Deferred Dues Restricted Fund (280 members)             | 8,355.00          |                              |
| Stewardship Endowment Fund (+3.53% for Q2)              | 133,204.78        |                              |
| Gale & Ray Beach Endowment Fund (+4.35% for Q2)         | 456,855.10        |                              |
| Previous General Fund (total)                           | 87,127.58         |                              |
| Net Excess (Deficit) This Period                        | <u>1,670.20</u>   |                              |
| Current General Fund (unrestricted)                     | 88,797.78         |                              |
| Current General Fund (committed)                        | 3,890.92          |                              |
| Real Estate Basis (excluding value of CE)               | <u>887,000.00</u> |                              |
| <b>Total Liabilities &amp; Operating Excess</b>         |                   | <u><u>\$1,656,170.04</u></u> |

# IKC EXECUTIVE BOARD MEETING MINUTES

Sunday, June 16th, 2024 – 1:00 PM EDT

Wayne Cave Preserve, 8307 W Gardner Rd, Bloomington IN

**Board Members Present:**

- Matt Selig, President
- Laura Demarest, Secretary\*
- Keith Dunlap, Treasurer
- Bill Baus
- Bruce Bowman
- Brandon Chasteen
- Jeff Cody
- Scott Frosch
- Danyeale Green
- Goniela Iskali
- Joe Kinder
- Cris Seuell
- Tom Sollman
- Carla Striegel-Winner
- Richard Vernier

\* represented by proxy (see below)

**Board Members Absent:**

None

**Others Present:** Sue Vernier and Tim Harris.

**Call to Order – IKC Exempt Purpose & Introductions**

Meeting was called to order by Matt Selig at 1:00 PM EDT.

**Acceptance of Proxies**

Sue Vernier for Laura Demarest

**Approval of Previous Minutes**

No edits were proposed to the last meeting minutes as published in the December *IKC Update*. *Cris made a motion to approve the minutes. Danyeale seconded. Unanimously approved.*

**E-mail Motions Since Last Meeting**

None.

**Treasurer Report**

Dunlap outlined the current financial status of the organization:

**Assets:**

|                      |                       |
|----------------------|-----------------------|
| Cash assets totaling | \$767,626.89          |
| Land assets totaling | \$887,000.00          |
| <b>Total Assets</b>  | <b>\$1,654,626.89</b> |

**Dedicated Funds:**

|                              |                     |
|------------------------------|---------------------|
| Land Acquisition Fund        | \$81,947.38         |
| Stewardship Endowment        | \$132,232.85        |
| Gale & Ray Beach Endowment   | \$456,616.52        |
| Deferred Dues                | \$8,385.00          |
| General (unrestricted) Fund  | \$88,445.14         |
| <b>Total Dedicated Funds</b> | <b>\$767,626.89</b> |

**Current members:** 334 with 59 members yet to renew.

Danyeale asked if we have ever done or would consider doing a survey to inquire why the members have not renewed. Carla and Keith responded that we have previously done this, but it would be good for someone to take the initiative and ask again. Danyeale and Scott volunteered to reach out to members that have not renewed yet. Keith will send out the list to them. Cris will also post on the BIG Facebook page to generally remind people to sign up or renew their IKC membership.

Additional information on the funds and investments was provided with the financial report to answer questions and provide more detail to the new board members.

**Education/Outreach Committee**

**Limestone Fest** – Goni, Brandon, and Jake (Brandon’s son) attended the Limestone Fest in Bloomington on June 15, 2024 to represent the IKC. The event was less well-attended compared to last year, but we still reached out to a number of families (~50 participants overall). The IKC will reconsider attending next year depending on availability of volunteers. The organizers also asked if the IKC would prefer if the Limestone Fest occurs in mid-May or mid-June next year, and the IKC does not have a preference.

**Indiana Cave Symposium** – Over 90 people attended and overall, it was a great event. The pre-tour presentation was also a success. Matt, Dave Everton, Kevin Strunk, and Paul Uglum formed a planning committee prior to the symposium and this committee will continue to plan the Symposium in future years.

**Henderson Park Discovery Day** – 30-40 people attended, and attendance was boosted by TNC’s promotion. The general consensus was that it would be great to continue to collaborate with TNC and to get to know some of their new staff (many of the staff we have worked with in the past have retired or moved on to other opportunities). TNC also expressed interest in repeating this event every year. Scott led the cave tours, which about half of the participants took advantage of. The wildflowers were spectacular, but Scott recommended considering having the event a little earlier in the year, depending on weather, so that we don’t chance missing the peak. Tim Harris, who is a volunteer for TNC, would be interested in getting involved in this event and other events in the future.

**IKC Tour in Wyandotte Cave** – An IKC-specific tour will be led by Property Manager Stanley Baelz with assistance by Keith and Tom on June 30. The trip is currently full and there is an ongoing waitlist, but Carla sug-



gested to still encourage people to sign up because a few people will likely cancel before the event. Wyandotte is currently also doing tours every weekend during the summer and Sunday mornings seem to be less busy.

**Cave Capers** – Carla will have the display booth and will have handouts on nearby IKC properties with maps of caves and the hiking trails on these properties.

**Bat Surveys** – Three bat surveys will occur this summer (one in June, one in July, and one in August) at three of our preserves. Tentative dates and details were posted on Facebook. Interested participants should contact Goni to attend and participation will be limited to 4-5 people per survey.

**Noblesville Event** – Noblesville Crossing Elementary School wants to host an evening family event in January or February on caves and karst. Carla has a phone call scheduled with the librarian and may give some IKC board members to her as contacts. Matt indicated interest as he is close by.

**Free Accounts** – Non-profits can get one free Canva account and Carla has signed up and can make it available to anyone who is interested. Canva is a marketing tool available for making marketing materials such as fliers, posters, etc. Non-profits can also receive a free Flickr account and Carla signed the IKC up for it also so we can store photos.

**Stickers** – We have run out of IKC stickers. Our previous vinyl stickers were not great and faded quickly, so we will order stickers from another vendor. Carla reached out to Charlie Vettors (Organic Robot) and Sticker Mule to get more information and prices. Carla would like the new stickers by Cave Capers. *Carla made a motion to pay up to \$800 to purchase up to 2,000 stickers to have them ready before Capers. Cris seconded it. The motion passed unanimously.*

Keith noted that we may want to order less than 2,000 stickers because we may want to update them with future cave acquisitions, etc.

**Inflatable Cave** – Carla wondered where the inflatable cave is. Keith said it was permanently given to the Terra Haute bat festival organizers and he will inquire about whether they are still using it.

**Facebook** – Carla encouraged that Directors post to BIG, CIG, and personal pages on Facebook to advertise what the IKC is doing.

### ILPA Update

ILPA membership has increased to 23 organizations and continues to provide perks to the IKC. The IKC (Wayne Cave Preserve) is featured in ILPA's *2024 State of the Lands Annual Report* and Carla handed out copies of this report. Carla also reminded that Directors or volunteers of IKC can attend any of the ILPA events for free. ILPA is also advertising a three-day Chain-

saw Safety Class and the participation is limited to 12 people, so full-time stewards will likely be prioritized. If anyone from the IKC is interested and would put the training to good use for the IKC, please contact Carla.

ILPA made a grant through the Marketing and Communications committee to give photographers stipends to take photos of ILPA member land trusts. Garry Morrison will be the photographer assigned to the IKC and Carla will coordinate with Gary and preserve managers to take surface (not in-cave) photos. Danyeale asked if the IKC would have ownership of the photos and Carla said the photographer, IKC, and ILPA should have ownership of the photos taken at our preserves.

### 2024 Orientation to Cave Rescue (OCR) Training with National Cave Rescue Commission (NCRC)

Cris and Danyeale provided an overview of the training, which included approximately 30 people. The class was taught by six instructors. The class was successful and continues to provide a great value for the caving community. The IKC sponsored four scholarships for first responders (\$65 each) and twelve discounts (\$25 each) for IKC members. There was general agreement during the meeting that the IKC should continue to sponsor future OCR training events. Any caver can benefit from the class and the class can also be customized for people who are not as physically fit or do not prefer to go in the cave. Learning about the process of a cave rescue is just as important as hands-on participation.

### SCCi Online Waiver Update

Joe spoke to Paul before the meeting to see if the site is ready to trial. Paul indicated that the site is not ready yet and Matt will reach out to him to get a more detailed update and schedule. Bill Baus noted that he has used the SCCi online waiver system and finds it cumbersome, and the waivers are so long that a plaintiff's attorney could convince a jury that it is unreasonable to expect people to actually read it all. Keith noted that the updated system will have IKC waivers specific for each of our properties (i.e. the current waivers that we are using). Carla also noted that the decision to use this system has already been made by the Board and only the final details need to be worked out. Keith indicated he would get the draft waiver language to Bill for review.

### Review IKC Membership Dues for 2025

Danyeale recommended that the IKC considers raising dues for 2025. Carla asked that we also discuss other considerations such as: what costs do our dues need to cover, should we consider family memberships, and if our dues go up do we get less donations? Bill suggested having another category of contributors if they donated a higher amount. Bruce noted that maintaining family memberships is difficult to keep track of based on his experience with other organizations. Matt noted that current dues do not cover our day-to-day ex-



penses. Keith stated that original dues were \$25 and were lowered to \$15 (\$41.51 in today dollar if accounting for inflation) in 1987 and have not increased since, and our dues have never covered our operational expenses. Keith also noted that additional donations with the membership dues are common, and generally help cover expenses, likely because some members may feel that the IKC dues are low. Matt reminded that additional donations will be an option with the upcoming online permit system, such as a one-time donation if you are just visiting the cave/preserve once (the SCCi derives a lot of donations via this permit system). Overall, the IKC values participation more than dues revenue and will carefully consider any potential increase, and will further consider this motion during the September meeting. Carla will inquire with other ILPA organizations what their membership dues are and how they are structured. Danyeale can summarize all the ideas and will continue discussions during the next board meeting. Lastly, the IKC will re-initiate sending out personal Thank You cards in a timely manner to members who are donating. Keith maintains a list of such members and can make it available.

#### Wayne Cave Research Permit Request

Cris is interested in further exploring a lead in Wayne's Cave in the Wells Area. She also inquired with previous surveyors of the cave, and no one has indicated that this lead has been previously explored. The IKC generally encourages cave exploration, which is considered research, as long as it does not impact the cave. Carla cautioned about approving cave exploration requests if they require any major modifications to the cave, because that may go against the spirit of the Conservancy. *Bill made a motion to allow Cris to investigate this lead, as long as there is a report detailing the finds afterwards. Carla seconded. The motion passed 13-0-1.*

#### Recap of Preserves Work Projects and Upcoming Preserves Projects

**Buddha Karst Nature Preserve** – Mowing, invasive spraying, and gate painting are upcoming projects this summer.

**Lowry Karst Preserve** – No report from Property Manager Jasper Beavers, but Keith will be doing invasive plant treatments.

**Orangeville Rise Nature Preserve** – Nothing to note.

**Robinson Ladder Cave Preserve** – No report from John Benton. Jamie Winner recently mowed the upper area.

**Shawnee Karst Preserve** – Mowing will occur soon, likely before the next bat surveys on June 20.

**Wayne Cave Preserve** – A volunteer workday with mostly Board members occurred prior to this Board meeting. Danyeale will continue invasive control of mainly multi-flora rose. Cris may join depending on

dates/availability. Cris also indicated that the Hoosier Hiking Council has approved the use of their trail-making tools by the IKC, if needed.

**Indian Creek Conservation Easement** – Bambi Dunlap is the new Monitor and she will need assistance sending out the letters to the landowners as part of the property easement inspection. Matt will help with sending out the letters.

**Sullivan Cave Preserve** – Joe and Keith recently mowed. Joe greased the cave gate. Upcoming projects include shed roof painting, treating invasives (Keith to help), cutting and splitting trees that Jamie previously felled near the lane entrance gate, and building a kiosk. Joe has prepared a quote from Lowe's for the kiosk project and it's approximately up to \$1,000. Keith noted that the Shawnee kiosk project will be postponed for now. *Keith made a motion to use the \$1,100 previously approved by the Board for the Shawnee Preserve kiosk project for the Sullivan kiosk. Cris seconded it. The motion passed 14-0.*

#### Items from the Floor

- Keith brought the two bat boxes that were previously donated to the IKC. Goni took the bat boxes and will decide by next spring on which IKC property to place them.
- Carla asked: Why don't we include our managed caves such as Shiloh on our list of IKC properties on the agenda? No one expressed any objections to this. Also, Jim Adams relayed via Carla that a trip to Shiloh Cave is available for this June or September, but you must contact Jim ASAP if interested.
- Spring Mill State Park has a new naturalist (Wade LaHue). Tom will help Wade lead an Endless Cave trip on June 22. This staff change does not affect access.

#### Next Meeting date and place selection

The next IKC Quarterly meeting was tentatively scheduled for Sunday, September 8, 2024 @ 1:00 EDT at the IKC's Sullivan Cave Preserve with a workday and pitch-in lunch planned prior to the meeting. Keith's garage on the nearby property was chosen as the backup location, if it rains. A cave trip is also an option for after the meeting.

#### Adjourn

The meeting was adjourned at 3:40 pm EDT.

*Respectfully compiled and submitted by Goni Iskali, acting Secretary*



# Scrub Hub: Indiana’s Karst Habitat Supports Unique Ecosystem Unseen by Most Hoosiers *by Karl Schneider*

Corn and soy fields seem to take up vast swaths of Indiana’s land across the state, but Indiana is rich with varying landscapes and habitats.

Some habitats are easy to identify like forests, grasslands and wetlands. Others are less obvious or hidden.

So, for this edition of Scrub Hub, we hope to introduce more Hoosiers to one of the lesser-known natural features of the state by answering: What is Karst habitat?

## Underground rock formations create unique features

Karst is a landscape filled with limestone or other similarly soluble rocks underground. Acidic waters erode the underlying rocks over millions of years and leave an underground drainage system that can have disappearing streams, sinkholes, springs and caves.

Matt Selig, president of the Indiana Karst Conservancy, has caved all of his life and says karst habitat offers views most people have never seen before.

“We have over 4,000 reported karst features and several thousand caves,” Selig said. “We’re still finding new caves all the time and there’s still a lot to learn about Indiana’s caves.”

This habitat is provided various federal and state protections because it is vulnerable to contamination as water freely flows through the holes and fissures in the rocks.

These contaminants move quickly underground, Selig said, and caves hold very sensitive ecosystems inside.

“Caves have blind crayfish, blind fish, isopods and other insect living there, and those can be wiped out by chemical spills that can be rapidly transported a relatively long way away quickly,” Selig said.

Karst is well developed in Southern Indiana with caves and valleys common in the habitat. Cave systems allow adventurous Hoosiers to explore places like McCormick’s Creek State Park’s Wolf Cave (which is currently closed) and visit a number of deep sinkholes.

As surface waters seep into the ground, karst landscape creates subtle habitats and microclimates for various species dependent on these unique features.

Rare plants can thrive where calcium-rich nutrients are abundant after rock erosion, and caves provide shelter to salamanders, frogs, bats and diverse populations of microbes.

The Indiana Karst Conservancy is working to raise more awareness

of the state’s unique karst landscapes. Trash and other materials get dumped into sinkholes and pits, leading to pollution seeping into groundwater.

“We recommend people get involved with a local grotto and find others who are enthusiastic about caving,” Selig said. “Learn the basics and go caving with experienced cavers that know what they’re doing and where they are going.”

The group manages properties across the southern part of the state from Bloomington down to Harrison County. It also works to stop residential and commercial development from encroaching and destroying cave systems created on the karst landscape.

*Karl Schneider is an IndyStar environment reporter. You can reach him at [karl.schneider@indy.com](mailto:karl.schneider@indy.com). Follow him on Twitter @karlstartwithk*

*IndyStar’s environmental reporting project is made possible through the generous support of the nonprofit Nina Mason Pulliam Charitable Trust.*

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**INDIANA KARST CONSERVANCY, PO BOX 2401, INDIANAPOLIS, IN 46206-2401**

I would like to help the IKC protect Indiana’s unique caves and other karst features. Enclosed is:

\$ \_\_\_\_\_ for IKC membership dues at \$15 per year (dues expire March 31st of each year, please pro-rate @ \$1.25/month).

\$ \_\_\_\_\_ donation to the general IKC fund.

\$ \_\_\_\_\_ donation restricted to a specific IKC project. Please specify: \_\_\_\_\_

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

\_\_\_\_\_ I would like to volunteer to help. Please contact me.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

PHONE # \_\_\_\_\_

Make checks payable to the Indiana Karst Conservancy, Inc. and mail to the IKC Treasurer, c/o Indiana Karst Conservancy, PO Box 2401, Indianapolis, IN 46206-2401. The IKC is an IRS recognized 501(c)(3) non-profit organization with membership dues and donations fully tax deductible.

