IKC UPDATE

A Quarterly Publication of The Indiana Karst Conservancy
September 2025 Number 158

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.

Cover: Mike Drake on rope at the waterfall entrance to Porter Cave in Owen County, Indiana. More photos on the back cover. Photo by Jordan Lacy (2025)

Myotis Press

IKC QUARTERLY BOARD MEETING REMINDER

Sunday, September 28th, 1 PM EDT

Shawnee Karst Preserve

3918 SR 60 E, Mitchell, 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; Electronic scheduling and waiver system status; Cave/land acquisition activities; DNR bat habitat contract update, and more...

Meeting Details: The meeting will start promptly at 1 PM. Bring a lawn chair. The meeting will be outside. In the case of inclement weather, it will be in the shed at the property. If you have questions about the meeting or have an agenda item, please contact IKC President Matt Selig (see contact information on page 2).

Pre-Meeting Stewardship Activities (10 AM to noon): Those wishing to participate in pre-meeting stewardship activities on the property should arrive by 10 AM. The main task will be invasives treatment (cut and stump treat autumn olive), working in teams. We will have other tasks for all skills and abilities, including trail maintenance tasks. If you have questions, contact Property Manager Keith Dunlap (see contact info on page 2).

Pre-Meeting Social and Pitch-in Lunch (noon to 12:50 PM): Come early and give a pre-meeting hello to the IKC Board and fellow members and supporters. The IKC will provide deli meats, cheeses, and condiments for sandwiches. Feel free to contribute a salad, fruit, dessert, or chips to share.

ACTIVITIES CALENDAR

Sept 27 – ISU Bat Festival, Terre Haute (see page 5)
Sept 28 – IKC Quarterly Meeting & Pre-meeting Stewardship (see above)
Oct 11 – Big Day for the Birds, Buddha Karst Nature Preserve (see page 11)
Oct 25 – Bats & Rocks at Henderson Park (see page 19)
Oct 25 – Bat Day at Indiana Caverns (see page 5)
Nov 8 – Fauna and History of Lawrence County Caves/Karst (see page 17)
Dec ?? – IKC Quarterly meeting (date and location TBD)
April 18 – 2026 Indiana Cave Symposium, Orange County Community Center

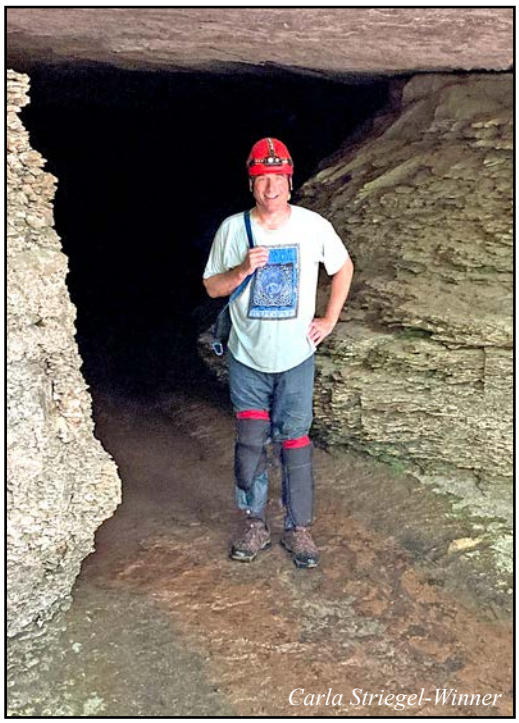
For more information on the Indiana Karst Conservancy, visit our website at ***ikc.caves.org,*** our Facebook page at ***www.facebook.com/IndianaKarstConservancy***, or write to our PO box. Membership to the IKC is open to anyone or any organization interested in supporting cave and karst conservation. Annual dues are $20. 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***.

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***.

RAMBLINGS FROM THE PRESIDENT...

The ancient Greek tragedy *Antigone* came to mind recently. Antigone's two brothers, dead by each other's hands. Their city of Thebes, broken. A new king, their uncle Creon, forbids burial for the brother he calls a traitor. The traitor's corpse exposed outside the city walls, left for wild dogs.

Antigone chooses to obey what she believed to be divine law, that the dead must be buried. For breaking his law, Creon seals her in a tomb, very much like a cave, where she hangs herself. When her fiancé, Creon's son, learns of this, he takes his own life, as does his mother.


Carla Striegel-Winner

Antigone couldn't win. By obeying divine law, she was forced to break the law of man. This fraught decision brings ruin to her and Creon's household, and it could not have been any other way. She lived beneath two laws and could not serve both. Either choice exacted a price.

I thought of her when a caver I follow on social media, surveying in a cave, found a virgin passage full of fragile beauty. Crystals unbroken, untouched, blocking their way.

To step forward would destroy this fragile beauty. To protect them would leave the exploration and map unfinished. And she asked her followers, which law should guide her?

One law says go. Exploration demands the unknown be charted, data collected, connections found. The air was blowing; the passage went. To turn away would be to leave knowledge buried with the rock.

The other law says stop. Reverence for the cave demands restraint. Once broken, a crystal never returns. Beauty dies in an instant; only millennia can restore it.

The responses to her question became a virtual Greek chorus. Some said walk away and let beauty remain unmeasured. Some said go once, with surgical care, then bar the way by custom and policy. Some said mark a narrow path so at least the damage is confined.

Others remembered when they made the decision to explore and related how the sound of formations shattering like glass still haunts them.

I have seen examples of exploration balanced with conservation in places like Mammoth Cave's Turner Avenue in Flint Ridge, where one path has been carefully followed for decades, leaving the glittering gypsum that encrusts that passage intact. In other places passages are marked as so fragile and wondrous that no one should ever disturb them.

Some counseled secrecy: keep the location quiet, tell only those you trust or no one at all. And some argued with fatalism, that if you don't explore, someone else will, and they may be careless.

One philosopher in the chat mused, "Is it really beautiful, if no one ever sees it?"

I read the comments and heard echoes of Antigone. Not good versus evil, but two real and valid claims pulling against each other. A decision that must be made by a serious caver who loves caves and feels the force of each law demanding recognition.

Explore or protect. In this case, she could not fully do both.

I feel it in myself, two voices I never thought of as separate until now: The caver who hungers to know what lies beyond, and who wants to find and experience the sublime beauty of what is underground, and the President of the IKC who must answer to time and to others and has a duty to advocate for stewardship and conservation.

Sometimes what is right is not opposed to what is wrong, but to another value that is also right. This conflict is at the heart of how we carry out the IKC's mission.

The history of the IKC echoes with similar arguments. At our founding, we were cursed as elitists for gating and guarding caves. We now receive research proposals we know will leave scars in service of knowledge. We have had long discussions of how to clean cave graffiti without doing worse harm. Always the same question: Which law do we obey today, and what price might we pay tomorrow?

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If it were me standing at that threshold of this decision, I would set the bar high. Sometimes knowledge is worth a careful step. The reason must be real, the plan narrow, the damage owned. And if those conditions are not met, then it is better to leave it untouched, to let the restraint itself be the thing we give back.

But I don't pretend the decision is easy. I feel the airflow on my cheek and the pull of the unknown. I see the crystals glittering in the light of my headlamp.

Antigone did not win. That is the nature of tragedy: She could not win. She reminds us that to be human is to live with values that sometimes collide. For the IKC, we have these two: To explore, and to protect.

My friend's photograph lingers in my mind: Intricate crystals rising delicate as breath, the whisper of air telling us the passage goes. This is where we sometimes find ourselves, standing at a threshold with no clean answer, knowing whichever choice we make will have a cost.

I am not sure what decision my friend made, but I must ask: What would you do?

Matt Selig

NEWS BRIEFS...

- ***Thank you Paul Uglam!*** Earlier this year, Paul informed the IKC Board that he wished to retire as the Cave Patron for Sullivan Cave. Sullivan is by far our most visited cave with an average of 76 trips per year and untold additional inquiries. Paul had served in this volunteer position for ten years, and we are so appreciative for his dedication to the IKC and to all the groups he has assisted in arranging trips to the cave over the years.

- The IKC Board solicited potential candidates for the Sullivan Cave Patron and at the June IKC Board meeting, there were four IKC members who had expressed interest in filling the position. After some discussion, it was decided to appoint an *ad hoc* committee to review the applicants and make a recommendation at the September Board meeting. In the mean time, it was decided to designate Goni Iskali (assisted by her husband Brad Barcom) as the interim Cave Patron.

- The IKC is making progress on migrating to an on-line cave access permit, scheduling, and liability waiver management system that will simplify/eliminate much of the physical paperwork Cave Patrons currently have to handle. Paul Uglum and Tim Harris have been working with the SCCi-developed system and it is now operational for Sullivan Cave (the pilot project). To read more about this system, see the article starting on page 10.

- A final *News Brief* related to Sullivan Cave... At the June IKC Board meeting, a restoration project proposed by Nate Vignes was approved. The scope of the project is to remove/cover up graffiti in the Backbacker passage and Mountain Room, with the exception of one small area where there are some historic (pre-1950) signatures. There was a lot of previous restoration work done in this area during the 1990s and 2000s, but enthusiasm waned, so it is hoped that a new generation of cavers will make progress. If you are interested in learning more about this project, contact Nate Vignes (***natevi@yahoo.com***).

- Head to the 20th Annual **Bat Festival** at ISU in Terre Haute on Saturday, September 27. Visit our IKC booth and say hi to IKC Board member and bat biologist Goni Iskali from 10 AM to 3 PM EDT at the ISU Science Building. There will be all kinds of cool activities and displays going on for kids and adults. If you feel like hanging out afterwards, the festival reconvenes in Dobbs Park from 5 - 8 PM with nature hikes, walkabouts with bat detectors, and more kids activities.

- Kick off the International Bat Appreciation Week at Indiana Caverns near Corydon as they celebrate with their **Bat Day** on Saturday October 25. Booths, food trucks, crafts, scavenger hunts, bat art contests, and cave tours all day. The Second Chances Wildlife Center presents "Batty about Bats" at 1 PM. For more information visit ***www.facebook.com/share/15wTvYwByv***.

- Join us for our last two **Focus on Fauna** field events of 2025: *Big Day for the Birds* on October 11 at Buddha Karst Preserve with expert birder Cathy Meyer (see page 11) and *Lawrence County Caves and*

Continued on page 16...

STEWARDSHIP ON OUR PROPERTIES NEVER STOPS

compiled by Keith Dunlap

When we acquire caves and karst properties, we are also promising to take care of them in perpetuity. Thus the IKC spends a lot of effort through continuous, competent stewardship to really conserve and enhance our properties. And we do it with passionate volunteers. Here's a sampling of what was accomplished since our last newsletter:

☑ Prior to the last quarterly Board meeting, more than a dozen volunteers collected trash and rolled a large tractor tire uphill for later disposal on the newest expansion tract of the Wayne Property Also volunteers hand-pulled invasives (mostly re-sprouted autumn olives) on the other tracts.

☑ Property Manager Cris Seuell (below) and Keith Dunlap treated stiltgrass on several days on the expansion tract of the Wayne Cave Preserve.

photo courtesy Keith Dunlap

☑ Property Manager Joe Kinder organized a mini-workday at the Sullivan Cave Preserve with the campground and overflow parking areas being mowed, a drainage culvert being unplugged, the wood shed roof being painted, and some invasive treatment accomplished. Volunteers included Jeff Cody, Laura Demarest, Keith Dunlap, Goni Iskali, and Cris Seuell.

☑ Keith Dunlap spent multiple days at the Sullivan Cave Preserve killing multiflora rose, stlitgrass, and invasive bush clover (*sericea lespedeza*).

☑ Property Manager Keith Dunlap mowed trails and cleared down trees at the Shawnee Karst Preserve. He also treated (killed) autumn olive and tulip poplar seedlings in the larger prairie opening, and worked on spraying invasive *sericea lespedeza* in another clearing.

☑ Tom Sollman, assisted by Keith Dunlap, replaced a trail bridge at the Shawnee Karst Preserve (below).

photo courtesy Keith Dunlap

☑ Property Manager Keith Dunlap mowed the trails at the Buddha Karst Preserve and treated Johnson grass along the county road frontage.

☑ Property Manager Carla Striegel-Winner and her uncle Chris picked up trash and weed-wacked the pull off area once a month at the Orangeville Rise.

☑ Jamie Winner mowed the access lane, lower parking area, and openings by the barn at the Robinson Ladder Cave Preserve.

☑ Keith Dunlap mowed the area inside the chestnut tree enclosure at the Robinson Ladder Cave Preserve and treated the chestnut trees with fungicide.

☑ John Benton, Keith Dunlap, John Lawrence, and Chris Schotter worked on trimming overhanging limbs on the access lane at the Robinson Ladder Cave Preserve prior to the *Hike with a Bat Biologist* event. Carla Striegel-Winner and Joe Kaiser pulled Tree of Heaven seedlings and picked up downed limbs on the access lane.

If you are interested in helping at one of our preserves or assisting one of our Property Managers, reach out to them directly or to ***IndianaKarstConservancy@gmail.com***. If donating new (or gently used) equipment, or funding the purchase of stewardship tools is more to your liking, we would welcome that as well.

2025 WILDERNESS FIRST AID – CLASS RECAP

article by Danyele Green, photos by Carla Striegel-Winner

On July 12th and 13th, 23 students and two instructors descended upon the Lawrence County Independent School (LCIS) near Bedford, IN for two full days of Wilderness First Aid (WFA) lessons and hands-on training. I am an IKC Board member, and my husband, Tymme Laun, and I are instructors for SOLO, which is the first (and thus oldest) wilderness medicine school in the United States, based out of Conway, New Hampshire, next to the White Mountains.

Every year, the IKC rotates sponsoring WFA or Orientation to Cave Rescue (OCR) training courses. This year was the WFA.

In addition to the hands-on exercises, the training presented a lot of information in the classroom.

About half of the class participants were "repeat offenders", that is students coming back to either re-certify their Wilderness First Responder (WFR) certificate, refresh their skills learned two years ago, or even spend the time mentally coming to terms with events that happened to them in the last few years that they needed to talk through as part of their healing journey.

The other half of the attendees were brand new and eager to learn and did an amazing job acquiring new skills and sharing in the journey with students that were refreshing their skillset. While the majority of attendees were local to the southern Indiana region, we did have participants from six states, including as far away as Wisconsin and Connecticut. Several recreational groups were represented as well, such as the Sierra Club and several local Grotto members.

With the financial support of the IKC, LCIS for their classroom space, and discounted instructor rates, this offering is one of the least expensive WFA courses available! Donations from you (yes *you*, IKC members reading this right now) help support these cost-effective courses to aid those going caving and adventuring above ground. The IKC is a land trust, but we are also all about helping prepare our members and guests who go onto and under our lands to be as safe as possible.

Students practicing improvised carry using 22 feet of webbing, a carabiner, and sleeping pad.

Thank you for making this happen and we are looking forward to WFA 2027!!!

Learning to pack a deep gash wound with gauze on a prosthetic arm to stop it from bleeding.

THE MEMORIES OF WATER: HOW WE USE ISOTOPE CHEMISTRY TO UNDERSTAND THE WATER CYCLE

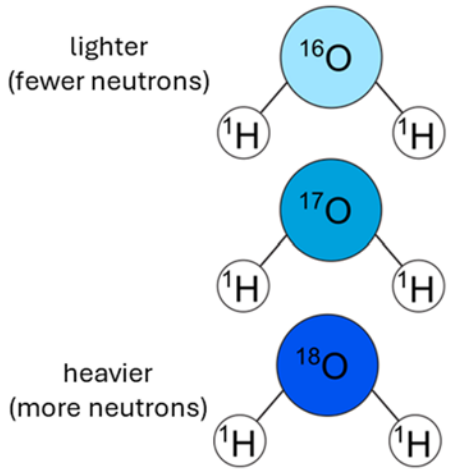
by Tyler Huth, Bronwen Konecky, Jack Hutchings

Over the last few years, a team of volunteers from the caving community have contributed their time, effort, and deep knowledge of the USA's karst systems to support a research project out of Washington University in St. Louis. Our group, composed of Drs Tyler Huth, Bronwen Konecky, and Jack Hutchings has been hard at work analyzing all the samples and working through the data set, and we are excited to be able to share this summary of the results with you. Please enjoy!

Weather and climate patterns across the USA are largely controlled by the behavior of the global water cycle, which determines how water moves from the oceans and to the atmosphere, land, and biosphere. Unfortunately, it is not easy to track the origin and transport history of precipitation and its derivatives (e.g., soil water, lake water) even though this is critical information for understanding the nature of storms, seasonal precipitation patterns, and year-to-year oscillations in different climate zones (for example, think of the El Niño climate pattern that is often in the news).

There are several methods scientists have come up with to track the water cycle. The way our group at Washington University in St. Louis fingerprints the origin and history of water is through its isotope chemistry. How does this work? Let's think back to high school chemistry for a moment. Atoms are the fundamental building block of matter. They have a nucleus, which contains protons and neutrons, and are surrounded by electrons. Protons and electrons have positive and negative charges, respectively, while neutrons have no charge. We define elements in the periodic table, like hydrogen (H) and oxygen (O), by the number of protons. However, for our purposes, we also need to think about the number of neutrons.

It turns out that atoms of a specific element always have the same number of protons, but they can have a different number of neutrons – these are what we call isotopes. When we talk about isotopes, we usually refer to it by its mass number, which equals the total number of protons and neutrons. For example, oxygen is defined by having 8 protons. However, it has isotopes with 8, 9, and 10 neutrons. So, considering the total number of protons and neutrons, we would write the isotopes of oxygen as ^{16}O, ^{17}O, and ^{18}O.



Isotopes of an element have very similar properties (they're all the same element!), but in detail, they act slightly differently during chemical reactions and physical changes. These changes are imperceptible to humans, but are regularly measured in laboratories worldwide. This is incredibly important for Earth scientists. It means that by tracking the amount of isotopes in a water sample (H_2O contains ^{1}H and ^{2}H; ^{16}O, ^{17}O, and ^{18}O) we can actually track water cycle processes like evaporation, rain, snow, and evapotranspiration. For oxygen, we normally can only measure the two most common isotopes, ^{16}O and ^{18}O, but the scientific community has been able to do a lot with them, including characterizing public water systems, tracking animal migration, solving forensic cases, quantifying plant evapotranspiration, reconstructing ancient water resources, and quantifying evaporation from lakes.

Recently our research group at Washington University in St. Louis has optimized a new tool where we can now also measure the ultra-rare ^{17}O isotope using a laser system. This is a huge deal because it means we now have a whole new source of information about how the water cycle works. However, this really is cutting-edge science. We don't have a strong handle on what determines how much ^{17}O is found in environmental waters around the world, or what water cycle processes determine those patterns.

This is why we joined forces with the caving community! We wanted to make a map of triple oxygen isotopes across the USA, an "isoscape," to identify the spatial patterns that exist and begin to explore what drives them – in other words to cre-

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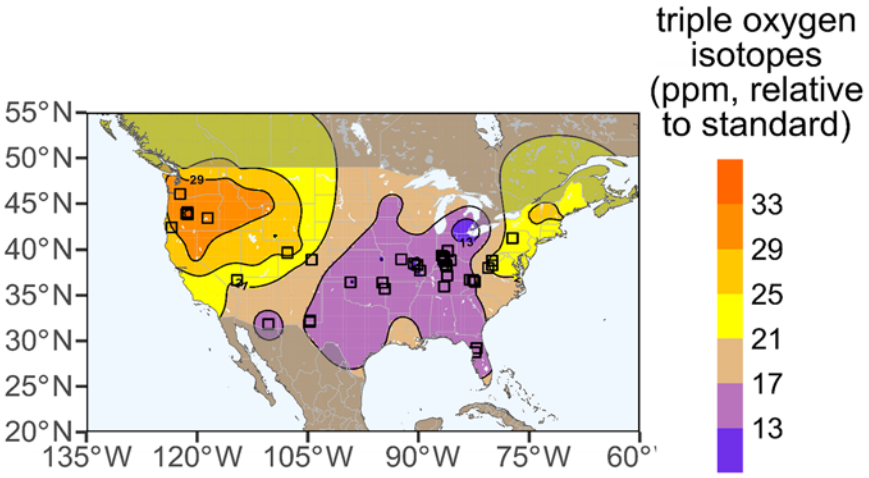
ate the scientific foundation for this new era of investigating the water cycle. Caves were a logical choice for water samples because they, as a group, represent pristine infiltrated waters with relatively long residence times (as compared to, for example tap water held in a man-made reservoir). With the help of cave enthusiasts around the country, we were able to collect more than 100 cave water samples (drips, springs, seeps, waterfalls, pools) in 34 distinct locations across 17 states a truly amazing effort.



Our results demonstrate that water triple oxygen isotope values have distinct spatial patterns. Values are highest in the northwestern USA, lowest in a broad region across the Southwest, Midwest, and much of the South, and moderate-to-high along the Atlantic coast. Our initial explanation for these spatial patterns is that the waters are recording weather conditions from when they were initially evaporated from the ocean. In other words, these cave waters may remember what it was like when they were "born" during evaporation!

Ultimately, these findings are the foundation for new avenues of scientific exploration of the water cycle. With this base characterization of the large-scale patterns of water isotope chemistry at the Earth's surface, we can now move towards applications of this new method. Targets for future work will naturally include understanding the modern and ancient water cycle, but also extend to exploring any material that contains oxygen coming from water: hair can be used to track human movement; bone, teeth, horns, and feathers can be used to reconstruct animal migration patterns, and the molecules in food and drink can be used to determine their authenticity.

In closing, we'd like to again thank all the citizen scientists who worked on this project. Your community is such a warm and welcoming one and we truly appreciate everything you've done to make this study a reality.

SAMPLING THE DEPTHS: IKC'S CAVES AND ISOTOPE RESEARCH

by Carla Striegel-Winner

In April of 2022, Dr Tyler Huth reached out to caving groups across the country with an email that began with "*I work on the geochemistry of caves and am looking to acquire a set of cave water samples from across North America as part of a scientific study on caves and climate. Would members of your group be willing to collect cave water samples in caves they are already planning to visit this year?*" I immediately felt that it would be ideal if all of our primary IKC caves could be part of the study. I reached out to Dr Huth, assisted him with the required IKC research permit, as well as the IDNR Nature Preserves Permit (for caves on the Buddha property), and we were ready to go. I then received a package from Tyler with labeled vials and related materials and instructions. I would not be completing all of these myself, and would need to store the samples in my fridge until they were all collected, so I made up field kits with the needed supplies and included instructions for each of the eight IKC caves that would be sampled. It took awhile to get them all, but we did it. In addition to me, Matt Selig, Scott Frosch, Jasper Beavers, Amelia Schipp, and Isabelle Schipp

photo courtesy Megan Schipp

Amelia and Isabelle Schipp concentrate on collecting a sample from a waterfall drip in Lowry Cave.

Continued at the bottom of page 11...

ELECTRONIC PERMIT SYSTEM AT SULLIVAN CAVE

by Goni Iskali and Brad Barcom

Sullivan Cave is the most visited cave that is owned/managed by the Indiana Karst Conservancy (IKC). Over the past few years, the IKC Board has been investigating using an online access/permission system that was developed by the Southeast Cave Conservancy and is now being used by several other cave conservancies and the NSS to manage their cave and property visitations. This system allows cavers to not only request and schedule trips, but it also allows trip leaders to paperlessly distribute information about the cave and the required waivers to their participants in a more efficient way.

The IKC Board has been testing this system internally over the past year, and is now piloting it for those who wish to request caving trips or camping at the Sullivan Cave Preserve. Currently, the IKC is only using this on-line option for Sullivan Cave, but intends to expand its use to other IKC-managed caves/properties in the future, assuming the system works as expected.

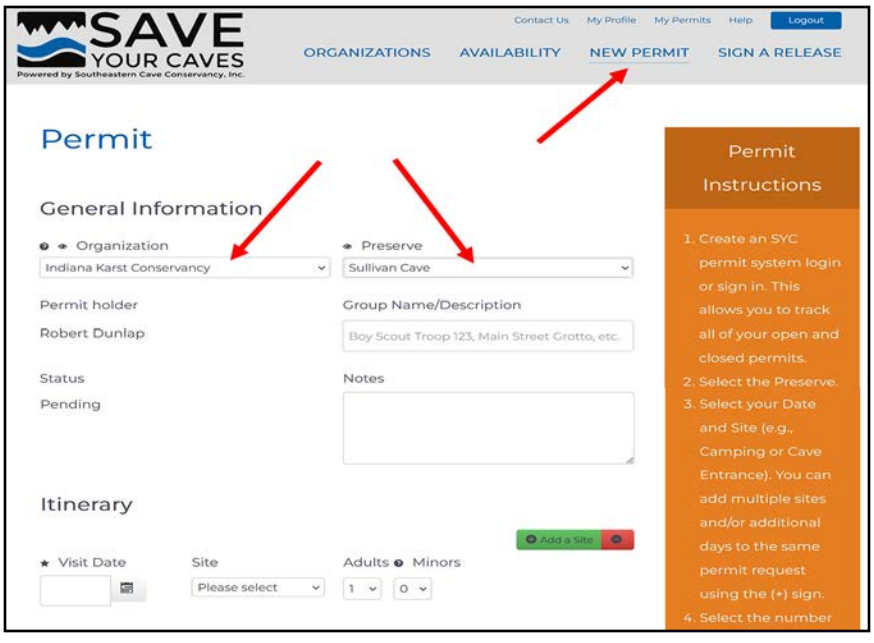
The following is a detailed description for how a trip leader uses the system from a desktop or laptop, but the experience is very similar from a smartphone. Go to ***permits.saveyourcaves.org/organizations.html***. A first-time user will need to Register (see that menu option at the top right) to create a login profile for the site. After the user has a profile, they can Login (also top right) and request access to any of the caves/conservancies listed on the website. To request access to either Sullivan Cave for caving or camping on the property, the trip leader simply chooses the New Permit option (also top right) and that will then take the user to the Permit page (see image below). Then select Indiana Karst Conservancy and Sullivan Cave, and fill out the other required fields to request permission.

Once this initial request has been submitted, the trip leader/requester will receive an email (via the email used in their profile) with a unique permit number and a link to the waiver release form. The trip leader will then forward this email link to all trip participants for each of them to read the material and sign the electronic waiver form.

All participants must sign their respective release forms before the trip request can proceed to be reviewed and considered for approval. Each participant will also receive a copy of their release form via email once signed. Once the request is approved, additional information and directional maps will be provided to the trip leader.

Here are a few things to consider when requesting a trip:

1) Requesting access to Sullivan Cave via the website does not automatically grant the requester access to the cave. The Cave Patron and/or other administrators will need to approve the request, and the trip leader/requester will be notified via email whether or not the trip has been approved. The Cave Patron may also reach out to the trip leader with any questions before approving the trip, so please provide any details in the Notes field that can reduce some of these questions (i.e. how many trips have you led into Sullivan Cave and how familiar are you with the cave?).



2) The minimum number of participants in the permit system is currently set to "1" to provide flexibility with special circumstances. However, requesters should typically enter no fewer than the minimum number recommended in the Sullivan Cave Management Plan (which is 4) and also maintain the recommended ratio of participants to trip leaders relative to age group category. For youth groups, an adult leader should not oversee more than six youths. For anyone under

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the age of 12, the child must be accompanied by an adult of their immediate family.

3) The Cave Patron and IKC may deny a trip or camping request, and will communicate with the requester if this is the case (e.g. if other trips or activities have already been requested for that date).

The IKC sincerely hopes that this new online system will make requesting trips into Sullivan Cave and camping at the Sullivan property a lot easier and more accessible to cavers, while also helping to organize/schedule trip requests and manage/secure waivers better in order to reduce the IKC's liability and physical paper shuffling. We look forward to having IKC member and cavers test this new system and provide the Board feedback about how we can make this transition go smoothly. Once this pilot evaluation is done, the Board will need to approve the official use of this new system at Sullivan and then expand it to our other caves.

Sampling... continued from page 9

collected samples. IKC caves that were sampled as part of this study were Robinson Ladder, Breakdown Falls, Sullivan, Lowry, Upper Twin, Chase, Wayne, and finally in April of 2023, Buddha.

When a permit is issued for research on IKC preserves, the researcher is required to submit a report suitable for publication upon completion of their research, so the article on pages 8-9 finalizes Dr Huth's permit process. We appreciate our caves being a part of this baseline study of water samples and the work Drs Huth, Konecky and Hutchings continue to do.

THE "HIKE WITH A BAT BIOLOGIST" WAS A REAL TREAT

by Chris Schotter

The *Hike with a Bat Biologist* event, as part of the IKC **Focus on Fauna** field event series, was held on August 16th, and was a great opportunity to learn all about our beloved bats of Indiana. The hike was planned as an evening event at the IKC's Robinson Ladder Cave Preserve located just north of Milltown in Crawford County, Indiana.

Before the actual event, volunteers were invited to come early and help with several stewardship projects on the property. Mid-August can be brutal in southern Indiana, so the work activities were promised to be in shady areas and limited to just an hour (or so) with time to relax afterwards with a light meal before the bat hike. We had enough volunteers to split up into two teams. One group worked their way up the trail from the parking area to the top of the hill clearing downed limbs out of the way, and then pulling some invasive Tree of Heaven (*Ailanthus altissima*) saplings that were spotted on an earlier visit to the property. Much like roaches, if you see one Tree of Heaven, there are more elsewhere, so this will likely be an ongoing battle. The other group headed out to trim overhanging tree limbs along the grassy access lane. This right-of-way lane is along an old fence line with many trees growing and drooping over into the road, making it challenging to mow and maintain the lane without periodic trimming. Armed with a couple of battery-powered pole saws, a pruning chainsaw, and some long-handled loppers, the sweaty volunteers worked their way up a couple hundred feet of the fence line trimming the hanging branches and clearing them out of way. It was a 100+ heat-index day, so an hour of work was plenty and everyone was ready to relax and eat as we reached the designated quitting time. Carla planned ahead and had some life-saving frozen Fla-Vor-Ice™ in a cooler that were much appreciated. Supper was a tailgate buffet including deli meat sandwiches with all the fixins, potato salad, chips, ice cold lemonade, and some chilled watermelon. A perfect mid-August meal! We had an hour or so to eat and socialize before the main event of the evening.

photo courtesy Chris Schotter

Removing tree branches along the access lane.

By 7 PM the group had grown to over a dozen people eager to learn more about bats. The preserve's Property Manager, John Benton, got us started with an introduction and brief history of the 73+ acre property and the cave. The Robinson Ladder Cave Preserve is the IKC's southernmost property. The cave itself is over 1700 feet long, is an Indiana bat hibernaculum, and was first explored long ago with some signatures dating to 1882. Another interesting fact is that in the not-so-distant past, migratory bison followed a well-defined trail call The Buffalo Trace across a near-by ford on the Blue River and over a part of this property.

Bat biologists are almost as rare as the northern long-eared bat, so we were extremely lucky to have not one, but two bat biologists come to our event! Goni Iskali, who also serves as the IKC's Secretary, brought along a bat biologist colleague, Aaron McAlexander from WEST environmental consulting. Some of Aaron's work includes monitoring and bat surveys related to the I-69 project and other significant projects in the Midwest. Before heading off on our walk, Goni gave us a brief overview of bats. The only mammals capable of true flight, there are over 1,400 species of bats widely dispersed around the world and found on every continent except Antarctica. Here in Indiana, there are 13 documented species of bats. Six of them are here year-round and hibernate through the winter months, primarily in caves and abandoned mines. The other seven species are migratory and head south for the winter.

We started our walk up the lane from the parking area and made our first stop in the woods to learn the sordid details of our Indiana bat mating and birthing habits. Mating typically occurs in the late fall before hibernation (often "swarming" at cave entrances). To conserve energy while hibernating, the females are able to store the sperm over winter and actually delay fertilizing the egg until spring. This amazing bit of evolution allows the

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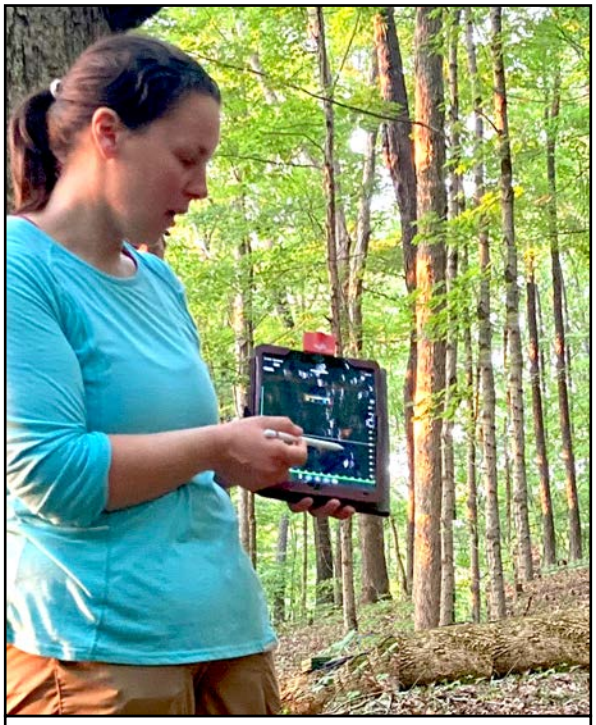
baby bats to be born after the females leave the caves and are once again feeding. In late spring and early summer, female bats give birth and with their pups, form maternity colonies in warmer places like under the shaggy bark of living trees or dead snags, or in hollow trees. Mother bats typically have just one pup per year and the young bats have only a few short months to grow into adulthood and fatten up in order to be ready for hibernation. Like all mammals, bat pups are fed milk until they are old enough to hunt/feed for themselves. We also learned that, like people, some bats are very social and some are not. Indiana bats and gray bats for example prefer tightly packed winter colonies. Tri-colored bats on the other hand, usually roost alone. In-cave roost locations are primarily determined by temperature and only a few dozen caves in Indiana meet the required temperature requirements for some species like the Indiana bat. While colonies of bats are hibernating, they do wake up periodically through the winter and the roost locations in the cave may shift throughout the winter as temperatures fluctuate. It was also noted that they seem to prefer larger spaces and rarely roost close to the ground to minimize predation. From a caver standpoint, it is always encouraging to see bats come out of a crawl or cave dig. It's not just a good omen; it is a sign that there is larger passage somewhere ahead. Someone asked if the different species of bats got along with each other. The answer from our biologists was that they thought so. There are no recorded observations that show one species of bats attacking another. Though Aaron shared a humorous story of holding two different species of bats in his hand during a bat count and seeing one appear to punch the other in the face, so maybe it's more accurate to say the different species tolerate each other.



Goni Iskali showing how the Echo Meter Touch 2 works on her iPad to detect bats in real time.

Our next stop on the hike was at the entrance to Robinson Ladder Cave. The timing was perfect and we got there just before dusk. As the sun was setting, bats started to emerge from the cave on their nightly quest for food. Goni and Aaron brought two versions of bat "detectors" on the hike, both from Wildlife Acoustics (***www.wildlifeacoustics.com***). Bats echolocate at frequencies far beyond what the human ear can hear. The bat detectors are designed to capture these high frequency sounds. The app associated with the detector can then analyze the echo patterns, or "calls", and determine the species of bat. The smaller/cheaper version of the detector that the IKC owns (Echo Meter Touch 2) is mostly for educational/amateur use and plugs into a smart phone or tablet and the associated app lets the user see what bats are in the area in real time. The more expensive/professional model (SM4) that Aaron brought along has a wider range and is much more accurate and primarily for research/consulting projects. It is housed in a weatherproof box and attached to a pipe with the microphone located ten feet above ground level. It is typically deployed in the field to collect data for days or weeks, then the data is downloaded and analyzed with other sophisticated software tools to identify all the bats that might be using the particular location to determine if a planned project might impact the bats and require mitigation. During the hike, Aaron placed one of these detectors near the cave entrance and another in the clearing atop the hill. The data collected will be analyzed and presented in the December *IKC Update*, and also used for ongoing bat studies of IKC properties.

We made one last stop at the top of the hill so Aaron could set up the second detector for the bat survey. This ridge top location has a sizable open

Continued on page 16..

Center spread: Ty Spatta near the Black Damp passage in Shiloh Cave, Lawrence County. Photograph by Dave Everton (2005)

area favorable for bats to fly and feed, so it was fun to visually see the bats and use the cheaper detector on Goni's tablet to identify what species of bats were flying about. Goni also used this last stop to talk about the threats to our bat populations. By now most cavers are painfully aware of White-nose Syndrome (WNS) that has decimated bat populations across the country, especially our smaller species like the Indiana, little brown, and tri-colored bats. According to the DNR website, of the 13 recorded species in our state, six are listed as state Endangered and six more are listed with a status of Special Concern. But that's not all the result of WNS. The bulk of the hibernating bat species hibernate in just a few Indiana caves, requiring those locations to be closed through the winter months. When not hibernating, these bats need good maternity roost forested sites and habitat loss plays a factor. All bats in Indiana eat insects, so agricultural pesticide use is yet another risk to their survival. With just one pup per female a year, it can take decades for population numbers to recover. This is a great example of why conservation organizations like the IKC are so important. The IKC is dedicated to responsible land management in an effort to preserve these unique landscapes and the vulnerable species that call them home. IKC volunteers are also active in community outreach and education programs. Bats are often misunderstood and through education we can change the narrative of these precious and fascinating animals.

photo courtesy Carla Striegel-Winner

Aaron McAlexander installing a bat detector with microphone near the cave entrance.

Many thanks to the IKC for hosting the hike, and to Goni and Aaron for sharing their knowledge and expertise. This was a fun and informative event with a lively discussion and some great questions. I think everyone came away from it with a better understanding of our incredible bats. It was a great reminder that when we are out exploring these caves and forests, we are just visitors. To the bats, this is home. Tread lightly!

New Briefs... continued from page 5

Karst hike and tour on November 8 which features the IKC's recent work in Hamer Cave as well as Board member Tom Sollman's cavefish census work throughout the Spring Mill area (see page 17).

- ❑ Where did the summer go? A reminder that a number of "bat" caves are closed from September 1 until April 30 for bat swarming and hibernation. These include *all* Hoosier National Forest caves, Langdon's Cave in the Harrison-Crawford State Forest, Wyandotte Cave (commercial), Endless and River caves in Cave River Valley, Robinson Ladder Cave owned by the IKC, and a number of caves on InDOT mitigation easements (Coon, Grotto, Salamander, Clyfty, and Eller caves). This is in addition to all the DNR managed-caves that are not in their permit system that are closed year around. Other privately-owned caves that serve as bat hibernacula should be avoided as well.

- ❑ The IKC has gained seven new members in the last quarter. Welcome Kenzie Givens, Richie Hinshaw, Austen Noyes, Zachary Patrick, Matthew Rhule, Charlie Savage, and the Harrison-Crawford Grotto (reincarnated). The IKC membership currently stands at 321.

USFWS RECOMMENDS DE-LISTING THE GRAY BAT

compiled by Keith Dunlap

In early July, the United States Fish & Wildlife Service released their required 5-Year Review of the gray bat (*Myotis grisescens*). As a result of this latest Review, the Service is recommending that the gray bat be federally de-listed. Any change in actual status requires a separate rulemaking process, which includes opportunities for public review and comment. Based on the recommendation in the Review, the Service intends to begin the rulemaking process to remove the species from the Federal List of Threatened and Endangered Wildlife.

Quoting from the announcement: *The Service listed the gray bat as endangered in 1976, primarily due to cave commercialization, improper cave gating, and roost disturbance, modification, or destruction. At the time of listing, the total estimated population of gray bats was 1.5 million. The gray bat's decline was reversed through focused conservation actions of many partners. The species' recovery is a 50-year story of passionate and dedicated state and federal agencies and private partners working together to resolve threats. Through educational outreach and cave protections, the Service, state natural resource agencies, private landowners, and many other conservation organizations successfully protected all major winter hibernacula and a majority of biologically significant summer colonies. Gray bat populations have increased dramatically where threats were resolved, and new populations are continuously being discovered. As part of the most recent review, the Service completed a population trend analysis which indicates significant positive population growth over the last 20 years. Additionally, through biennial winter cave surveys, the Service estimates that there are approximately 5 million gray bats across the species' range.*

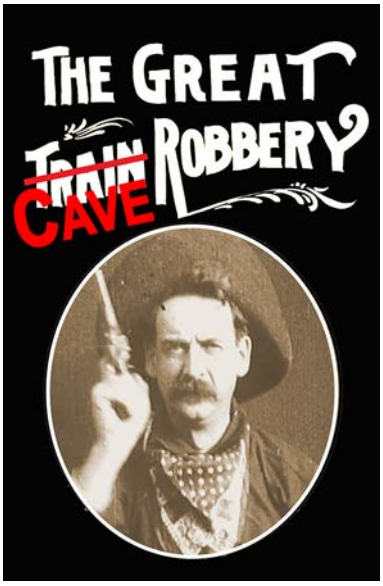
If you wish to learn more about the details of this Review, you can visit the Service's gray bat page here: ***ecos.fws.gov/ecp/species/6329***.

A LOOK BACK AT INDIANA KARST

by John M. Benton

Marengo Cave Underground Robbery

Friday, July 23rd, 1982 seemed a normal day at Marengo Cave in Indiana for tourists. A tour group with 27 people was passing Penny Ceiling (a room where tourists are allowed to toss coins that stick to the muddy ceiling) on the Dripstone Trail section of the cave led by 18-year-old guide Pete Crecelius (*editor's note: this was a different person than the Indiana caver by the same name who now resides in Idaho*). Suddenly, a masked gunman with a sawed-off shotgun appeared on the ledge and barked, "This is a holdup!" A lot of the visitors thought this was a performance and part of the tour. This angered the gunman and he fired his weapon up into Penny Ceiling, blowing many coins off the roof about 20 feet above the group, not to mention a deafening noise blast from the shotgun blast. The shocked tourists and guide realized this was real!!



The gunman took the flashlight from the guide and ordered him to collect all the wallets and purses in a plastic bag. He then turned out the cave lights and left the group in total darkness. Pete eventually found his way to a light switch using a guest's cigarette lighter, and then took everyone from the cave, shaken but unharmed. Roughly $300 was collected in the robbery. The tourists were from Indiana, Kentucky, Michigan, and Virginia. After the event, none were available for comment.

Pete recognized the voice of the gunman as that of a then-16 year old former employee. The outlaw, Curtis Johnson, fled the cave, but was captured about two weeks later at a beach on Patoka Lake in a neighboring county. Then while waiting for his trial, Johnson briefly escaped a work detail at the local Crawford County Jail on October 5 1982, but was recaptured and returned to jail five days later. The young juvenile, who had previously had multiple run-ins with the law, later received a ten year prison sentence for the underground robbery.

Cave manager at the time, Gary Roberson, stated the incident received wide publicity both on local television and nationwide in many newspapers from coast to coast (see an example below from the Seymour Tribune). Roberson noted that it was probably the single most media covered

Gunman Holds Up 27 in Marengo Cave

MARENGO, Ind (AP) – At first, the 27 people touring Marengo Cave in southern Indiana were thrilled when a masked figure appeared on a dark ledge above them and fired a sawed-off shotgun towards the ceiling.

"The people thought it was part of the tour, and the tour guide told them, 'Folks, this is the real thing,'" said Gary T. Roberson, manager of the Crawford County tourist attraction near the Ohio River.

But when the masked figure took their purses and wallets, the tourist realized Friday's robbery wasn't intended as a dramatic touch to the tour.

Guide Peter Crecelius had led the 25 adults and two children into the 500-foot long cave late Friday morning. Suddenly the bandit, his face hidden by a ski mask, appeared on a ledge overhead, Roberson said.

He fired a shot into the ceiling 20 feet above the tourist, injuring no one. He came down and forced them to put their purses and wallets into a bag.

The bandit also took the guide's flashlight, leaving the group in the dark as he fled with about $300, Roberson said.

Crecelius, 18, borrowed a cigarette lighter from a tourist and made his way along a passageway and turned on a light switch. He then went back and brought the group to the surface.

Crecelius, who had led tours for three years, declined to talk about the crime except to say, "it was an exciting thing."

State police used a dog to sniff through the cave for the bandit, but he was gone. A search by the state police plane also was futile.

Officers didn't know if the bandit was hiding in the cave or entered after the tour.

William Gilliland, Crawford County sheriff, said investigators believed the bandit was a juvenile who had been employed in the Marengo Cave.

The suspect's truck was found in a cemetery, and police believed he hid in a wooded area near the cave after the holdup. Gilliland said he had arrested the juvenile suspected of the crime three or four times on charges such as breaking and entering.

event in Marengo Cave's history.

This was quite a harrowing experience for all those involved! Luckily no one was harmed and the robbery has become a weird piece of Indiana cave folklore.

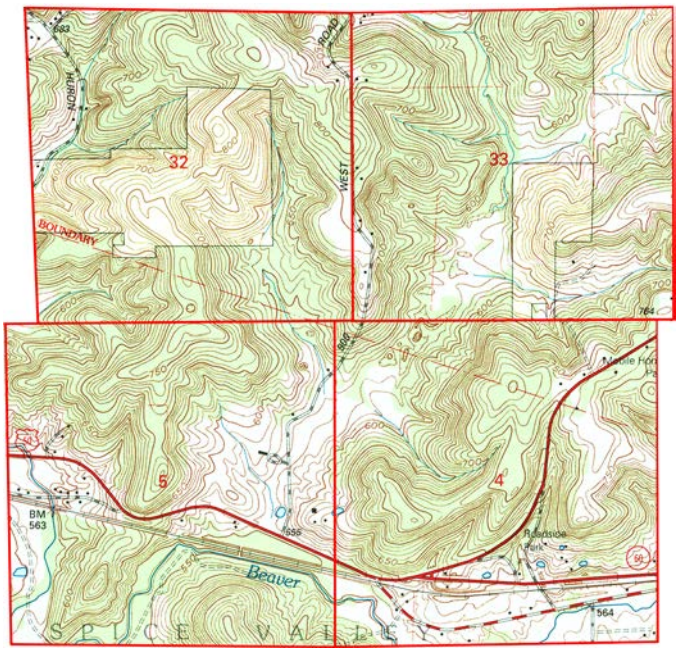
References:

- *Seymour Tribune*, Saturday July 24, 1982.
- *Dubois County Herald*, Saturday July 24, 1982; and Wednesday October 6, 1982.
- *Louisville Courier-Journal*, Tuesday July 27, 1982.
- *The Ferdinand News*, Thursday July 29, 1982.
- *Chronicle Tribune* (Marion IN), Tuesday October 12, 1982.
- *Official Souvenir Book of Marengo Cave* by Gary Roberson, circa 1990, 34 pages.

SPECIAL KARST FEATURES AND GEOLOGY ON THE HURON QUADRANGLE

by Carroll Ritter

The Huron quadrangle contains many varied geologic and stratigraphic features. This area has been extensively studied and documented as to its interesting array of rock strata, mineral deposits, past mine exploration digs, and abundant springs. The approximate 50 square miles of area lays in Lawrence, Martin, and Orange counties. Features on the Huron quadrangle exhibit a range from sandstone quarries and kaolin digs close to the Pennsylvanian-Mississippian Unconformity area on the north, down into the siltstone/whetstone formations of Orange County. Although in the Crawford Upland, we are close to the transition towards the Mitchell Plateau on the adjacent Georgia and Mitchell quadrangles. To the west and onto the Shoals quadrangle are found the dominant mineral deposits of gypsum from middle Mississippian age.



Early geology work was done as far back as David Dale Owen (Indiana's first State Geologist of New Harmony fame) in 1837. Later, *Geology of Lawrence County* was published by John Collett in 1874. Very interestingly, the 1874 map of this area labels a cave north of Huron as "Connelly Cave". But the location as we know it, seems to be Ray Spring Cave. Connerly (or Connelly as it is also called) is about two miles east along State Highway 60. The reason for this discrepancy may never be known.

More recent contribution to the modern revisions and updated nomenclature includes papers, reports, and field work by R.L. Powell, R.M. Weidman, Eugene Callaghan, R.D. Jenkins, and Henry H. Gray. This author recently visited Henry, who is now 103, to discuss the stratigraphy of the area.

Within the last two years, this author has conducted several field visits to sites on private land and the adjacent Hoosier National Forest, initially piqued by learning of some very intriguing features on private Classified Forest properties. Good friend District Forester Janet Eger has a keen eye out for not only forestry practices, but also for botanical and geological elements. This led to a close look at sections 4 & 5, (T3N, R2W) and sections 32 & 33 (T4N, R2W). The area is exceptionally karsted in a mostly forested environment. Elevations range generally from 550 feet to 820 feet. The terrain is moderately challenging to negotiate, with everything from cliffs and steep hillsides, to lowland swallow holes and sinks.

Higher elevations are capped with the Mansfield formation, with underlying Beech Creek limestone. Transitionally to lower elevations most likely passes through Elwren, Beaver Bend limestone, Big Clifty sandstone, Bethel Formation, and Paoli limestone. Of fascinating interest will be determining the subterranean drainage and resurgence point(s) for the area which may cover over 1,000 acres. The closest traces seem to point toward Hooper Spring to the northwest, but this hypothesis needs tested.

Section Surveys

Section 4 topographic map shows one primary drainage, which is spring fed, although there are many more hillside springs, some of which are perennial. One cave in sandstone is present, and one blocked small cave in limestone occurs. Amish Saltpetre Cave was a new find in 2024. The current owner reported that the cave was known when the former Amish residents explored their farm. The entrance appears natural in the typical Big Clifty alcove setting. At five feet high and fifteen feet wide, the passage trends north and has large breakdown blocks. At twenty-eight feet in from the entrance, a room is entered, and a further passage is seen straight ahead. But it appears circular, and then rectangular. It seems to have been dug by hand. At the

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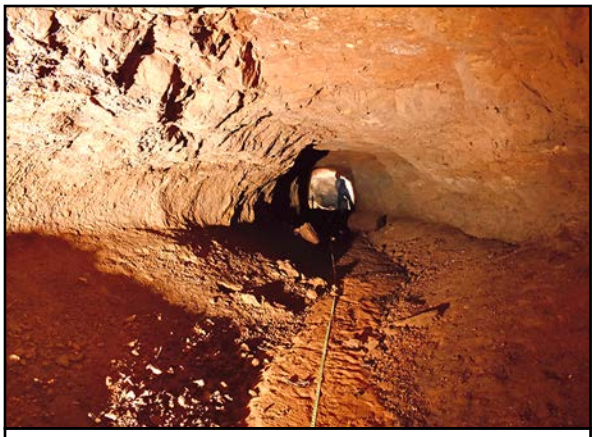

photo courtesy Carroll Ritter

Martha Ritter pulling tape in Amish Saltpeter Cave.

end and one-hundred feet in from the entrance, there is a small pool and submerged planks, with an old rail. An old iron exploration tunnel? The Amish had said it was a saltpeter cave, but this is doubtful. Even nearby well-known Connerly Cave was long ago called Saltpeter Cave. Nevertheless, a mystery and a good story.

In the northwest quarter of this section, exceptional deep and numerous swallows with relief of up to 20 feet, are abundant. There are many serpentine meanders with ten-foot relief and a proliferation of individual swallow points, with overflow routes and bypasses. One swallow hole was taking in a small flow during the visit. In places there are apparently convergent streams coming in from the north, but also east-southeast. The complexity of the hydrology here is fascinating. It would be extraordinary to watch during a flood cycle, but extreme danger would require careful consideration of vantage places that were safe. Due to swallow debris and chokes, overflow could easily fill swallows within the hour and then the entire valley could see a flood. In the main valley there are also sinks which overfill and later drain the system.

Section 33 lays north of Section 4 and continues the same pattern of large sinks, swallows, and possible caves, all of which I investigated, that collect flood debris and are choked. One opening, probably in the Paoli Limestone, has a fair degree of potential cave quality, but is filled with alluvium. The elevation of this section rises to 750 feet and there are five runoff stream valleys coming south. Every one of these are swallowed. However, two mapped caves do occur in this section. Convention Cave is in a deep swallow which floods quickly and fully. It has been mapped to 1853 feet (2016). Being clogged with debris, it must be dug out. Raccoon Run Cave is just on the Hoosier National Forest side of the line. This Cave was mapped to 193 feet (2016). This is another dangerous flooding swallow. Note that even getting down into these swallows to investigate possible openings presents a danger if the debris dropped or shifted and one sunk down into a situation where extrication might be a serious problem.

Section 32 lays west of the previous section and has intriguing features. Felknor Spring was reported in 2012. A spring source for water, the entrance is too small to enter. Felknor Swallow was also reported in 2012 with a limestone exposure an elevation of about 560 feet. The topographic map shows a stream in the east half of this section which may disappear into this swallow and then reappear. An old, reported iron exploration dig exists southwest of here along a scenic cliff section of sandstone.

Section 5 lays just below the above section. Of particular interest is the east half near Felkor Road The stream flow from Section 32, which may feed into the Felknor Swallow and then reappear, seems to continue down the valley into a grand set of swallow holes. Originally, and showing on the topo, is the main swallow in the NE, NE, NE quarter. Grand in its own right, it and a companion swallow just southwest appear to have historically taken the above-mentioned valley stream flow. But in early 2023 bulldozer work and clearing of pines appeared to have blocked some of this original flow path. Responding, a dramatic set of new collapse sinks fell in and began to take the stream. A remarkable band of strata was exposed, possibly of the Bethel formation, with shales, clays, and a black oxidized shale or peaty coal seam. The elevation is about 560 feet in the bottom of the sink. This new hole descends into an obvious cave and may be diggable, but cautiously. Large soil banks form the headwall.

photo courtesy Martha Ritter

An interesting sinking stream in Section 5 with extraordinary and colorful lithology exposure.

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Then, over ground within 100 feet, a new companion collapse sink plunges down steeply to an opening 20 feet below. Water can be heard, almost surely from its companion. IKC member Nate Vignes descended this and reached the plugged opening. The dynamics are exceptional in this area and can result in dramatic changes overnight. Every flood cycle creates new intrigue.

This one-acre area has some remarkable hydrology going on. The finality of the drains appears to point to the south into the adjacent valley. Dye-tracing would be fascinating here. Does this go to Hooper Spring, Blindfish Spring, or down to a spring outlet along Beaver Creek? Or further south? The dramatic sinking and resurgence of Beaver Creek and its swallows also is of hydrologic importance due to dye traces to both Hooper Spring and to Sulphur Creek Spring.

Other localized springs occur in abrupt alcove headwalls of sandstone where either Mansfield or Big Clifty formations overlay the shales and run out on Beech Creek limestone strata.

Just north of the center of Section 5, a sandstone cave named Amish Well Cave is also interesting. Beech Creek strata is exposed. It has been mapped at 139 feet and has a second entrance hole which drops 20 feet (per Jerry Litaker). Observations were that it was probably man-made years ago. Indications are that there was an old homesite there. Elevation about 670 feet. Close to this location, another cave hole of 18 inches had been reported by Steve Clark and Bud Dillon in 1977. Called Head of Valley Cave, the estimated length was 150 feet.

Conclusions

With over 101 documented karst features, a long history of old kaolin and iron digs, an active sandstone industry, and nearby gypsum plants, the Huron Quadrangle is certainly interesting.

Beautiful sandstone cliffs, alcoves, and caves abound, with crystal clear springs flowing from the hillsides. Lots of challenging stratigraphy and underground hydrology call for more research. In this area we have dye traces to four routes – towards White River to the north or Sulphur Creek and the Lost River to the south.

A great area with more finds yet to come!

photo courtesy Martha Ritter

Carroll Ritter (back ground) inspects dramatic sinks and swallows in the Felknor Road valley in Section 5.

INDIANA KARST CONSERVANCY TREASURY REPORT

Income/Expense Statement
From April 1, 2025 to June 01, 2025

INCOME:		
Dues Apportionment and Residuals	1,127.50	
Donations - General	1,308.75	
Donations - Land Acquisition Fund	75.00	
EQIP grant	3,920.37	
Wilderness First Aid class	1,265.00	
Promotional items	310.82	
General Investment Earnings	1,887.31	
		$9,894.75
EXPENSES:		
IKC Update (printing, production, mailing)	888.07	
Education / Outreach / Promo items	76.73	
Stewardship / Conservation	342.97	
Business (Ballot mailing, PayPal fees, postage etc)	115.39	
Property Taxes	276.19	
Transfers to/from restricted funds/other adjustments	3,560.00	
		($5,259.35)
NET OPERATING EXCESS (DEFICIT) THIS PERIOD:		$4,635.40

Balance Sheet
June 30, 2025

ASSETS:			
Checking / CD / Brokerage / Endowment accounts		875,566.31	
Wayne Cave Preserve	(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	
			$1,762,579.47
FUNDS & OPERATING EXCESS:			
Land Acquisition Restricted Fund		96,222.39	
Deferred Dues Restricted Fund[1]	(312 members)	13,940.00	
Stewardship Endowment Fund	(9.2% for Q2)	151,301.34	
Gale & Ray Beach Endowment Fund	(10.6% for Q2)	512,537.04	
Previous General Fund (total)	96,943.30		
Net Excess (Deficit) This Period	4,635.40		
Current General Fund (unrestricted)		101,578.70	
Current General Fund (committed)	3,890.92		
Real Estate Basis (excluding value of CE)		887,000.00	
Total Liabilities & Operating Excess			$1,762,579.47

NOTES:

1) The Deferred Dues Restricted Fund was pre-adjusted by $3,485 from the General Fund to reflect the increased dues structure effective July 1, 2025.

IKC EXECUTIVE BOARD MEETING MINUTES

Sunday, June 29 2025 – 1:00 PM EST

Wayne Cave Preserve – 8307 W Gardner Rd, Bloomington, Indiana

Board Members Present:

Matt Selig, President
Laura Demarest, Secretary
Keith Dunlap, Treasurer
Bill Baus
Bruce Bowman
Brandon Chasteen
Jeff Cody
Scott Frosch*
Danyele 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: Jordan Lacy, Wes Roeder, Kevin Romanak, Sue Vernier, and Nate Vignes (proxy for Scott Frosch)

Call to Order – IKC Exempt Purpose & Introductions

The meeting was called to order by Matt Selig, President, at 1:00 PM EDT. The IKC exempt purpose was reiterated and everyone introduced themselves.

Acceptance of Proxies

Nate Vignes for Scott Frosch.

Approval of Previous Minutes

No edits were proposed to the last meeting minutes as published in the June 2025 *IKC Update*. *Bruce made a motion to approve the minutes. Cris seconded. Unanimously approved.*

E-mail Motions Since Last Meeting

One e-mail motion was asked to be postponed until the in-person meeting, see below for the Sullivan Cave restoration project motions votes.

Treasurer Report

Keith outlined the current financial status of the organization:

Assets:

Cash assets totaling	$870,816.00
Land assets totaling	$887,000.00
Total Assets	**$1,757,816.00**

Dedicated Funds:

Land Acquisition Fund	$96,222.39
Stewardship Endowment	$150,457.35
Gale & Ray Beach Endowment	$509,958.37
Deferred Dues (as of 4/1/25)	$9,075.00
General (unrestricted) Fund	$105,102.89
Total Dedicated Funds	**$870,816.00**

Current members: 349 with 41 members yet to renew. So far, the IKC has not received any feedback from members about the increase in dues.

The annual growth rate of the Gale and Ray Beach Endowment is 7.3%, and the original investment was $400,000. When this fund was established in 2021, the IKC Board established a policy that anything over $500,000 may be used for primarily land acquisition, and this is the first time that the account has surpassed this threshold. The Board does not have any current plans to use these funds.

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

Sullivan Cave Patron and Online System Update

Paul Uglum is stepping down as Cave Patron after 10 years (huge thank you to Paul!). Four people have expressed interest in becoming Cave Patrons (Goni Iskali [current IKC Secretary], Nate Vignes [member], Jordan Lacy [member] and Brandon Chasteen [current IKC Director]). Matt presented the Board with options to select the upcoming Cave Patron for Sullivan. Option 1 was to appoint an interim Cave Patron in order give the Board until the September meeting to review the candidates and reach a final decision. The other option was to appoint Goni as the Cave Patron and Nate as the back-up Cave Patron when Goni is out of town. The Board decided to appoint Goni as the interim Cave Patron and wait until the September meeting to reach a final decision. The Board also appointed an *ad hoc* committee comprised of Paul Uglum, Matt Selig, Joe Kinder (Sullivan Property Manager) and Cris Seuell. The *ad hoc* committee will bring recommendations to the Board at the September meeting and the Board will make a final decision at that time. Meanwhile, Joe Kinder will include Goni in a transition meeting with Paul, cave visitation tracking documents, and set up a meeting with Tim Harris to continue to transition to the online system.

Goni also stated that Brad Barcom, Goni's husband and IKC member, will also help with the Patron's responsibilities, but Goni will be the acting interim Cave Patron. Matt will resend the email to the Board to vet the online

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system one more time to see if there are any final suggestions or edits before it goes live for Sullivan Cave. The other caves/preserves will be added over time.

Research Permits

Jerry Lewis reached out on behalf of Mark Wilhelm to collect a few beetle specimen under the supervision of Jerry Lewis at Lowry, Sullivan, and Buddha caves, and other IKC managed caves. Matt approved the research permit for only these three caves that the IKC owns.

Tyler Huth (isotope research) has completed his research that was outlined in the research permit. He has provided an article and this will be included in the September *IKC Update*.

Land Acquisition

The IKC last reached out to a property owner for a potential acquisition in the Fall 2024. Keith suggested that someone from the IKC should reach out to this landowner again to discuss potentially subdividing and acquiring the parcel with the cave, or other options that the landowner may be amenable to. Bill Baus volunteered to re-visit the landowner in early August. Nate Vignes mentioned that he has talked to this landowner while caving at their property and he relayed that the landowner is still interested in selling the property to the IKC. Carla suggested that we present the landowner with clearer options during this meeting about what the IKC can offer. Brandon has also completed some preliminary title work on this property and will participate with Bill at this landowner meeting.

Membership Dues Increase

Dues are officially increasing on July 1. Carla has updated the membership brochure and Bruce will update the IKC website pages related to membership on July 1 to reflect the new dues amount. Bruce and Carla also suggested to please recycle any older membership brochures that reflect the older price to avoid confusion. The membership renewal date remains the same (March). Keith will also update the PayPal buttons.

Education/Outreach Committee

The education portion of the IKC website has now been updated by Carla and Bruce.

Wilderness First Responder class is now full and will occur on July 12 and 13, 2025. Danyele is willing to leave registration open and create a waitlist in case any registered participants cancel before the class.

Review Summer Outreach:

- The Moth presentation (covered in the June *IKC Update*) occurred in May and was the IKC's first educational event of the year. The presentation was very popular and filled up quickly, even after the event was postponed by a week due to rain. The event was also attended by non-IKC members who were introduced to the IKC through this event. The link to the researcher's (Jeanette Jaskula) iNaturalist profile can be found in the June *IKC Update* and it lists other moth related events scheduled in Indiana, for those interested in attending.
- Update on Fall Outreach – The next presentation will be "Hike with a Bat Biologist" on August 16 at 7-9 PM at Robinson Ladder Cave Preserve with Goni Iskali. Goni stated that she will be assisted by Aaron McAlexander, a biologist with WEST environmental consulting, and they will also be deploying SM4 detectors that day to sample the area around the cave for a week. This will also be the last bat survey of the season (Wayne and Lowry will be surveyed in July by walking acoustic surveys using the Echo Meter detector owned by the IKC).
- Henderson Park Discovery Day – The IKC will partner with The Nature Conservancy (TNC) again for a presentation at Henderson Park on October 25, 2025. Matt Selig, Goni Iskali, and Scott Frosh will represent the IKC and present on topics such as geology, caves and bats. Danyele, Matt, Goni, and Scott are currently working on scheduling a pre-hike meeting with the TNC to further plan for the event.
- Indiana Bat Festival – The bat festival will occur on September 27, 2025 in Terre Haute. Goni will represent the IKC and asked if any other Board members would like to join her. Carla or Goni will send an email closer to the event to check if other Board members are interested in participating.

ILPA Update

Carla handed out the latest ILPA annual report. Keith and Carla attended the Spring Gathering meeting in May. In addition, a three-day gathering is scheduled for mid- to late-September in northern Indiana as a workshop that focuses on stewardship related opportunities for ILPA members.

2026 Orientation to Cave Rescue (OCR) Training with National Cave Rescue Commission (NCRC)

Laura requested that the location of the OCR for 2026 be near Harrison County in May 2026 to also provide opportunities for any local agencies (e.g. Indiana Department of Natural Resources) and rescue organizations (e.g. first responders). The reason for this is because this will act as a refresher to these agencies before the 2026 NSS Convention, which will be held in this area, and these counties continue to be the most highly visited counties by cavers. The class and pricing structure will likely remain the same as in 2025. Keith opined that the IKC would be able to provide the same discounts to members as we have in previous years. The existing ear-marked funds from the IKC can also be used for facility rental. Laura will continue to plan this event and provide more details at the next Board meeting.

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NatureConnect

Danyele presented information for how to sign up for NatureConnnect, which is available through the Master Naturalist program. The website can also be used to post volunteer opportunities, and those interested or needing to complete volunteer hours would be able to find these opportunities more easily. If the IKC opts to use it, this can encourage volunteers outside of the IKC email pool to volunteer or become members. The cost to use this website and become a member is $300 per year. The IKC Board general consensus was that we are currently too small to fully take advantage of this opportunity, and this membership will not be pursued for now.

Recap of 2025 Indiana Cave Symposium

The Indiana Cave Symposium and pre-event field trip were a success once again, after months of planning by the IKC and Indiana Cave Survey. The IKC contributed $186 (half the expenses after donations) to this event and thanks members who made it possible through their donations.

Recap of Preserves Work Projects & Upcoming Preserves Projects

Buddha Karst Nature Preserve – The mowing has been completed recently by our neighbor. Keith spent some time this month cutting and cleaning up the big ash tree near the parking lot as it decays.

Lowry Karst Preserve – A garlic mustard pull event was hosted in early May for the whole property.

Orangeville Rise Nature Preserve – A garlic mustard pull was hosted at the end of April. A new sign appeared at the property advertising produce for sale from our neighbors. Carla spoke with this neighbor and requested that they remove the sign from our property, and the sign has been removed. Carla will also work on removing the rope that's hanging from a branch over the Orangeville Rise.

Robinson Ladder Cave Preserve – Carla reported that Jamie Winner recently mowed and plans to do so again before Cave Capers. Carla also reported that she met with the Executive Director for the newly-formed Buffalo Trace Land Trust (service areas: Clark, Crawford, Floyd, Harrison, Orange, and Washington counties) and gave her a tour of our Robinson Ladder Cave Preserve. Carla's goal is to create and maintain a relationship with this land trust so we can potentially partner on any future acquisitions.

Shawnee Karst Preserve – Keith plans to mow trails, invasive spray, and clear some trees that are down.

Wayne Cave Preserve – A volunteer workday with mostly Board members, but also local grotto members (Kevin Romanak, Stephanie Suen, Nate Vignes, Owen David) occurred prior to this Board meeting. The volunteers worked mostly on cleaning up trash from the newly acquired parcel and piling it near areas where they can be picked up with vehicles. Cris decided that she will continue to collect more trash and add it to the piles before arranging transport.

Keith reported that the EQIP contracts for 2025 passed inspection and the IKC received the full payment. After five years, we are now 100% complete with our EQIP responsibilities at Wayne Cave Preserve. Cris reported that invasive control continue with stilt grass planned to be sprayed in August.

Cris stated that Jim Hole's entrance is unstable and visitation should be discouraged.

Cris is also considering doing a trail maintenance workshop in September or October of this year, but needs to put more thought towards organizing it, and reach out to members to see how much interest there is.

Indian Creek Conservation Easement – No update from Bambi Dunlap, but Keith and Matt reported that they plan to help her with relaying the landowner notifications in the next month.

Sullivan Cave Preserve – Joe and Keith recently mowed and trimmed around the camping and trail areas. Joe will have a work day next Sunday (July 6) to prepare the property for the upcoming Wilderness First Response class camping. Joe is also preparing a motion for Board consideration for the next meeting to request funds to add gravel to the parking lot area.

Nate Vignes, Keith Dunlap, Joe Kinder, Sarah Smith, and Brad Barcom visited Sullivan Cave on May 17, 2025 to assess a potential in-cave restoration project and complete some graffiti cleanup in the Backbreaker area of Sullivan Cave. Nate Vignes wants to lead this project. In preparation, he took over 300 photos and noted only one historic signature area and that the rest is graffiti and unsightly. He also identified a few key methods to remove the graffiti, and he suggested that mud-painting would be the best method in most areas. Another method for more sensitive areas such as gypsum areas would be using Elephant Snot (biodegradable spray paint removal), which is $100 for a gallon, but it's very effective on spray paint (tested in a small inconspicuous area of the cave). On June 3, a funding motion was emailed by Paul Uglum via Matt Selig to approve purchasing supplies for this project. The Board put a pause on the vote and decided to wait until the June meeting to discuss it, because it was noted that projects like this should require Board discussion and approval. In addition, per our bylaws, electronic motions should be used in emergency situations only.

Bill Baus stated that he does not believe that mud painting is the most effective method in covering up graffiti because it does not last long, often does not match the natural color of the cave walls, and it makes permanent removal *much* more difficult. Bill suggested that wire

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brushing is more effective, but you can often still see a ghost of the signature or a white area on brown walls. After wire brushing you can blend the area with a paste of limestone dust blended to match the cave walls. Richard Vernier noted that the cave restoration guide published by Val and Jim Werker should be consulted prior to any work to avoid any potential impacts to the cave and biota. Laura noted that the Backbreaker of Sullivan has already been damaged and it's not necessarily a sensitive biological area. In addition, she noted that new graffiti rarely appears nowadays and this practice can hopefully continue to diminish as cavers get more educated about conservation, so this project can focus mostly on cleaning up older graffiti. Tom Sollman requested that Nate Vignes provides an article for the next *IKC Update* to detail the methods he researched, and Nate agreed.

Keith made a motion to approve the graffiti removal project in the Backbreaker and Mountain Room of Sullivan Cave. Bill Baus seconded the motion. Danyele, Bill, Laura and others spoke pro the motion. No other cons were expressed after the initial discussion. The motion passed unanimously.

Keith made another motion to fund this project for up to $250. Bruce Bowman seconded the motion. The motion passed unanimously.

Any updates on the graffiti removal project will be passed on to the *ad hac* committee for the Sullivan Cave Patron selection, which will oversee this project for now.

Items from the Floor

- 2026 NSS Convention update from Laura (co-chair of this event): Registration is open. "CaveSim" requested to be hosted at the convention and Laura will be soliciting donations, and ask the IKC to consider donating. Laura noted that no landowner from Indiana has been nominated previously for the NSS Landowner Recognition Award and NSS is looking for letters of recommendation by the fall.
- Danyele is looking for the contact info of Tim Flint to mail a prize from the Indiana Cave Symposium.
- IKC Property Managers may obtain and request additional supplies for their Property Manager kits from Carla if they are running low.
- Carla suggested that the IKC email Cave Patrons and Property Manager on an annual basis to check if they need help with their responsibilities, and if they would like to continue in their current positions to avoid burning out.

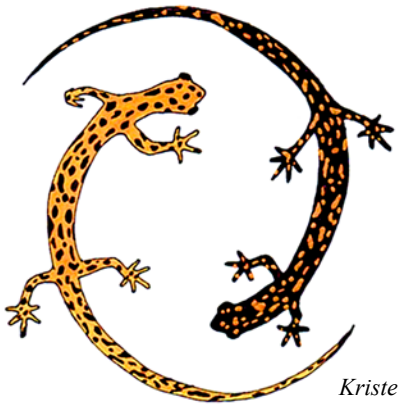
Next Meeting Date and Place Selection

The next IKC Quarterly meeting was tentatively scheduled for Sunday, September 28, 2025 @ 1:00 PM EDT at the IKC's Shawnee Preserve with a workday planned prior to the meeting at 10 AM EDT. The garage may be used in the case of a rain event.

Adjourn

The meeting was adjourned at 3:45 PM EDT. .

Respectfully compiled and submitted by Goni Iskali, IKC Secretary



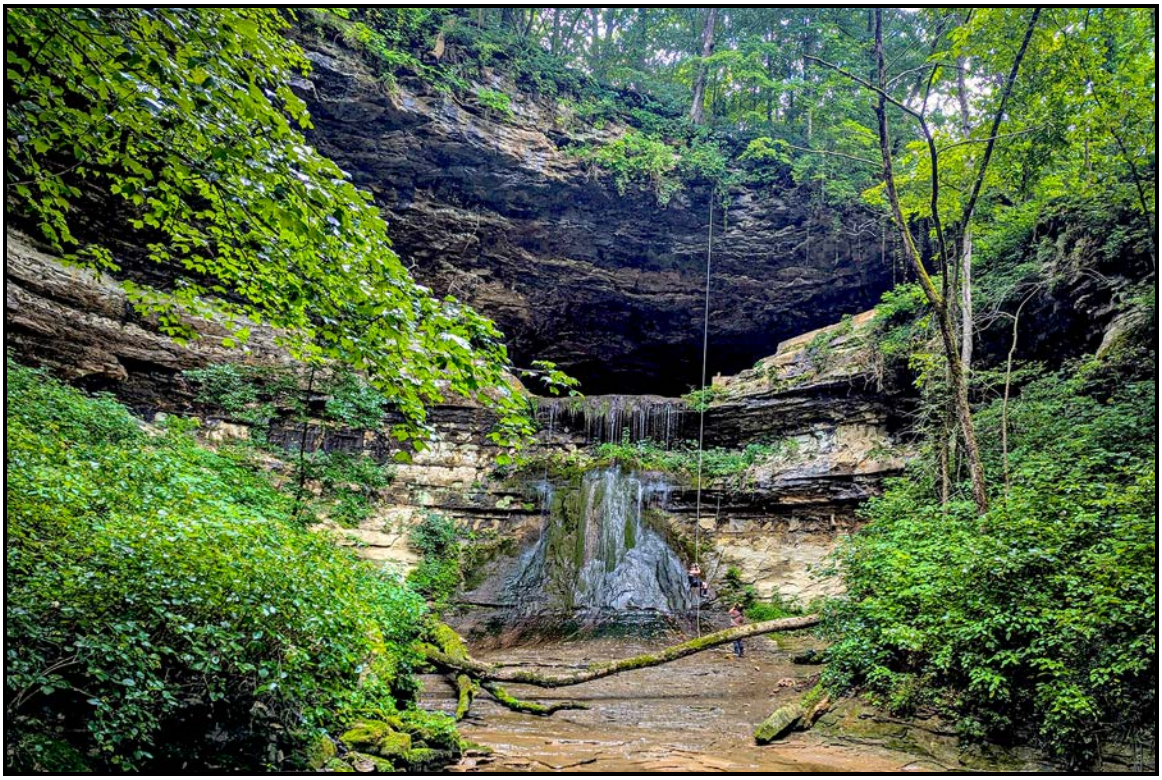
Kriste Lindberg

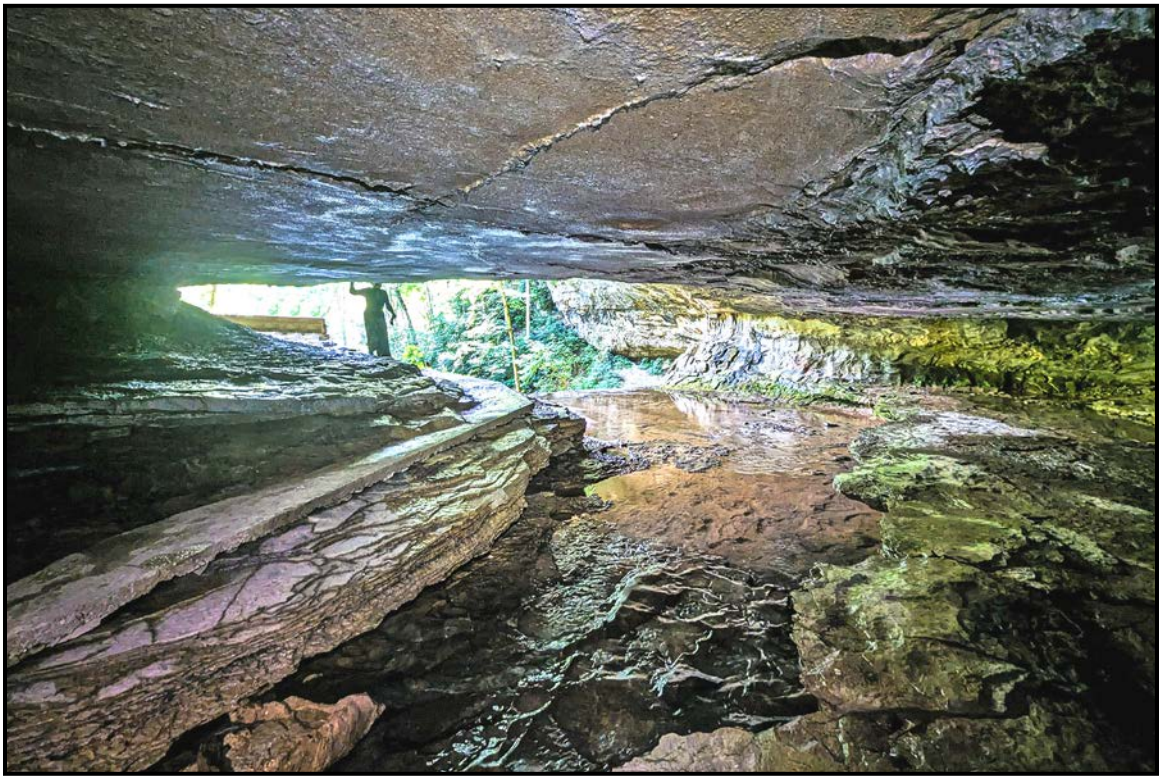
INDIANA KARST CONSERVANCY – NEW MEMBERSHIP / DONATION FORM

I would like help the IKC protect Indiana's unique caves and karst features. Use the QR code below or complete this form and mail to: **IKC, PO Box 2401, Indianapolis IN 46206**.

$ _____ for IKC membership dues at $20/year (please pro-rate $1.66/month to expire on March 31st).
$ _____ donation to the general fund (to be used for education, stewardship, etc).
$ _____ donation to the restricted cave/land acquisition fund.
☐ 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: _____ ☐ cell
Email: _____
Newsletter: ☐ digital PDF ☐ printed/mailed





Porter Cave, in Owen County has one of the most scenic cave entrances in Indiana. The cave was briefly commercialized in the 1970s under the name Tumbling Waters Cave. It is still privately owned and permission must be obtained to visit the cave and property.

Photos courtesy of Jordan Lacy