KENTUCKY

SPELEOLOGICAL SURVEY

ANNUAL REPORT

WEBSTER CAVE
The first look at the maps of the 10+ miles and 9 years of surveying in this cave complex

HART ATTACK!
A KSS survey weekend packed with surveying, ridgewalking and caving

CAVE ENTRANCES
A detailed look at the large cave entrances of western Kentucky
The annual report of the Kentucky Speleological Society

2018 MEETING SCHEDULE

All board meetings will be go-to meetings which will start at 7:00 pm eastern time. The app will be live 15 minutes early for set up.

- January 17 - Board Meeting
- February 21 - Board Meeting
- March 18 - Paper Caving Meeting
- April 18 - Board Meeting
- May 13 - County Coordinators Meeting
- June 1-3 - Survey Initiative Weekend
- June 20 - Board Meeting
- July 30 - August 3 - NSS Convention
- August 15 - Board Meeting
- September 21-23 - Annual Meeting
- October 14 - Paper Caving Meeting
- November 21 - Board Meeting

MEMBERSHIP

To become a member of the Kentucky Speleological Society, please visit our website and fill out the membership form. Dues are $12 for a year of membership or $100 to become a lifetime member.

CONTACT US

Visit our website to contact any officer as well as any county coordinator. You can submit cave locations and request cave data via the website.

Website: www.KSSCaves.org
Check us out on Facebook for events & meeting information

OUR STATEMENT

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DATABASE COMMITTEE
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Amber Yuelling
Hi Folks. I have to admit I am pretty happy where the KSS is at the end of this year – we have made progress on a lot of our priorities, and I believe the organization is stronger for it! Highlights from this 2017 include:

• A wonderful newsletter produced in January 2017 by Josh Brewer and Bill Walden, full of maps and reports. Another one (with this report in it!) to share our accomplishments from this year as well!
• Our Second Annual meeting - a whole day of presentations and talking with cavers. It is great to see cavers from all around the state attending!
• Sarah Arpin led the Hart County Hart Attack survey weekend, attended by 15-20 members and turned in 12 new caves!
• Our database continues to improve – we have upgraded and improved the original filemaker template (stolen from Missouri Speleological Survey) to make it easier to use and store data on our caves.
• Our data continues to grow – we have gone from 4827 independent caves to 4937 caves in a year. Some of that is improving our database and making corrections, but we have received new caves from 9 different members, and the Cave Research Foundation added 93 unknown locations from outside Mammoth Cave National Park.
• Christopher Morris’ new website is tremendous and is helping the organization in a number of ways – I use it all the time for reference.
• We have introduced a phone app to automatically turn in new or updated cave locations – it has already been used to report 15 new caves! (see next page)
• We are excited about the Race to 5000 – a contest to help push folks to remember to turn in new cave reports (you can read about it in this newsletter on page 9)
• We continue to add more and more cave data into our dropbox folder – we are pulling apart old Speleodigests now, and will soon move onto WKSS reports and other items in our collections.

I hope you will agree – it’s been a pretty full year – and I left some things out. However, we still have room to grow:

• We still need to improve our relationship with the caving public. We still have issues when compared to our closest neighbors (TCS and ACS for example) as we are a closed survey, and those surveys are open. We have dedicated ourselves to making sure that cavers get the data they need, but we continually have to get this out to erase old ‘tapes’ about Kentucky secret caves. We are doing many things to help this, but we can always do more.
• Our data is still incomplete in many cases – we still need our county coordinators to step up and fill in the blanks - this is happening slowly, and will take time, but we need to continue this.
• Changing from the Filemaker database to Esri ArcGIS database is a long-term goal for me, and we will continue try to move in that direction. I am hoping we will get a preliminary ArcGIS Pro database up and running by the end of the year. I am proud of the organization, its Board and its members. Please attend any Board meeting you would like to (all are on Go-To meeting and all are open) and bring your best ideas. Looking forward to another productive year.

HOWARD KALNITZ
Cave Definition & Cave Reporting App

This year a committee within KSS discussed and ultimately created a definition of what a cave is within the state of Kentucky.

The Kentucky Speleological Survey defines a cave as any humanly enterable void or cavity, which may be horizontal or vertical, and has a length or depth equal to or greater than 10 meters (32.8 feet). A feature which is wider than it is long and has a width equal to or exceeding 10 meters (32.8 feet) will be documented as a shelter. Any feature documented as less than the minimum requirements can be documented but will be listed as a karst feature in the KSS database. These standards which are established in May 2017, shall be carried out henceforth, though database users should understand that previous database entries may not meet the minimum criteria laid out above.

We have designed a new iPhone and Android application to report caves directly into the database. You can take your phone with you while ridge walking and enter data directly, or independently collect data and use the application to report it from home.

Use the QR Code above for a link to a PDF explanation for using and downloading the app.

![KSS Cave Reporter](image-url)
Kentucky currently has about 4965 caves currently reported. Let’s drive that to 5000!

To do this Kentucky Speleological Survey is announcing a statewide contest for cave locations! We will give points to all members and non-members who provide new or updated cave locations in Kentucky. The Individual winner will get a New Sten Light with charger. The group winner will receive a survey set. This contest will go from run from Sept 1, 2017 to the next Annual meeting where all winners will be announced.

Let us know if you have any questions. Please take advantage of these two new programs with the Kentucky Speleological Survey.

### KSS Location Contest Rules

- All new caves will be awarded 1 point.
- All updated entries from existing or known caves will be awarded ½ point.
- The contest will be backdated to September 1, 2017, so all entries from that point forward will be counted. The contest will be cutoff one week before the next annual meeting in September 2018.
- There will be an award for Individuals and groups.
- Individuals with the highest point count will win. Points used by an individual are not available for a group tally. Groups can combine several individuals into a single count.
- Award total to be no more than $500.
- Caves reported as part of a KSS sponsored or organized event (such as a survey weekend) are not counted.
- Data must be reported via the phone app, completed PDF, or through the KSS website, and entered into the database.
- All cavers (KSS or otherwise) are eligible.
- The Contest Committee is not eligible (Howard Kalnitz, and Josh Brewer).
Cave Entrances

A look at the large cave entrances in central and Western Kentucky
by Preston Forsythe

Smith Valley Cave within Mammoth Cave National Park was explored and surveyed by Don Coons and his crew. The most upstream extension is a low, wide, damp & long crawl that ends in a lead that need persuasion to open. This extension may not have been fully surveyed, as I was on the second and perhaps last trip to the end, with Don. Our goal was simply another, second look at the 'end,' but it does come closer to Mill Hole than any known cave. Smith Valley has the potential to play an important role someday. All good leads deserve at least a second look.

Lost River Cave in Bowling Green is perhaps the best known large entrance cave in Central and Western Kentucky and it is certainly the most visited large entrance cave. My relatives went to a nightclub in the cave entrance while at WKU in the late 1930’s. Shari and mines first visit to the entrance was around 1978. A hermit type homeless man was living in the entrance complete with a bed and small garden plot while drinking the highly polluted water.

Kelly Cave in Schochoh, northeast of Adairville, sis also called Schochoh River Cave and is a fine thru trip. Where the river sinks inside the cave, not far from the entrance, is a washing machine drain which is a must see in high water. Being one of the four entrances of this cave, makes this an easy spot to reach.

Twin Level Cave’s main entrance, on the West Fork of the Red River is a large entrance to a 5 miles long and is a great thru trip. Currently Christopher Morris is drafting the map from our survey complete survey notes. The resurgence is a spring on the opposite side of the West Fork from the cave. Joe Ray said that there are only a small handful of known examples of this type of rare karst feature in Kentucky.
Watts Cave is another large entrance to Twin Level Cave. The thru trip from Watts to Twin Level has my vote for the best cave trip in Western Kentucky. The cave has bear wallows in two areas, and native American footprints. There are five entrances to Twin Level Cave. Ernie Payne, Don Shofstal and the Evansville Grotto helped with the exploration and survey of this cave.

Campbell Cave, northeast of Hopkinsville, aka, Hoptown, needs a resurvey because it has one of the top five or six largest entrances in Western Kentucky. Campbell Cave was explored and surveyed by a soldier at Fort Campbell in the early 1980’s. Other than one brief trip there, Shari, Dyas and I only saw a portion of the cave. A huge entrance is near a housing development and it is not clear who owns it. It is a rocky crawl after the entrance and maybe extends for half a mile. There is not a complete survey and what was done was most likely a solo survey. The fellow left the Army and moved out of state to never return. I presume we did not survey it when we could because we considered it to be someone else’s project, and we wanted to give them a chance to complete it. Also, we could not locate the owner. It was said to have once been owned by a former sheriff. The cave is mentioned in the History of Christian County.

Savage Cave, east of Adairville, is one of the best archaeology caves in the state and it has received a lot of attention, but the cave deserves more. A colorful history was published in the Western Kentucky Speleological Survey, WKSS, reports. The city of Adairville now owns the cave entrance.

Mill Bluff Cave on the Minos Cox Farm at Fredonia, Kentucky is another large cave entrance in Western Kentucky. We surveyed this impressive river cave in 1978, with Joe Saunders helping on the survey. This was one of the first big caves the WKSS surveyed after completing Gorham Cave, east of Russellville, Kentucky.

In the Western Kentucky impressive feature list, I include the Pennsylvanian sandstone rockhouse and cliff features of Todd County, in an area known as Buzzard’s Ballyard. This area developed along Clifty Creek is a well known sandstone area of impressive dimensions. Buzzard’s Ballyard includes at least four rockhouses two to three hundred feet wide, by 80 feet high, and 80 feet deep. One rockhouse has a sandstone talus cave of some size in a corner, which we surveyed and documented. Other features along Clifty Creek are the impressive 100 foot plus vertical cliffs, the Ballyard Rock, Splitrock, a hominy hole and generally excellent hiking terrain. This is south of Kentucky Highway 107. I have known about this area since our Greenville Boy Scout Troop #40 days. In fact, those hikes started my entire outdoor life of adventure which included caving. Not to be left out is the impressive sandstone slot canyon and waterfall, in this general area, known as Pigeon Roast. This feature was pointed out to us by the arch hunter, Victor Fife.
Pigeon Roast is a sandstone canyon south of Kentucky Highway 1785 in the very northeast corner of Todd County. This is a narrow, high, slot canyon with a waterfall. The Fife Brothers pointed this feature out to us. Their specialty is documenting natural arches and bridges in Kentucky. The Pigeon Roast Slot Canyon and Waterfall is perhaps the single most impressive sandstone feature I have personally seen in Kentucky. Thanks Victor!

The Dawson Bluffs west of Dawson Springs in southwest Hopkins County are another sandstone clifty area not to be overlooked. It was here, along with Buzzard Ballyard, where I started rock climbing. I am still in touch with those climbing and caving buddies from the 8th-12th grades, Ed Wilson and Tom Lowery.

The northwest corner of Mammoth Cave National Park also has one of the largest sandstone overhanging ‘rockhouses,’ in Central and Western Kentucky. This feature is worth a visit. It is located on a side hollow to Bylew Creek.
Savage Cave was a major project for the WKSS during the late 1970s. Not only does the cave have length, 2.7 miles, it has some large passage, including an impressive whale mouth entrance habitation zone. The cave also has an archaeological history that even interested the famous African archaeologist Louis Leakey. Dr. Ken Carstens of Murray State University directed the Savage Cave archaeology. Dr. Carstens, summarized the prior archaeological work that had been done in the cave, but initiated no new investigations as he recognized the first task was to record what had been done. This was no easy job as some prior investigations were professional, semi-professional, and amateur. This work was recorded in the WKSS series of reports edited by Dr. John Mylorie, also of MSU. One Murray student, Ryan Parish, around 2009, received his masters at Murray supported by a paper he wrote *The Case for a Paleoindian Component at the Savage Cave Site.*

Dr. Parish now teaches at the University of Memphis, but I have not been able to contact him.

In recent years the cave was deeded to Logan County from Murray State University. Savage Cave is a short distance east of the small town of Adairville. A former magistrate of Adairville, Wayne Stratton, knows the current situation of Savage Cave as well as anyone. John Lee Barnes and his son John Mason Barnes own land adjacent to the five acres surrounding the main entrance to Savage Cave. Michael Boyd may still live in the Savage log cabin, but he does not own the five acres with the main entrance. In the past there was considerable vandalism to the cave but there has been no known vandalism in recent years. Savage Cave deserves more attention.

Perhaps this brief summary will lead to other investigators becoming interested in Savage Cave.
The centerline of the solar eclipse entered Kentucky in Livingston County, near Mantle Rock, and exited Kentucky in Logan County, west of Adairville. Along this path are 22 caves one mile or longer. The longest being Lisanby Cave in Caldwell County at 7.2 miles long. A total of 240 caves adding up to 100 miles of survey have been documented and surveyed in eleven counties in Western Kentucky. This is more surveyed cave than found in 40 other entire states. At the annual conference, I presented a brief history of WKSS. A few key caves were highlighted along with the major leads were discussed using a large geologic map and Joe Ray's Hopkinsville Hydrologic Map. The seven WKSS published reports were pointed out. A brief explanation of how the WKSS was able to accomplish this much work with only a small group was explained. Quotes from Mike Dyas’s writings were read and then some of Preston’s old caving gear was shown.
Kentucky Speleological Society

Annual Meeting
by Clint Barber & Josh Brewer

Fall was in the air as the KSS Annual Meeting and Survey Weekend arrived. Layout remained close to the same as our last meeting with caving Friday and Saturday with our meeting on Sunday. For the second consecutive year the meeting was held on the campus of Western Kentucky University. This year Allen County Coordinator, Clint Barber, volunteered to lead and coordinate the survey effort. Clint had lead survey trips into the cave before. In 2015-2016, members of the Green River Grotto visited the cave on four separate trips. The survey experienced a few bumps, and after all the survey notes had been misplaced the project quickly lost momentum. Once the annual meeting was set to take place in Bowling Green I knew we would have some out-of-town surveyors wanting to get underground, and Dillons Den would be the perfect project.

On Friday night Clint Barber, Josh Brewer, Ben Miller and Logan Wilder entered into the cave just after 7pm. We began the survey at A6, about 150’ into the cave. (On a previous trip Clint was joined by Catherine Malin and Ami Wagner and surveyed the first six stations.) Ben took on sketching plan and cross-sections, but he was a little reluctant as he had already sketched this passage once. I was rocking on the profile and Clint and Logan were setting stations and shooting instruments. Soon after we began the memory of lost notes faded and the brotherhood of survey came through. We surveyed about four hours and at the end of the night we had 393.81 feet in the book.

The next morning more surveyors began to trickle in. I met Ken Bailey, Chris Bauer, Fernando Hernandez and Sean Vanderhoff at a gas station close to the cave. We grabbed some last-minute items and headed off. Once we arrived at the cave we were met by Clint Barber, Amanda Edwards and Weston Hennion. We divided the group into two teams. I like to give the trouble makers solid roles with lots of responsibility. So Ken and Fernando were obviously named team leaders. The week before, Clint and Weston had set six major stations down main passage. This divided up the cave and made leapfrogging each other much easier. Ken, Sean and Weston pulled off 350.5 feet of survey. Fernando, Chris, Amanda and Clint had a monster day surveying 1150.57 feet. Over the weekend the KSS surveyed 1,894.88 feet in Dillion’s Den. A new entrance was found and the project once again has a high level of excitement. Thank you to everyone who came and made this a success and watch the KSS & GRG Facebook pages for our return to finish the project. If Saturday caving wasn’t already amazing enough when we came out of the cave the landowners, The Ausbrooks, threw a cookout & pool party for us. Hands down the nicest gesture any landowner has ever shown on a project I was a part of.

Sunday morning the KSS met on the campus of Western Kentucky University for the 2017 Annual Meeting. After some
short opening remarks and a room change we began our presentation lineup. Starting off the morning session our President, Howard Kalnitz, gave an organizational update. In 2017 the KSS made great advances including: digitizing a majority of the paper files, improving a working digital database & stepping into the future with a new cave reporter app. Our success stems from the vision Howard has for KSS and the dedication of our members to fulfill our organizational goals. Next up, Stephanie Stoops presented *Paperless Cave Survey: DistaX & TopoDroid*, *The future is now!* Stephanie shared her experiences using state-of-the-art technology to survey caves, and the bugs they’ve encountered along the way. Wrapping up the morning was Stephanie’s husband, Tim Stoops. He presented, *Surface LiDAR, a Caver’s Love Story*. Explorers have always found ways to use data to aid in exploration. Tim showed all the amazing applications of Kentucky’s free LiDAR data that the smart caver should be utilizing.

Sarah Arpin began the second half of the morning session. She presented, *Hart County Survey Initiative*. In 2017 the KSS had three of these events aimed to help county coordinators with their projects and boost output. Just before lunch Howard Kalnitz finished the morning sessions with his talk, *Ridgewalking: How to Find Caves in Eastern Kentucky*. Although just walking around does work sometimes, there are better ways to increase your chances of finding caves. The KSS provided lunch for 27 members and guest who came to the meeting.

After lunch Sean Vanderhoff kicked things off with his presentation, *Kentucky Spring Inventory: Sharing Data with the Government*. Sean works for the Commonwealth and has been an active voice in the caving community, shedding light on ways cavers can aid and benefit the state. Next, Preston Forsythe captured everyone’s attention with his interactive presentation, *Western Kentucky Caves Near the Solar Eclipse Path of Totality, and More*. Preston is an old school caver. Skipping the powerpoint, he hung maps, brought framed photos and displayed many various pieces of caving gear from years past. What a treat! Moving on, Western Kentucky University was represented well by Dr. Jason Polk (*Advancing the Study of Bowling Green Kentucky’s Karst Landscape*) & Dr. Pat Kambesis (*Cave Exploration and Science to the Rescue*). Up next, I (Josh Brewer) presented, *The Exploration & Resurvey of Steele’s Cave*. This was a summary of the Green River Grotto’s largest survey project of the year. The last presentation of the day was Ben Miller’s update from the *Karst Springs Initiative: Examining an Undocumented Component of the Karst Hydrology of Tennessee*. Last year the KSS donated $250 to this project. Seeing our investment turned to scientific research was very fulfilling. That concluded the KSS Annual Meeting. Below is a list of attendants.

Sarah Arpin, Ken Bailey, Clint Barber, Chris Bauer, Josh Brewer, Jim Currens, Teresa Currens, Pam Duncan, Bill Edisson, Nancye Edison, Preston Forsythe, Shari Forsythe, Fernando Hernandez, Katie Ingram, Howard Kalnitz, Pat Kambesis, Catherine Malin, Ben Miller, Tim Miller, Jason Polk, Bob Roth, Janeen Sharpshair, Hali Steinmann, Tim Stoops, Stephanie Stoops, Sean Vanderhoff & Logan Wilder.
In March of this year, I contacted the KSS board to propose the creation of a digital archive of publications for the KSS. In the past, maps and information found in various publications were photocopied and filed by cave and county, but the organization possessed very few publications in their entirety. I envisioned creating a collection of publications from all Kentucky grottos, past and present, and any grotto or organization who has worked in the Bluegrass. With the support of the board, I began reaching out to grottos and other organizations to gather materials for the KSS archives. The goal is to build a digital archive where these materials are accessible all in one repository.

There are many reasons to archive entire documents as published, not just the maps and cave descriptions they contain. In fact, I can’t think of a reason not to. With Dropbox, there is more than enough storage space. Practically speaking, it ensures nothing is missed or overlooked; it’s all there. Archiving entire publications also ensures these documents are preserved and protected for the future. It facilitates science and research; rather than seeking out documents one grotto at a time, the legwork has been done and researchers can make better use of their time. Most importantly, I think, these publications tell the human history of caving in Kentucky. They provide the background and context, a colorful history of caves and cavers in Kentucky.

Since March, 453 grotto and organizational publications have been added to the KSS digital archives. Seven grottos – the Cleveland Grotto, Dayton Underground Grotto, Detroit Urban Grotto, Greater Cincinnati Grotto, Green River Grotto, Louisville Grotto, and the Windy City Grotto – have approved our request to archive their publications. The process of collecting digital copies of publications from these groups continues, and new issues are added as published. John Cassidy presented our request to the Dayton Underground Grotto. Howard Kalnitz brought our request to the Greater Cincinnati Grotto. Josh Brewer had been working to contact past members of the Green River Grotto to obtain old publications and materials for the Grotto’s archives and facilitated the approval of our request. Steve Gentry had already gone...
through the painstaking process of digitizing all issues of the Louisville Grotto’s newsletter, Karst Window, as well as the Speleofest Guidebooks and passed them on to us upon approval. Steve is also providing digital copies of Fort Knox Grotto newsletters from the 70s and 80s and a few other publications from past organizations. Preston Forsythe provided hard copies of the Western Kentucky Speleological Survey’s Annual Reports and Howard took the time to scan each one. The NSS publications and others were available online.

Once digital copies of publications are obtained, the tedious task of teasing out the data still remains. This is a manual process at the moment, though the hope is to develop a new reference system which automates the process. Publications archived by the KSS are treated the same as all other data held by the KSS; access is obtained through a formal request and review process. This ensures the protection of sensitive data, landowner privacy, and protection of the resource. I would like to make the archives a searchable repository but currently lack the knowledge to do so. Searchable archives would be valuable for those conducting research as well as eliminate the need for us to keep separate excerpts in the individual cave files, though space is not an issue. Hopefully we can move in this direction as we continue to build the archives.

In addition to grotto and other caving organization’s publications, my goal is to include reference materials and scientific

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Total number of documents in the KSS Digital Publication Archives: 453
papers relevant to caves and karst in Kentucky. Two books have already been added: Saltpeter and Gunpowder Manufacturing in Kentucky by Angelo George (1986) and White and White’s out of print, first edition of Karst Hydrology: Concepts from the Mammoth Cave Area (1989). This has not been my initial focus as these materials are much easier to acquire, but will become more of a priority once the legwork of contacting grottos and others has settled down.

Going forward, we will continue to build the archives. Scanning and digitizing the paper files contained in the KGS in Lexington has been a primary focus of the KSS this year. While a majority of the cave maps and documents are completed, past issues of our own KSS newsletter remain to be digitized. I recently reached out to several organizations, including the Bluegrass Grotto, D.C. Grotto, ESSO Grotto, and Pine Mountain Grotto, and hope to work together with these groups soon.

Many thanks to the organizations who have contributed their publications to the archives and to the individuals who did the work to get us the documents: Josh Brewer, John Cassidy, Preston Forsythe, Steve Gentry, and Howard Kalnitz. Please feel free to contact me if you have anything you would like to contribute to the new KSS Digital Publications Archive!
Data Access

Committee Report
by Sarah Arpin
NSS 60507

It has been a good year for the newly established Data Access Committee. As new officers were announced during the February board meeting, the former Data Committee was divided into two, the Database Committee and the Data Access Committee. The Database Committee is responsible for the acquisition of data and management of the database while the Data Access Committee handles all data requests. Newly elected Member at Large Sean Vanderhoff and myself (Sarah Arpin) joined board members Josh Brewer and Jim Currens on the Data Access Committee (Though Howard Kalnitz has stepped up to take the place of Jim in his absence). These folks make up an excellent committee with a great team dynamic; each request is an opportunity to learn and improve our process.

In March, Data Requests became an online process with the launching of the new KSS website designed and managed by Christopher Morris. The new website allows people to contact county coordinators directly, report new cave information, as well as submit data requests online. The volume of requests received and a desire for transparency throughout our process prompted the committee to write a formal request policy, found on the KSS website. The committee also found the need to draft additional guidelines applicable to data received through requests for academic use. The committee saw this as necessary to prevent the disclosure of sensitive data in academic publications.

Since revamping our request process in March, the KSS has received a total of 33 data requests. Over half (18) of the requests received were billable commercial requests, all related to road and construction projects. The committee received eight private requests from individuals such as landowners, local community members, and cave surveyors, as well as seven academic requests for use in scientific research and studies. Of all 33 requests received in 2017, only four were not granted by the committee. One of the four was a request for academic use by a student. The committee requested additional information from the student, such as the name of the academic advisor on the project and a copy of the research proposal, but received no response. The committee denied three private requests for blanket data access to area caves. In all three instances, the requestors had no prior history or knowledge of caving. Though the committee denied the requests for cave data and locations, all requestors were provided information on local caving organizations, safe caving practices, as well as an open invitation to join us and get involved in the caving community.
WKSS Report

Highlights of the Western Kentucky Speleological Survey, WKSS, 2016-17
by Preston Forysthe

Brian Hamm took over as coordinator of Butler County and we gave him all of the information available on the current cave situations in his new county, including leads and projects to pursue.

The WKSS filled several requests for data including Shelby Cave in far Western Kentucky. The landowners were thrilled. We are a little disappointed that in the past, most of the recipients of data requests have not followed-up with an after-action report telling us how our hard earned data, at great expense of time and labor, has been utilized in their project. The minimum fee the KSS charges for data requests, to a small degree, compensates for this lack of consideration. We are pleased the KSS treasury is at a high point for the organization. The fee program for data requests was started a few years ago at our request, and it has paid off.

On August 21, 2017 we had a wonderful total eclipse of the sun party in southwest Logan County, at the farm of Frank and Alison Lyne. Attendance was 45, including several WKSS cavers. Frank, to my knowledge, has spent more time digging out a cave on his property than any other caver or landowner in Kentucky. On a planning trip to Frank’s, for the eclipse, we revisited his cave.

This year Ronson Elrod became a partner in coordinating Logan County with Preston and Shari Forsythe. Ronson has helped with entering our Dropbox cave information, although much still needs to be done. Logan County has 31 miles of cave survey completed and only a small number of surveyors were responsible. All of this data is published and we are proud of this. We need to make more progress in Filemaker, but we need additional one-on-one instruction.

The total cave survey in the WKSS remains at 100 miles of survey of 240 caves. Again, all of this survey and maps has been published. Howard Kalnitz has entered all of the WKSS reports into the KSS files making this information readily available to researchers of karst information on Western Kentucky. Mike Dyas, one of the most prolific cavers, surveyors, and writers on caves in the United States, has moved to Caldwell County. He is a valuable resource on caves.
Green River Grotto

Exploration, Survey & Shenanigans
by Josh Brewer
2017 GRG President - NSS 56030

GRG’s Mission Statement:

The Green River Grotto is a chapter of the National Speleological Society located in Bowling Green, Kentucky. We are an organization comprised of cave explorers, scientists, surveyors, students, and enthusiasts. We are dedicated to the responsible survey, documentation, cleanup, and conservation of caves and karst environments. Our volunteer-based projects are often joint ventures with local, state, and national entities, such as Western Kentucky University, Kentucky and Tennessee State Parks, the Kentucky Speleological Survey, the National Park Service, neighboring grottos, and the Cave Research Foundation, among others. Our members’ skills are showcased in a variety of ways, including cave mapping and cartography, groundwater hydrology, and environmental protection projects, such as sinkhole clean ups. We welcome any like-minded individuals or groups to join us at our monthly meeting!

During 2017, the Green River Grotto continued to gain momentum from the previous, amazing year. We continued working in Dale Hollow State Resort Park. Since 2008, GRG has located, surveyed & drafted maps of over 80 new caves in the park. The resurveys of Steele’s Cave (Warren Co), Dillion’s Den (Allen Co) & Hoy Cave (Simpson Co) also provided many adventures. We reached out to the community with sinkhole clean ups at L & N Cave (Barren Co) and Steels Cave (Warren Co). We also joined forces with the Kentucky Speleological Survey & Louisville Grotto with a clothing drive at the Lone Star Preserve for the Barren River Refuge. During Earth Day, GRG participated in festivities held at Western Kentucky University; our squeeze box was a huge hit with the students! This year we put our mission statement into action and 2018 is looking even brighter.

I can’t even describe how excited I am about the coming year for the GRG. Over the holidays the GRG Board, along with the newly established committees (Outreach, Safety & Publication), came together and laid out a plan that guarantees our members opportunities for recreational exploring, surveying & mapping trips, and vertical rope training. This training includes tying knots, rigging and rebelay workshops & planned outings to repel a cliff face. After all the training has been mastered, a trip to TAG to drop some pits! And of course, we’ll find some new projects to get involved with our local communities. If you’re in the Bowling Green area and would like to join us, the grotto usually meets the first Monday of each month at Lost River Cave. To easily keep up with what we’re doing, please like our Facebook page at https://www.facebook.com/groups/greenrivergrotto. Let’s get underground!
Cascade Cave became a privately owned show cave in 1925. Even though the main part of Carter Caves State Resort Park, north of Tygarts Creek, was donated in 1946, the Cascade Cave System and land did not come under state control until 1959. Cascade Cave is now one the main attractions of the state park.

My first trip to Carter Caves, was in middle school. To be honest I don’t even remember going into any of the caves, but I am told that we did go to X Cave & Cascade Cave. Back then I played a lot of golf, so my brother, grandfather and I did a lot of that. This past spring the golf course was shut down.

Years later, I returned and visited X Cave, Cascade Cave as well as I got to do the Bat Cave tour on the first weekend it was reoffered after being shut down for years because of white nose.

The most memorable part of the Bat Cave tour was the guide being amazed at how the cave had taken back over. So many of the beaten paths had been washed away in the years the humans were absent.

In October I had the opportunity to get to tag along with a Lexington area camera club and have access to the cave for photography. It was a wonderful experience, but as cave photography goes, it was fairly easy. With easy walking passage, tourist lights and able to drag along a tripod, made it much easier than the normal dragging pelican cases carrying flashes and camera. The tripod was by far the best tool that is usually lacking in wild cave photography. Just not worth dragging through crawls, but on this day, it made it possible to brighten up the cave without flashes.
Kentucky Speleological Society

We proceeded to have access to the cave for 3.5 hours of exploring and photographing the rooms and features. It was very enjoyable to spend so much time in a section of the cave that you normally just walk right by on a tour. Being able to take it all in, really let the beauty of this cave shine.

I have spent a good amount of time above ground at Carter Caves. I have actually stayed at the park a few times and never gone underground. Outside of the caves, the park is just as wonderful and breathtaking. Similar to venturing above ground at Mammoth Cave National Park. Some of the largest natural arches in the state are located within the park’s boundaries. The entrance road is perhaps the most beautiful of such in the state, especially in autumn.

If you have not visited Carter Caves, or have not in recent memory, I highly advise visiting late this January (25-28) when they put on their 9th annual Winter Adventure Weekend. They have 197 field trips this year, some into caves both in the park and on nearby private property.
In an effort to aid its County Coordinators, the KSS developed a Survey Initiative program. The KSS County Coordinator Survey Initiative is designed to bring members of the organization together from across the state (and beyond) to provide a wave of support and assistance to one of its County Coordinators. Three weekends a year, everyone in the organization is invited to participate in a Survey Initiative organized and led by the hosting County Coordinator. All County Coordinators have the opportunity to host a Survey Initiative and receive a major boost towards the completion of county objectives!

The second KSS Survey Initiative was held in Hart County, the first weekend in August, by County Coordinator Sarah Arpin and Co-Coordinator Weston Hennion. On Friday evening, August 4th, folks began to gather at Louisville Grotto’s LoneStar Preserve, located outside Bonnieville in Hart County. The preserve is host to Louisville Grotto’s popular annual caving event, Speleofest, and includes several caves on the property. The (back-up) plan for Friday evening was to work on a dig within Saltpeter Cave, the largest cave on the preserve.

As folks trickled in and set up camp, a small group headed into the cave. Stephanie Stoops led Josh Brewer, Weston Hennion, Sheila Minor, Christopher Morris, Amber Yuellig, and I on a quick tour of the cave before bringing us to a side passage where the dig begins. The dig we worked is the main dig in the cave; a two-foot trough is being dug through sediment in passage only about three feet high and currently extends over twenty feet in length. Stephanie demonstrated tried and true digging techniques. Then Weston, Stephanie, Amber, Josh, Sheila, and I crawled into the sediment trough to formed a human conveyor belt, sliding sleds of heavy dirt between our legs while on all fours. Chris stayed back in the Mushroom Room to take pho-
tographs, Preston Forsythe wandered in to see what was happening, Clint Barber and little brother Tristan Thomas came in for the sightseeing tour, and the dirt movers burnt out after a few inches of progress. Tim Miller arrived and he and Weston kept up the dirty work while the rest of the group returned to the shelter for some grub and an early night under the stars.

Camp buzzed with activity on Saturday morning as the rest of the troops filed in, Clint and Susan Wilkinson whipped up a breakfast feast, and gear exploded from vehicles all around. After breakfast, everyone gathered under the shelter to go over the weekend objectives and devise a plan of attack. We were heading to the property of Russell Meredith, sole resident of the long-forgotten Bee, Kentucky, located just outside the northeast boundary of Mammoth Cave National Park. Russell’s daughter attended WKU some years back and led Green River Grotto members Clint Barber and Ben Miller to several caves, arches, and shelters on the property. Ben recalled the experience but did not believe the features were documented. Our goal for the weekend was to ridge-walk the roughly 500 acre Meredith property, document feature locations, and survey features which met the newly established Kentucky cave definition.

The features on the Meredith property are all formed in the Pennsylvanian Caseyville Sandstone. An email providing details of the upcoming event had reached Victor Fife, Kentucky’s number one natural arch expert. Victor visited Russell Meredith at his property in the early 2000’s in his ongoing effort to document arches in the state and had recorded a number of features on the site. Victor was also an old friend of Preston’s and contacted me hoping to join us for the weekend. The caravan departed camp to meet Russell and Victor onsite.

We arrived at the Meredith property just past ten that morning and we parked in the cleared grassy field atop the ridge behind the home. The temperature was a mild mid-70s, the sun shone golden rays over the ridgetops, and large puffy white clouds lazily floated through the bright blue sky. Though the forecast was for rain, we could not have had a more beautiful day for ridgewalking. We broke into four teams and descended off all sides of the ridge. Two teams set off towards Still Cave, the longest cave on the property; Weston Hennion, Howard Kalnitz, Christopher Morris, and Amber Yuellig formed a team and Clint Barber, Cody Barber, Hali Steinmann, and Tristan Thomas formed a second. Lilia Sewell and her pooch, Ladybug, joined this group, enjoying the gorgeous weather and scenic walk in the woods. Though formed in the Caseyville Sandstone, Still Cave has the morphology of a stream cave more commonly formed in limestone. A small stream flows into the cave and disappears down a drain of rubble in the back. Russell confirmed the cave once contained a moonshine still.

Tim Miller, John Sies Stephanie Stoops, Tim
Stoops formed another all-star team and Sarah Arpin, Josh Brewer, Victor Fife, Preston Forsythe, and Sheila Minor formed the fourth. These two teams set off into the trees and down the ridge on the north and eastern sides to walk the sandstone bluffs below. Teams each spent about six hours in the field, reuniting on the sunny ridgetop late in the afternoon. Everyone headed back to camp to enjoy a nice evening of cave talk, knots games, and lots of laughs around the campfire. Pam Duncan, Holly McClintock, and Susan Wilkinson had each spent the day working on their own objectives but were sure not to miss the evening gathering! Weston Hennion, Catherine Malin, Christopher Morris, Stephanie and Tim Stoops, and I returned to the Meredith property Sunday morning for a half day of surveying in Ridge Cave to finish up the weekend.

The KSS had an excellent, productive and successful weekend at the Hart Attack! County Coordinator Survey Initiative. A total of thirteen new records were added to the database over the weekend (Table 1). Four of the features documented did not meet the minimum length required by the organization’s newly established definition of a cave and are thereby classified as shelters. Four drafted maps have been produced, two surveys remain to be drafted, and a working draft of Still Cave is complete, though the survey is still in progress. At a surveyed length of nearly 395ft with an estimated 100ft of passage remaining, Still Cave holds the current title of the longest documented sandstone cave in Kentucky.

The KSS database for Hart County contains map after map that bears the name of the Hart Attack Team. Joe Saunders led the Hart Attack Team that often included Gary Adams, Jim Borden, Tom Ramsey, and Lou Simpson, along with several others. Joe was a leading figure in Hart County caving, working in the classic systems Crump Spring Cave, Grady Cave, and Fisher Ridge Cave as well as countless lesser known caves of Hart and the surrounding area. In 1974, Joe received the prestigious NSS Lew Bicking award for his outstanding contribution to caving through exploration and mapping. Known for pushing the most grueling leads;
his grit and demeanor are legendary among cavers who knew him. We acknowledged the work of those before us with the goal of adding to it at the KSS County Coordinator’s Survey Initiative: Hart Attack!

Community involvement, outreach, and education are important endeavors to the KSS. The Hart County Survey Initiative was paired with a Clothing Drive for the Barren River Refuge. The Barren River Refuge is a charitable organization dedicated to the establishment of a homeless shelter in Barren County. Green River Grotto member, Sheila Minor, serves on the board for the organization and brought the project to our attention. So many people, both within and outside the KSS, joined in to make the drive a success! Boxes and boxes of clothing were received, forming a mountain of donations. The community building and the gathering of members from across the state, to work together, were the biggest successes of the weekend.

Many thanks to everyone who contributed to the Hart County Coordinator’s Survey Initiative; Hart Attack! was a super success! Special thanks to landowner Russell Meredith, the Louisville Grotto for the use of their beautiful property and facilities at LoneStar Preserve, and Holly McClintock and Susan Wilkinson for their ground support and assistance with the logistics. Many, many thanks to all the weekend participants: Sarah Arpin, Clint Barber, Josh Brewer, Pam Duncan, Victor Fife, Preston Forsythe, Weston Hennion, Howard Kalnitz, Catherine Malin, Tim Miller, Sheila Minor, Christopher Morris, Cody Munday, Lilia Sewell, John Sies, Hali Steinmann, Stephanie Stoops, Tim Stoops, Tristan Thomas, & Amber Yuellig.

Table 1. Newly documented features and records added to the KSS database during the County Coordinator Survey Initiative in Hart County: Hart Attack! Note: No length was recorded for Column Arch Shelter

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<th>Accession Number</th>
<th>Name</th>
<th>Feature Type</th>
<th>Length (ft)</th>
<th>Status</th>
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<td>Shelter</td>
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<tr>
<td>050-0284</td>
<td>Still Cave</td>
<td>Cave</td>
<td>394.47 (+100)</td>
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<td>Shrek’s Place</td>
<td>Cave</td>
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<td>Shelter</td>
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</table>
Kentucky Speleological Society

The Rock House
Hart County, Kentucky
KSS 050-0289
Suunto & Disto Survey
Date of Survey: August 5th, 2017
Survey Team:
Sarah Arpin
Josh Brewer
Sheila Minor

Total Length of Cave 49.3ft (15.0m)
Total Vertical Extent of Cave 7.5ft (2.3m)

North

Scale

Map Legend

Cartography by: Josh Brewer
September, 2017

map by Josh Brewer
Hart Attack! Weekend
Still Cave
Hart County, Kentucky
K3S OGO-G8H
Horizontal Extent is
648.15 x 1034.6 feet (unsurveyed)
Vertical Extent is
12 feet + 13 feet (unsurveyed)
Shilo & Susie
August 5, 2017
Sponsors:
• Don Barlow
• Winton Hendle
• Howard Kohlritz
• Christopher Morris
• Bob King
• Hild Salomon
• Traci Thomas
• Amber Yarnell
Cartography
Christopher Morris 4E5/17

Map by Christopher Morris
Hart Attack! Weekend

Note:
1) Geology of the cave is the Coryellville Formation Sandstone.
2) Adjusted for magnetic declination.
3) Cave profile with light shows passage is greater than 30' high.
Ridge Cave
Hart County, Kentucky
KSS 050-0287
DistoX2 Survey
Date of Survey: August 6th, 2017
Survey Team:
Sarah Arpin, Weston Hennion,
Catherine Malin, Christopher Morris
& Stephanie Stoops
Total Length of Cave 190.34ft (58.0m)
Total Vertical Extent of Cave 14.5ft (4.4m)
Escape Hatch Cave
Hart County, KY
KSS 050-0292
101.3 feet
DistoX survey
August 8, 2017

Stephanie Stoops - Book, Cartographer
Tim Stoops - Book (xs)
Tim Miller - Instrument
John Sies - Point

Entrance 1
Entrance 2

Extended Profile
Bee Arches Cave
Hart County, KY
KSS 050-0290
49.5 feet
DistoX Survey
August 8, 2017

Stephanie Stoops - Book, Point, Cartographer
Tim Stoops - Book (xs)
Tim Miller - Instrument

map by Stephanie Stoops
Hart Attack! Weekend
This is a well known cave in the Alcorn quad of Jackson County. Angelo George lists it as a saltpeter cave in his 1986 article on *Saltpeter And Gunpowder Manufacturing in Kentucky*. Tankersly notes it as having been mined for saltpeter during WW1 in his *Cavernous Karst Forms of Jackson County* (1975).

I was introduced to Durham Saltpeter by Bruce Isaacs. After a day of ridgewalking up and down hills in Jackson County, I was getting lazy, and asked about looking at some of the more well known caves that he had been telling me about. Bruce has lived in the area most of his life, and knows more about Jackson County caves than anyone. We decided to go look at Durham Saltpeter Cave, one that I had heard about, but had never seen.

After a quick drive and a short walk, we stood at the entrance. It is an easy walk in, with a dome complex close to the entrance. Past this, the passage stays walking – mostly 20’ wide by 10’ high. It goes for about 500 feet to a choke end.

There are two things that stand out in this cave. First are the saltpetre workings. There are a few logs in the passage that looked like they were worked to carry water. Trailing dumps are all over the cave. The vats are hard to find. We found one V-vat where the wood had all be removed (and probably burned), but the impressions were still in the hard packed dirt surrounding it. Another location had a mound of dirt, and looking carefully, we found intact wood sides sticking out of the pile a short way, were it looks like they had been broken or rotted away. These workings looked to me, that they pre-date WW1 by quite some time, but I am no expert.

Second, this cave is a living history of the area. Inscriptions cover the walls from the late 1800’s to present day. Carbide or scratching, but little spaypaint. Bruce was able to point out his grandfather’s name, as well as both his mother and father (before they were married!). This is like a register of who lived in the area!

We soon made a date to survey the cave. That morning, something I ate or drank the night before struck back, but Pam Duncan, Tammy Otten, and Bob Roth met Bruce to survey. Soon the notes were in my hands, and a quick map was drawn up. This cave lies high on the hill, and shows almost no water flow. I suspect this may be a meander cut-off similar to Great Saltpetre Cave, but more work will have to be done to determine this. Due to the fragile saltpetre workings, and the extensive local family history on the walls, we will not share the location of this cave.
It was a cold wet April weekend, and John Cassidy and I were stomping through the woods looking for caves.

A few weeks before, Jonathan Carmen had invited us to cave on some property he had access to in Jackson County. He had promised big cave, and I was a little skeptical – I hadn’t heard about anything in that neck of Jackson County, and I wasn’t certain there could be anything big there. After an unfortunate incident with a skunk (it could have been worse), we crawled down a little chute and ended up in a 20’ wide, 10’ high stream trunk. Tammy and I took off surveying upstream, while Jonathan, and Bob Roth headed downstream. After about 1000 feet of surveying that trip, Tammy and I ended at a breakdown pile where the stream braided.

Fast forward to April. Tammy, Jonathan and Dustin Kinser were gearing up to continue pushing upstream. I decided I wanted to walk the woods and John quickly agreed. We split up at the valley floor, and Jonathan and his team headed to the cave. John and I went up a valley. Soon we were in a steep sided valley. However, this one was a little strange – it was flat-bottemed, and showed no dry stream bed as most Karst Valleys do in our area. It was flat, dry, and showed no sign of flowing water. I had recently walked a similar valley in western Jackson, and that one had a large pit in the middle of the valley, so I was hopeful. John and I found a few small things, but nothing that explained the lack of apparent water signs. However, up the valley a bit more, I paused. I heard water running and splashing. With no water on the floor of the valley where I was, I knew that water had to be going somewhere! I told John to stop and listen, and he heard the same thing.

We ran around the corner, and there it was – a huge pit, right in the middle of the floor of the valley, with a large stream crashing into it. We edged closer. We could see a double drop, but could not see how deep it went. It had a large rock projecting a few feet out over the pit – We called it Pulpit Pit, in honor of this rock that looked like a pulpit.

We met up later with Jonathan and Tammy, their survey had pushed past where we had stopped the previous trip, and was headed directly for the pit we found. We had visions of a great through trip., but unfortunately, not for a while. This was the last trip Jonathan could lead for a while, as he works full time during the summers. So we waited, and waited, and waited.

Finally, in September, Jonathan was able to lead another trip. We headed directly to Pulpit Pit, with Jonathan, Tammy, a newer Lexington Caver, Elizabeth Copelin and myself. It was a beautiful fall day, and Jonathan quickly rigged. I rigged up, and jumped down the pit. I quickly hit the bottom of the first drop, about 30 feet. It was a large mid section, most of it sloping towards the second drop, with a stream coming in at this level and dropping into the second pit. I moved to the lip of the second drop. I could see passage going off the bottom, but there was a obstacle. A large tree was lodged directly in the path. I went over the edge, and squeezed between the sharp rock and the log. It was another equal drop of about 30 feet. I got off rope, out of the waterfall, and moved off. I could see a large passage behind me, so I shouted up for the others to join me. I went up a few feet into the passage to scoop, but decided to come back before much, so as to not be beaten by the rest of the group.

I amused myself watching the rest of the group get around the log, and not end up in the waterfall –We tried to get Tammy to ride it down, but she wouldn’t do it. As soon as everyone was down we started the survey. We got a hundred feet up the canyon, but then it closed on our level. Jonathan climbed up, and found a continuance at a higher level, but would need a bolt to rig a rope. We found a side lead that jammed up in mud.

We then looked for the water exit as this pit took a lot of water, and it had to connect to the other cave we were surveying. However, this, was a bust as well as we found the exit, and it was wide, 20 feet, but low, very low. Even Jonathan, who I have seen jam up holes smaller then my head, couldn’t get very far. We are certain this is the water route, but our dream of a door to door was crushed, or rather, squashed.
Big Bat Lidar

by Ken Bailey

On the over the Thanksgiving Holiday twenty-three cavers participated in the second Big Bat 24 Hour LiDAR Project. The project weekend was pushed back from the Labor Day weekend because of rain since Big Bat Cave floods a lot, quickly. The project was funded by grants from the Cleveland Grotto Science Fund, the Cave Conservancy of the Virginias and the Dogwood City Grotto. Without the financial support of the caving community, this project would end. Seiler Engineering out of Indianapolis rented us the equipment this year. A giant thanks to Todd for thinking that taking his equipment that far underground was a good idea. This year gave us a new believer in the project, our portlet provider C & C Portables who gave us a $50 discount.

This year we got off the main trail and headed back into the underground wilderness. Our goal was to scan the Armory. We got right up to the edge of the Armory. We were able to get 0.62 miles of cave scanned including Funky Hollow and the Formation Room. The processing, and connecting the new data with the existing data, is currently under way. Thank you Paige and QK4 for the computer time, software and expertise. Travel time to the scan sites were further than they have ever been with trips lasting twelve hours. Four hours of travel time with eight hours of scan time or until the batteries give out. A thank you to Ben Shinabery at QK4 for lending us extra gear including two batteries.

This year we started on the Friday after Thanksgiving and ran until Sunday late afternoon. As with all projects, we never had enough of whatever we needed but we always seemed to push on through and get the data collected. I am in awe of the commitment that cavers bring to this project. Grant writing has already begun for next year, so if you have some leads, let us know. I couple more acknowledgements are in order, Tim Miller and Stephanie Stoops, the Kentucky Karst Conservancies newest board members for leading multiple trips and just being great board members. Lore Berlund for providing the dog tags and making sure the campground got set up and torn down, plus a bunch of organizing things that I suck at. We had Mike and Abbie Crawford, our non-cavers, who really jumped in with both feet. Abbie made three trips in and Mike kept us in soup. Thanks to both of them.

QR code sends you to a 3D model of the Formation Room (as seen opposite bottom)
Cavers that made it happen:
Stephanie Stoops
Abbie Crawford
Lore Berglund
Chloe Bailey
Chris Morris
Aaron Baggett
Tim Miller
Matt Carey
Tim Stoops
Nick Anderson
Kara Pivarski
Jeannie Bailey
Nathaneal Strauch
Paige Wilson
Ken Bailey
George Rush
Dan Legnini
Jillian Dyer
Brian Devine
Lore Berglund
Paige Wilson
Bethany Widmayer

* = connection pending
Nestled in Sinking Creek Valley, surrounded by the 800 foot high ridge tops of central Breckenridge County, are the three known entrances of the Webster Cave System, the longest of a dozen or so caves that make up the Webster Cave Complex. From 2005 to 2013, 48 cavers were involved in 85 mapping trips into the cave, along with numerous other trips to check on the status of the Mulu Sump. For a detailed narrative of our efforts, please see the National Speleological Society News article from January 2017.

While there are still numerous leads left in the system, that article and these maps are the culmination of that work. Additionally, none of our work in the area would be feasible but for the kindness and hospitality of the many landowners in the area. For over 20 years, they have made our work in the caves of Webster possible. Our work is dedicated to them.
Project Summary

**Total Survey Trips:** 85

**Total Surveyed Length/Depth:** 54252.8 ft (10.275 mi) / 93.5 ft

- Webster Cave: 50734.4 ft (9.608 mi) / 93.5 ft
- Melody Hill Cave: 1641.2 ft / 37.5 ft
- Vanlahr’s Sink/Briar Hole: 1134.2 ft / 28.1 ft
- Park’s Valley Cave: 576.4 ft / 11.7 ft
- Basham Sink: 166.6 ft / 27.3 ft

**Cartographers (# of maps):**

- Ben Hutchins (7), Ben Tobin (6), Andrea Croskrey (3), Dave Lambert (2), Johanna Kovarik (1), Melissa Hendrickson (1)

**Surveyors (# of trips):**

- Ben Hutchins (38), Chris Anderson (34), Ben Tobin (30), Pat Mudd (28), Mark Phillips (25), Andrea Croskrey (16), Pat Brian (15), Dave Everton (11), Ty Sparks (9), Ryan Stidham (7), Jeff Gillette (6), Steve O’nan (5), Mike Springer (5), Melissa Hendrickson (4), Brian Sakofsky (3), Johanna Kovarik (3), Scott Schoefernacker (3), Chad Williams (3), Mike Drake (2), Curtis Beasley (2), Sean Lewis (2), Carrie Hutchins (2), Adam Craig (2), Brian Hamm (2), Tyler Eaton (2), Heather Veerkamp (2), Mary Hicks (2), Goni Iskali (2), Ben Miller (2), Aaron Boles (1), Adam Baldrige (1), Tyrone Laun (1), Tommy Rundall (1), Brandon Jackson (1), Erin Hricik (1), Ryan Brown (1), Todd Armstrong (1), Bill Baus (1), Andy Mudd (1), Srdjan Page (1), Erin Lynch (1), Amy Bern (1), Lorna Bern (1), Evan Blackstock (1), Roger Harris (1), Indi Landsey (1), Pat Mueller (1), Carrie Crockett (1)

Survey Methodology

The Webster Cave Complex Survey Group is currently conducting the third survey of the Webster Cave Complex. However, the current survey is more organized, methodical, and accurate. The following details summarize current survey methods:

- WCCSG surveys use Suunto compasses and clinometers.
- Distances are measured using a fiber glass tape and measurements are taken to the nearest 10th of a foot.
- Backsights are taken at all shots and a two-degree discrepancy between fixesights and backsights is allowed.
- To reduce survey error, survey loops are analyzed using COMPASS and a compass course is used to calibrate instruments although use of the compass course is admittedly used sporadically.
- Survey data is stored in COMPASS, and the program is used to generate the lineplots for the Webster Cave Complex.
- Sketches are scanned, and both original and scanned copies are filed. All original sketches were drawn at 20 ft to the inch.
- Surface survey and GPS readings have been taken to accurately align cave surveys with the surface.

Cartographic Methods

The cartographic efforts of the WCCSG are producing quality maps of accuracy and detail meeting current standards of cave cartography. The following details summarize current WCCSG cartography methods:

- The cartography of the Webster Cave Complex is being completed in quadrants with a scale of 50ft:1in., allowing increased detail to be shown.
- Maps are created using Adobe Illustrator CS3, into which lineplots generated using COMPASS, an SVG exporter, and scanned sketches are imported directly into Illustrator.
- A map template provided by the Hong Meigui Cave Exploration Society was modified for Webster Cave. We are greatly indebted to that group. The template included cave symbols as well as strokes and fill patterns.
Acknowledgements

With much thanks and gratitude to the landowners, who have not only allowed us access to their caves, but who have also taken such pride and interest in the natural wonders that they own as well as our continuing efforts:

Jim and Angie Parks, Charles Vanlahr, Sammie Quiggins, Jonathan and Marinetta Vanlahr, Mr. and Mrs. Shilts, The Bashams, William Mays, Mr. and Mrs. Joe Mays, Mr. J.D. Tobin, Jr., Mr. Charles Smith

Special Thanks to Jim and Angie Parks, who graciously provided us with a wonderful fieldhouse for multiple years of the project. And to the Hutchins for graciously opening their house to dirty and weary cavers time and time again. Without all of your support, none of this would have been possible.

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Legend

- bedrock
- sediment
- water
- sump
- ledge
- ceiling height
- height above water
- depth below water
- dripline
- intermittent flow
- water flow
- ceiling height change
- ceiling channel
- undercut ledge
- too tight
- unsurveyed passage
- bedrock column
- fossils
- stalagmite/stalactite
- flowstone
- sodestraws
- breakdown
- slope
Webster Cave System

Overview and Quad Location Map
Breckinridge County, Kentucky

Webster Cave Length: 6.01 miles (9.63 km)
Melody Hill Cave Length: 0.91 miles (1.46 km)
Van Lahr's Sink/Bria's Hole Length: 0.21 miles (0.34 km)
Flinta Valley Cave Length: 0.11 miles (0.17 km)
Basham Sink Length: 0.03 miles (0.05 km)

Surveyed using Suunto and Tanex
by The Webster Complex Cave Survey Group
2005-2013

Legend
- Walls
- Sediment
- Water
- Breakdown
- Fernations
- Bedrock
Kentucky Speleological Society
Parks Grotto Quadrant

Webster Cavern
Breckinridge County, Kentucky
Approximate Length: 2750 ft. Depth: 20 ft.

Photo: Thaddeus Cavern Cavers Group, 2006-2015
Cartography by Tom Tait, 2008-2015

Parks Grotto

Western Quadrant of Parks Grotto.

Photo by Chris Anderson
Mulu North Quadrant

Valaster Cave
Breckinridge County, Kentucky
Approx. Length shown: 2142 ft. Depth: 24 ft.

Cartography by David Lambert with additions by Ben Kuczenski, 2017
VanLahr's Cave
Webster Cave System
USGS Webster Quadrangle
Breckinridge County, KY

Length: 1044 ft  Depth: 75 ft
Surveyed Using Pipe and Tape
by the Webster Cave Survey Group 2005-2006
Cartography: by Traci, 2013

Cartography by Benjamin Tabin

Melissa Hendrickson & Andrea Croskrey
surveying in North Bore
by Chris Anderson
Park's Valley Cave Quadrant
Webster Cave
Breckinridge County, Kentucky
Approx. Length shown: 578 ft. Depth: 11 ft.
Surveyed and plotted by: J. Paul and Randy Blevins, 2003
Cartography by: Wendell O'Keefe, 2003

Webster Cave System
Quadrant Location

N

South

Entrance

Cave Quad

Map Scale: 1 inch = 200 feet

200R

100

50

25
Kentucky Speleological Society

Joe Douglas, Nicole Blanton & Larry Johnson checking out historic signatures
Mammoth Cave, Edmonson County
by Chuck Sutherland

Discovered (sic)
Riggs & Kino
Aug 12th
1841
Mammoth Cave, Edmonson County
by Chuck Sutherland
The Pan-American conference of 1889-1890 may not seem relevant to caves or the Commonwealth in general, but on a fall day in November 1889 a little piece of history has been lingering in the dark.

The conference was the design of James G. Blaine, Secretary of State under President Garfield and Harrison, and was born out of the 1823 Monroe Doctrine. Blaine’s ambitious goal was to establish closer ties with the countries that lie south of the United States. In creating stronger bonds with our neighbors, Blaine imagined it would open Latin American markets up to United States trade. In addition, by the United States making the initial idea of a Union of Americas, it was hoped that the United States would have more control over the agenda at the conference and hold more influence in decision making.

In 1881, invitations were sent out to all countries south of the United States, inviting delegates to what could be considered a hemisphere conference. But on September 19, 1881 President Garfield was assassinated and succeeded by Chester A. Arthur who did not particularly like Blaine. Within a short period of time, President Arthur removed Blain from office and rescinded the invitation and called the conference off.

Over the course of seven years, Blain lobbied so well that Congress was able to urge President Grover Cleveland, although reluctantly, to hold the conference, which was to be held in the presidency of Cleveland’s successor, who happened to be Benjamin Harrison. Harrison, after election, was quick to return Blain to the same post that he held under President Garfield, which was Secretary of State. He also encouraged Blain to move forward with the planning and execution of the conference. During this time of development, it was decided that the delegates would take an extended (six weeks) train trip visiting commercial, industrial, and culturally significant centers, starting at the beginning of October 1889. One of these culturally significant stops happened to be Mammoth Cave.

On the 3rd of November, the Pan-American delegates arrived at Glasgow Junction from their late departure from Louisville. The morning sun was shining and breakfast was served on the private train that Blain had chartered specifically for the Pan-American excursion trip. After breakfast, the group boarded the Mammoth Cave train from Glasgow Junction to the cave, which they entered around ten o’clock in the morning.

While working their way through the cave, with lanterns in hand and being led by guides, they came upon the Star Chamber. Upon entering the room, a photographer, who had accompanied them from Louisville, had sat her photography equipment up to photograph the Pan-American delegation 200 feet below the surface by flash light. The photographer was Sallie E. Garrity, who owned a photography studio in Louisville. The newspapers at the time called her a plucky little lady, but unknowingly, what the newspapers did, was possibly take record of the first photograph taken underground, not only in Mammoth Cave, but the world, by a female.

After the photo was taken, the group visited the Salt Peter Works, Bottomless Pit, and Fat Man’s Grief. It is assumed that they were pleased to do this before having lunch. By accounts reported, the slim members were sent first, but all delegation members made it through. Lunch was served in the Theater Room of the train by Steward Myrick. It is noted that a basket of provisions was lost over a high ledge and a server almost followed while bringing in the food.

The party exited through the Corkscrew and reached the surface at 3:20 PM. They arrived at their private train at five o’clock and were off to Lexington.

Note: Andrew Carnagie was part of the 1889-1890 Pan-American delegation, but I have yet to find any sources placing him inside Mammoth Cave.
Kentucky Speleological Survey

Hydophobic bacterial colonies, Hoy Cave, Simpson County

photo by Chuck Sutherland