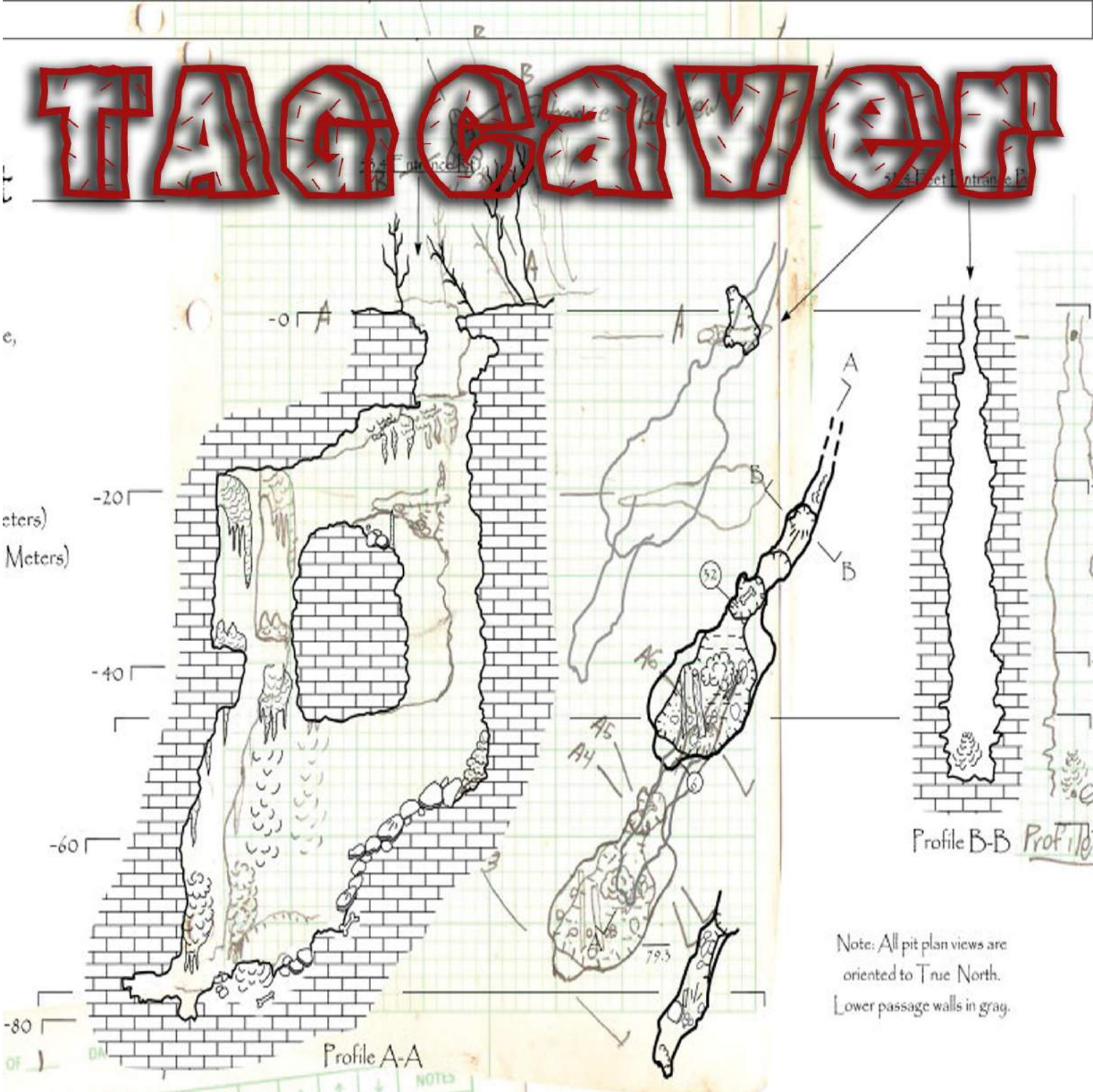
TAG Caver



Sewanee Mountain Grotto
Volume 5, Issue 1

TAG Caver ~ Volume 5 Issue 1

Spring 2014

TAG Caver is the official newsletter of the Sewanee Mountain Grotto & is published on a quarterly basis. Sewanee Mountain Grotto is a non- profit internal organization of the National Speleological Society dedicated to the exploration, mapping and conservation of caves. If you are interested in joining the Sewanee Mountain Grotto we invite you to attend one of our monthly grotto meetings. Meetings are held the second Saturday of each month at various locations in the heart of TAG. A typical meeting starts with a potluck dinner at 6pm CST, followed by the meeting at 7pm. On occasion we also have special presentations following our meetings. Annual dues are $10 per person and are due in January. Please email sewaneemountaingrotto@caves.org or one of our editors for more information on the location of our next meeting. You may also visit our website at http://www.caves.org/grotto/sewaneemountaingrotto/

2014 Sewanee Mtn Grotto Officers:

Chairperson: Peter "Mudpuppy" Michaud
Vice Chair & Programs: Woody Woods
Treasurer: Blaine Grindle
Secretary: Cindy Geick
Member at Large: Ben Miller
Conservation Chair: MaureenHandler
Survey Chair: Jason Hardy
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Email articles and photos for submissions to one of our editors. Content may include articles/photos from non members as well as other caving regions. Statements and opinions expressed in the TAG Caver do not necessarily reflect the policies or beliefs of the Sewanee Mountain Grotto or the NSS.

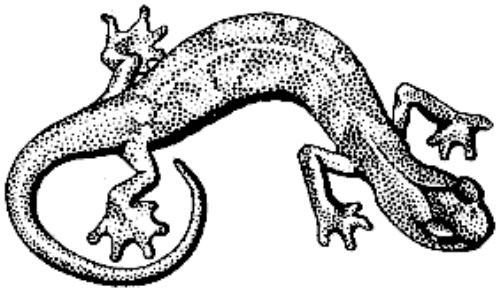
Front & Back Covers:

Using XERA to create cave maps
Maps by Jason Hardy

Calendar of Upcoming Events

April 12, 2014 – Sewanee Mountain Grotto Meeting. Meeting starts at 6pm central with potluck dinner, followed by business at 7pm. April's presentation will be on cave photography by Kelly Smallwood.

May 10, 2014 – Sewanee Mountain Grotto Meeting. Meeting starts at 6pm central with potluck dinner, followed by business at 7pm.



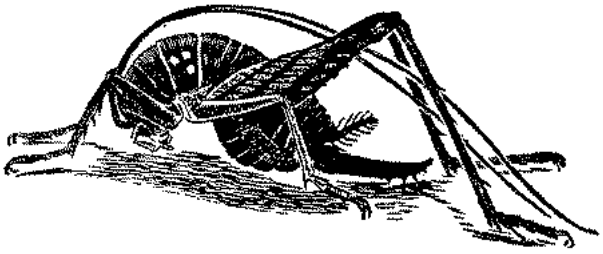
May 29 – June 1, 2014 – SERA Summer Cave Carnival, hosted by the Chattanooga Grotto. Event will be at the new NSS Headquarters in Huntsville, Alabama. Pre registration ends April 20, 2014.

June 14, 2014 – Sewanee Mountain Grotto Meeting. Meeting starts at 6pm central with potluck dinner, followed by business at 7pm.

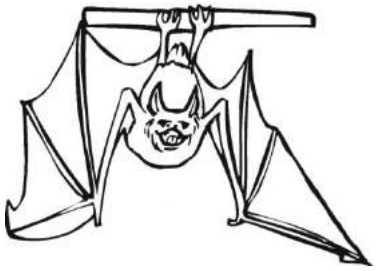
July 14-18, 2014 – NSS Convention. The event will be at the new NSS Headquarters in Huntsville, Alabama. To preregister go to http://nss2014.caves.org/. Preregistrion ends May 1, 2014.

Connect with the Grotto

If you're new to the Grotto, here are a few ways you can get to know other members:



- Join us on a Grotto Trip, Survey Trip or a Cleanup.
- Sewanee Mountain Remailer
  After you have joined the grotto, join our mailing list to keep up to date with cave trips and meetings. Go to: http://sports.groups.yahoo.com/group/sewanee_mountain_grotto and click join. Please provide your real name so we'll know who you are.
- Facebook – Join our official unofficial Facebook Page to meet other area cavers and plan trips. Search for Sewanee Mountain Grotto under groups.



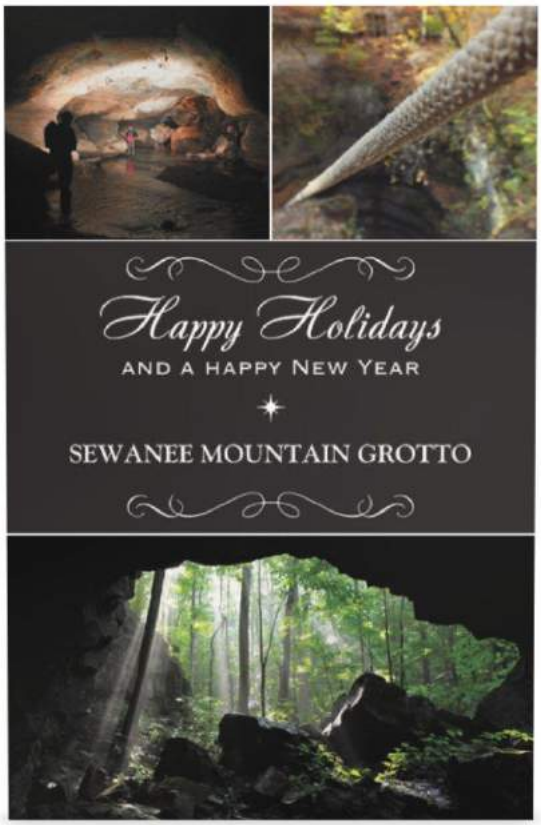
Support the Grotto ~ Grotto Merchandise

The Grotto has Baseball Hats for $10 & 3' patches for $5. Both items have our grotto logo on them. Please contact Kelly Smallwood at rowland7840@bellsouth.net to purchase.

THE TAG SCOOP

Our current membership is at 69 members!!! Welcome new members: Meg Armistad, TJ Arsenault, and Hali Steinmann.

You can download an updated membership list from the Yahoo group. Membership dues are $10. You can pay Blaine at a meeting or send them via snail mail. Send check payable to Sewanee Mountain Grotto, 669 Old Sewanee Road, Sewanee, TN 37375. Make sure to include your contact information (name, address, phone #, email address, & NSS #).



Left: Sewanee Mountain Grotto Christmas Card, sent to over 100 TAG Landowners in 2013.

Right: Thank You Card from the SERA Karst Task Force for our $500 donation in 2013.

SKTF would like to thank the Sewanee Mt. Grotto for your generous contribution to our trailer fund. The purchase of the trailer will allow the gear to be stored in one container, assuring that it all makes it to each cleanup. It will also allow each SKTF trip leader to haul the cleanup equipment to the cleanup site. Your gift is much appreciated.

Congratulations to the grotto's newest LIFE MEMBER of the National Speleological Society

Jason Hardy

Salamanders of Tennessee

http://www.tn.gov/twra/tamp/salamanders.shtml

In 1995, in recognition of Tennessee's unique natural heritage, the state legislature designated the Tennessee cave salamander as our official State Amphibian. You may be wondering, "What are salamanders and why are they important?" Salamanders are the group of animals, including newts, sirens and amphiumas, that have smooth, moist, porous skin, lay jelly-like eggs and have a long tail. Often they are mistakenly referred to as "spring lizards," when in fact they belong to the group of animals known as amphibians. Unlike lizards, a type of reptile, salamanders lack scales on the body, do not have claws on the toes, and cannot survive far from moisture.

Salamanders are nocturnal and come out from their hiding places during moist nights to hunt for prey. Most species eat large amounts of invertebrates such as worms, insects and snails. A few species, like spring and red salamanders, will even eat other salamanders. Salamanders are equally important as food for many other animals, such as raccoons, opossums, bears, mink, river otter, frogs and snakes. In some places they are the most abundant vertebrate animals in the forest. They are also important as biological indicators as their porous skin is sensitive to environmental toxins. Since many live in both aquatic and terrestrial habitats, scientists use them to monitor for problems in the environment.

Most of Tennessee's salamanders have a biphasic life cycle, meaning they spend part of their life in a tadpole-like larval stage then morph into the adult stage. Many species of salamanders spend their adult stage on land in moist habitats near water. Then during the breeding period, the adult salamanders move into the breeding ponds to court and lay eggs. Spotted salamanders are well known for their mass migrations in the spring as they move from their forest habitat to their breeding ponds. Salamanders require ponds that have no fish in them as "Fish Eat Amphibians!" Temporary ditches, road ruts, flooded fields, wet depressions and semi-permanent to permanent ponds are all favorable breeding habitat. A few species, like the pigmy salamander and seepage salamander, skip the larval stage and the eggs hatch into perfect miniatures of the adults. While most salamanders lay their eggs and then depart, some species like the green and marbled salamanders stay and guard their eggs to help protect them from small predators and fungus.

What are some of the major challenges facing salamanders today? As more and more people use more resources and require more places to live, habitat destruction and modification are occurring at an alarming rate and are the greatest threats facing salamanders. Another major problem salamanders face is habitat fragmentation; salamanders are unable to move freely between populations or even reach their breeding ponds because of highways and other construction. Introduced species can negatively affect salamanders by direct predation and competition. Chemicals such as pesticides, herbicides, and fertilizers are adversely affecting salamanders in many areas around the world. Other factors that may negatively affect salamanders in Tennessee are climate change, disease and collection for the pet trade even though it is illegal to remove any native animal from the wild in Tennessee. Below are a selection of salamanders that can be found in caves in Tennessee.

Photo by Lisa Powers

The Cave Salamander

Eurycea lucifuga, Family: Plethodontidae - One of our more colorful salamanders, the cave salamander is found in karst habitat throughout the eastern two-thirds of the state. Bright orange to red, it has irregular black spots on the dorsum. The underside is white to yellowish with no markings. The body is elongated and slender with the prehensile tail making up more than 60 percent of the body length. The head is large and flattened and the eyes bulge out of the head. These salamanders range in size from 10 to 20 cm. Cave

salamanders may produce a noxious secretion from the tail if bothered, and when attacked they will coil their body around and tuck their head underneath the base of the tail, then wriggle the tail to distract the predator. Using this common defensive strategy for many species, the cave salamander can regenerate the tail if part of it is broken off.

The Tennessee Cave Salamander

Photo by Tom Barr

Gyrinophilus palleucus, Family: Plethodontidae - A long-bodied salamander (10 – 23 cm) with a flattened head, slightly upturned snout and 3 large red feathery gills, the Tennessee cave salamander is one of our most unique species. These salamanders spend their entire life in a "neotenic" or larval form and even reproduce in this form. In 1995, the Tennessee cave salamander, Gyrinophilus palleucus, was designated by the Tennessee legislature as our state amphibian. Living exclusively within a few cave systems, this unique salamander is listed in Tennessee as "Threatened." The range for this salamander is very restricted; it is found only in Tennessee, Alabama and Georgia. The Tennessee cave salamander lives in limestone cave systems containing streams in central and eastern Tennessee.

Above photo by Stephen G. Tilley
Below photo by Brad Moon

The Mud Salamander

Pseudotriton montanus, Family: Plethodontidae - A large (7.5-19.5 cm), stout-bodied species, the mud salamander has an orange-brown to bright crimson dorsum with brown or black spots that are often widely scattered. The tail is short and makes up less than 40 percent of the total length of the salamander. Mud salamanders inhabit muddy, mucky areas along swamps, seeps, bogs, springs, floodplain forests and headwater streams. They occur throughout middle and eastern Tennessee.

The Spring Salamander

Gyrinophilus porphyriticus, Family: Plethodontidae - A large (11-21 cm), stout-bodied salamander, the body color ranges from salmon to pinkish-orange with small dark spots or flecks. A light line extends from the eye along a raised ridge to the snout and may be shadowed by a faint gray to black line beneath it. These salamanders are very predatory and often feed upon other salamanders, even their own kind; they also feed upon many invertebrates. Spring salamanders prefer seeps, springs, fish-less headwaters, caves and cave streams. They are found primarily in the eastern half of the state, although there has been one

Photo by Lisa Powers

reported from West Tennessee.

Northeren & Southern Zigzag Salamander

The northern zigzag salamander (*Plethodon dorsalis*, Family: Plethodontidae - pictured) is one of our most abundant species and is found throughout the eastern two-thirds of the state. The similar looking, closely related southern zigzag salamander (*Plethodon ventralis*, Family: Plethodontidae - not pictured) has a very small range along the eastern border of Tennessee. But as these two were just recently separated into two conducted to determine the true range of the southern zigzag salamander. Both of these salamanders are relatively small (6 – 11 cm) and exist in two color morphs (phases). They may be a uniform brownish-gray color (lead morph) or a dark base color with an orange or red zigzag pattern (striped morph) extending down the back that straightens out when it reaches the base of the tail. Both color morphs may have light metallic flecks on the back and sides; the belly is mottled with tiny black, white and orange speckles. These salamanders prefer moist forested slopes, caves and rocky hillsides. Females use underground retreats in which to lay and brood their eggs.

Photo by David Withers

The Green Salamander

Aneides aeneus - A beautiful, rarely seen salamander (8 – 14 cm), the green salamander spends much of its time on sandstone, or sometimes limestone, rock faces with many crevices, or more rarely in trees or under the loose bark of fallen timber. This salamander has a black base color with a yellowish-green, lichen-like pattern upon the back. It has a flattened body, long legs and square toe tips, all adaptations for living on cliffs. Females of this species deposit their eggs in moist crevices in the rock face and will actively protect their eggs from small predators and fungus. The range of this species is rather limited in Tennessee, being confined mainly to the Cumberland Mountain, Highland Rim and Cumberland Plateau physiographic provinces.

State Acquires Conservation Easement on 3,282 Acres of Private Land at Fiery Gizzard

Monday, December 16, 2013 | 12:33 pm

Multi-year campaign to protect nationally-recognized recreation area is complete thanks to Forest Legacy Grant

http://news.tn.gov/node/11794

MONTEAGLE – The Tennessee Department of Agriculture Division of Forestry, in partnership with The Land Trust for Tennessee and The Conservation Fund, celebrated today the completion of a multi-year effort to conserve a significant stretch of environmentally and economically important forestland in South Cumberland.

The Division of Forestry acquired a conservation easement on 3,282 acres adjacent to South Cumberland State Park in Grundy County thanks to a grant from the federal Forest Legacy Program. The conservation easement allows for the property to remain privately owned and managed as a working forest, which significantly benefits the local economy while conserving the area's exceptional biological diversity. The land is near a section of the nationally-ranked, 17-mile Fiery Gizzard Trail, where more than one million people visit South Cumberland State Park annually.

"The conservation easement will ensure that a valued portion of the unique tableland forests of this area remains intact in perpetuity," said Jere Jeter, State Forester and Assistant Commissioner for the Tennessee Department of Agriculture. "The Division is proud to partner with the Land Trust for Tennessee and The Conservation Fund in keeping working forests forested and protecting the rich forest heritage of the South Cumberland Mountains."

Ranked 10th on the 2012 national Forest Legacy priority list, the Fiery Gizzard project received a grant from the U.S. Forest Service's Forest Legacy Program. U.S. Senators Lamar Alexander and Bob Corker and U.S. Representative Scott DesJarlais supported federal appropriations for the Forest Legacy Program and the Land and Water Conservation Fund in fiscal year 2012.

"I grew up hiking in the mountains of East Tennessee and welcome the announcement that Tennessee will be able to preserve more than 3,000 acres next to the South Cumberland State Park to ensure the same opportunities will be available in the future for Tennesseans and visitors," said Senator Alexander.

In 2008, the Land Trust for Tennessee and The Conservation Fund, with assistance from the Friends of South Cumberland State Park, preserved nearly a third of the Fiery Gizzard Trail and a large section of the trail viewshed from fragmentation and development. With the completion of this final phase, more than 5,000 acres have been added to South Cumberland State Park system, along with the protection of these 3,282 acres that will be maintained as private working forestland.

"The public-private partnership for Fiery Gizzard reflects the highest ideals for conservation of special places in Tennessee," said Jean C. Nelson, executive director of The Land Trust for Tennessee. "We feel fortunate to be able to protect these valuable acres from incompatible land uses and provide both economic and ecological benefits to the area. We have received support from across the country on this project and are grateful for such a strong commitment from our partners."

"The support we received for this ecological and economic gem at federal level is a testament to its importance," said Ralph Knoll, Tennessee state representative for The Conservation Fund. "This easement is a conservation solution that makes good economic sense, and we're grateful to the Tennessee congressional delegation for continuing to support innovative land protection programs like the Forest Legacy Program and the Land and Water Conservation Fund, which will keep Fiery Gizzard protected in perpetuity."

About the Tennessee Department of Agriculture Division of Forestry: The Division works to protect and enhance forests that cover half the state and provide jobs, timber, clean water, wildlife habitat and recreation. As coordinator for the Forest Legacy Program in Tennessee, the Division helps identify and protect priority forestlands from development. www.TN.gov/agriculture/forestry

About the USDA Forest Service's Forest Legacy Program: The Forest Legacy Program works with state agencies and local landowners to protect environmentally important forests that are threatened with conversion to non-forest uses. It is funded through the Land and Water Conservation Fund (LWCF), a federal land protection program that receives funds from the development of federally-owned offshore oil and gas resources. LWCF does not use taxpayer dollars and has been protecting forests, natural resources, state and local parks and recreation areas since 1965.

About The Land Trust for Tennessee: The Land Trust for Tennessee is a private, not-for-profit charitable organization founded in 1999. Its mission is to preserve the unique character of Tennessee's natural and historic landscapes for future generations. To date, The Land Trust for Tennessee has protected more than 90,000 acres statewide. The Land Trust maintains a community-based approach to carrying out its mission with offices in Nashville and Chattanooga. www.landtrusttn.org

About The Conservation Fund: At The Conservation Fund, we combine a passion for conservation with an entrepreneurial spirit to protect your favorite places before they become just a memory. A hallmark of our work is our deep, unwavering understanding that for conservation solutions to last, they need to make economic sense. Top-ranked, we have protected more than 283,000 acres in Tennessee and 7 million acres across America. www.conservationfund.org


2013 Survey Projects
By Kelly Smallwood


Jason Hardy and I have had the opportunity to not only start a few projects of our own this year but to also help out several other Sewanee Mountain Grotto members and other surveyors on their projects as well. This report looks back on the projects that Jason and I have worked on in 2013.

Ellis Pit

On January 12, Jason Hardy and I were able to help Ben Miller again with his project on mapping the deep unmapped pits in Tennessee. This time his goal was to map Ellis Pit in Marion County. Harold & Cindy Geick and Jon Mnich also came along to help with the survey. A copy of Ben's map is included in this issue of the newsletter.

Nancy Wynn Cave

The survey of Nancy Wynn Cave is a beginner's survey project that Jason began in 2012 for the grotto. On March 2, 2013 Jason, Blaine Grindle, Lynn Buffkin, & Julianne Ramsey were able to add 357 feet to the survey. This brings the horizontal length of the cave so far to 758.1 feet with a vertical extent of 52 feet. Jason estimates there is approximately 800 feet or more left to survey, which we plan on finishing up in March of 2014.

Kentucky

On March 4, while on vacation, Jason was able to make a trip up to Kentucky to give a presentation on TAG Caving to the Green River Grotto. He arrived at Dale Hollow State Park to meet up with Ben Miller and a few other Green River Grotto members. Their objective for the day was to check out and survey some small caves on the property. They mapped two small caves and Jason found another cave in the process. In all, the Green River Grotto has found and starting mapping over 80 caves in the park. After an afternoon of surveying, Jason then went back with them to Bowling Green for the Green River Grotto meeting where he gave his presentation.

Byers Cave

March 23, Team Ale continued to help Marty Abercrombie & the Georgia Speleological Survey with the re survey of Byers Cave in Dade County, Georgia. For this months trip, Marty had lined up enough surveyors for three teams. Team Ale consisted of Kelly Smallwood, Jason Hardy & Blaine Grindle. Our objective for the day was to head downstream past the big formation form and survey as far as we could go or until we got close to our scheduled meet time with the other teams. We made our way down to the big formation area, thru the crawl way and popped back into borehole. We quickly found where the previous survey in this area had stopped and we set our first station. The passage here was about 50 feet wide and there is huge breakdown all around. Our first shot was 94 feet long so while Jason sketched it in, Blaine and I poked around looking at some pretty red formations. It wasn't long before we were in the water and came to some side passages. We decided this would be a good area to take a break for lunch and check out the side passages to determine if we would survey them on this day. I pushed one dry passage for about 60 feet before it went into a mazy breakdown room. I went back and reported to Jason and Blaine that it didn't go far so we should go ahead and survey it while we were out of the water. After we finished this area, we then got back in the stream and continued surveying the main passage. It wasn't long before it became too low and wet for us to continue on. We then headed back up stream and determined that due to time it was best to not start surveying the second side passage we had seen. We left a really good recoverable so it should not be hard for others to find next time. On our way back out we also checked out the lower stream passage that heads up stream. In all, Team Ale was able to survey around 600 feet of passage. We were about an hour ahead of the other teams on our meet up time, so we left them a note and began heading out. Jason and I made our way thru the crawlway after the pop out and waited on Blaine. As he approached the tightest spot, I could hear what sounded like a heartbeat. I

asked Jason if he heard it too and he did. We then realized what we were hearing was Blaine's heartbeat being reverberated thru the rocks. It was one of the weirdest experiences we've ever had in a cave.

Nickajack Pit

March 29 - Since I was off on Good Friday, I convinced Jason to take a vacation day as well. We decided we would spend the morning surveying a nearby pit that I had wanted to revisit. Since the pit is only a few miles from our house, we got a leisurely start around 10am. It only took us around 2 hours to complete the survey. The pit depth came to 53.4 feet, with a total depth of the cave at 79.3 feet and a horizontal length of 40.7 feet. We then headed to Waffle House for lunch to get into the spirits of our next pit on the list to survey, Waffle Well. After lunch we headed up the road behind Waffle House and found a parking spot. After a few minutes of walking, we found the pit but determined it was too wet to survey on this day.

The Hell Sucker

June 9 - Jason Hardy, myself, and Jim Campbell headed back over to push the last blowing lead in The Hell Sucker. It had been nearly 9 months since any of us had been in the cave. With all the rains we have had this spring and summer we were not sure what to expect. We made it into the cave and down the drop into the stream with no problems and quickly made our way to the lead. After spending several hours working on the lead we did not make much progress. We decided we would re group and make another fresh day out of it.

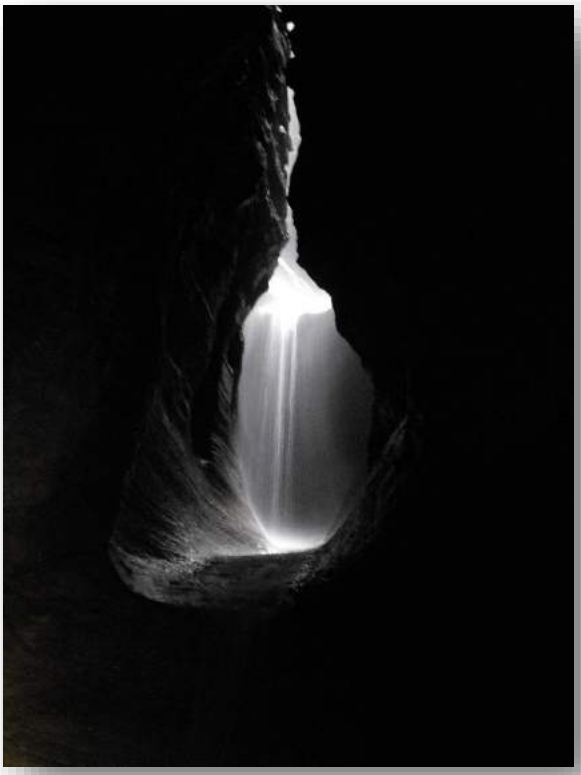
Battle Creek Horror Hole

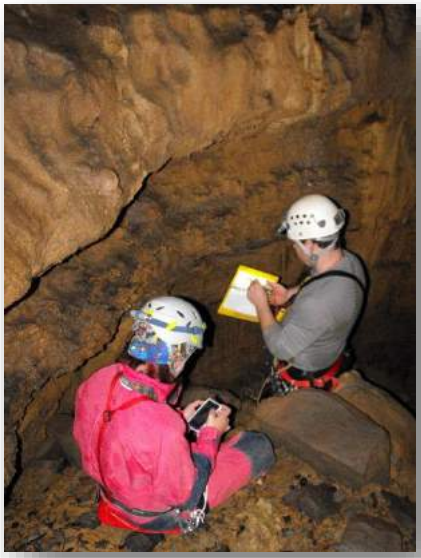
June 23 – Jason Hardy, Myself, Ben Miller, and Katie Ingram met up at Martin Springs to map Battle Creek Horror Hole. This one had been on the back of our mind and on Ben's list to eventually get too. Once at the pit, we realized the narrative was not clear and there were two parallel pits, not just one. We took a gamble and chose to start with the more inviting pit on the right. This one turned out to be the smaller of the two but had more horizontal passage at the bottom. Jason sketched the plan view and cross sections, while Ben sketched the profile view. Katie set point and read back sights, while I read the front sights. After finishing up with it, we re rigged the less inviting hole on the left and discovered it was the deeper 100 footer. We literally taped it just at 100 feet and there was only enough passage in the bottom for one last shot. Both of the pits were drippy but the main pit was even more so. Unfortunately, due to the water, I was not able to get a good photo of either one. The overall depth of the cave came to 102 feet with the pits measuring out at 68 and 101.

Snowflake Pit

August 10 - After our plans fell apart for leading a grotto trip on the day of the meeting, Jason and I were left trying to figure out something to do literally at the last minute. Jason phoned Mike Green who was also looking for something to do. Mike was interested in doing a 100+ foot pit that he had never done before and decided on Snowflake Pit in Sinking Cove. Jason phoned me with the plans around midnight so I decided to quickly take a look at the narrative and map for the pit. That's when I realized there was no map. The narrative listed the pit as 121 feet deep with one to two smaller pits. The overall horizontal passage of the cave was also listed as 100 feet. It was a no brainer. Jason and I both knew

that it would be easy to survey the pit while there. We met up with Mike Green, Lindsay Hansen, and their two dogs Monte & Jackson the next morning and headed over towards Stevenson. Once at the gate at Sinking Cove, we met some of the hunters who were there hanging out. Jason had never been to any caves past the main campground so he spent a few minutes chatting with the hunters about how to get back to Snowflake. They instructed us to simply just keep going down the road. Once we got past the hunters camp, the road began to narrow and became very rocky and in the streambed at some points, four wheel drive is necessary! We finally made it as far as we could following the road and knew the rest was going to be on foot. From this point, the GPS showed the pit only a half mile away but we knew we would have to gain a lot of elevation in that half mile. The hike actually wasn't too bad. It rained a bit on us as we went up and we also came across a 40 foot pit that Mike dropped into to check out. Which, we will have to look up since it was obviously known because there was a HUGE rock cairn next to it. Once at Snowflake, Mike and Lindsay secured their dogs on leashes. As Mike was rigging the pit, Lindsay informed him that one of the dogs had actually chewed thru the leash. We knew at this point it wasn't going to be safe for the dogs if we all went into the pit. So Mike rigged the pit while Jason began drawing the profile of the entrance. After Mike made a quick bounce, Jason and I went down. The pit goes down for about 100 feet to a ledge. There is a waterfall coming in on the back side of the pit which continues down two more short drops. We continued down the rest of the pit, being careful to stay out of the waterfall. Once I was at the bottom, Jason informed me there was a copperhead and showed me where it was so we could keep an eye on it as we surveyed. The bottom of the cave wasn't very big so it didn't take us long to survey it. In the meantime, Lindsay also bounced the pit. Just before Jason was about to get on rope to climb up to continue the survey, he noticed three more snakes on the ledge right next to where we had to climb. Two of those were also copperheads, YIKES! Neither Jason nor I are into "saving snakes" from pits. My personal view on it is let Mother Nature takes it course. So we carefully negotiated up the rope but had to get into the waterfall just a bit to avoid the snakes. I was actually a bit nervous but I also knew that the snakes were probably not interested in bothering us as long as we didn't both them. While Jason finished up sketching in the main pit, I climbed up and we then measured the pit using a 200 foot Keson Fiberglass Tape. Jason then climbed finishing up his profiles as he went. The overall depth of the pit came to 135.6 feet with the pit depth of 98 feet. The total horizontal extend came to 213.3 feet.





Gestapo Droppo

After surveying Snowflake Pit, Jason and I were excited to realize that there was another unmapped one hundred plus foot pit that was easily accessible in the Sinking Cove area. The Chattanooga Grotto had reserved the Sinking Cove campground the first weekend in September so we decided we'd return to the area and survey the pit on September 7. As the day approached, Jason and I were discussing the plans and decided since we had just camped the weekend before with Cave Fest that we would just make a day trip out of it. On Wednesday, September 4, there was an interesting email on the Dogwood City Grotto yahoo group from Sasha Orlanova Shturma. Her and her husband, who are both from the Ukraine, are developing a new Android App called Abris which eliminates the use of paper and pencil during cave surveys. She was looking for a survey trip to beta test the new app and to learn more about how Americans survey caves. I sent her an email and invited her along on our trip to Gestapo. On the morning of September 7, we met Sasha at the Krystal's in Kimball, TN

and she followed us over to Sinking Cove. Once at the gate, we stopped for a few minutes to chat with the hunters who were hanging out at the house. We then headed down the road, past the hunters camp and parked. We geared up and began our classic tag hike of four tenths of a mile up the mountain. As we were heading up we were chatting with Sasha about various things: the terrain of getting to caves in the Ukraine, how longs she's been caving, what kind of animals can kill you in the woods, etc… It wasn't long after that when Sasha blurted out, "Snake". With that, I immediately turned to my left and within a foot of my left foot was a really large Timber Rattler. Jason and I both had stepped within inches and were lucky that we didn't disturb it. We paused for a few minutes enjoying it's beauty and power, snapped a few photos and then continued our hike. Once at the pit, we found it covered with a few large dead trees. It appeared as if the trees had been there a while and luckily there was still one live tree within a few feet to rig too. The narrative listed the pit as divided by wedged boulders with a side passage part way down with a total pit depth of 110 feet. Because of the unknown with side passage we decided to start the survey from the top and work our way to the bottom instead of from the bottom out. As Jason began sketching the entrance, Sasha began "ghost sketching" with the Abris app on her Android phone. I went down first to investigate the ledge that we could see below. Once down the narrow entrance I quickly came to the ledge. It was very obvious that this was also the ledge with the 60 feet of passage that the narrative mentions. I also noted that it was safe to get off rope here and that we were going to need to set a station that could continue us down both the main pit and the side passage. After communicating this back to Jason on the surface he then lowered the tape for our first survey station. From the entrance down to the ledge it measured about 18 feet. I then moved safely out of the way for Jason and Sasha to come down. Once both were down, we decided it would be best to continue the survey down the side passage first. The narrative mentions this passage as leading to a large formation with 60 feet of horizontal walking passage. After setting three stations and going around a bend in the passage, Jason jokingly said, "Oh we will probably find another pit back here", and with that he stepped around the corner to set the next station and there it was, another pit. We tossed a rock down and it didn't seem to be too deep but deep enough that we knew we needed rope! After contemplating our plan of action we decided to toss down another rock with flagging tape tied to it and go back to the main pit, finish up there and see if we could find the rock in the bottom. This would at least tell us if the two pits connected or if they were separate. Once back at the ledge next to the main pit, I rigged in and set us up for a perfect 90 degree shot down the main pit. Looking down below, I could see another bridge below as I continued down the shaft. Once at the bottom, I shouted, "Off Rope" and Jason lowered the tape. We measured the pit from the ledge above at 88 feet. Jason and Sasha then rappelled down. It was very interesting watching both Jason and Sasha sketch in two very different methods. Some of the more obvious issues I can foresee with the Android App is battery power running out and keeping it clean and dry in wet conditions. It did however seem to hold up quite well in the dry pit we were in.

The bottom of the main pit was blind and we were not able to locate our rock with flagging tape so we knew there was still a second pit to survey in the cave. There was still the bridge above that could possibly lead into the second pit. As Jason and Sasha sketched below, I began to climb. After about 60 feet, I reached the bridge and was able to tell that the other side led to a window into the second pit we had found in the horizontal passage. Once we all made it back up the rope, we decided to pull the main rope around the 60 foot of passage and use two natural re belay points to get into the second pit. When Jason was finally able to peer down below into the second pit, he could see the bottom. We continued the survey and measured the pit at 53 feet. Once at the bottom we found our rock, finished up the survey and noted how beautiful of a dome it was. There were flowstone formations that went all the way from the top of the pit to the bottom. We then all made our way out of the cave and hiked back down to the vehicles making sure to be careful of snakes along the way. Before heading home, Jason and I stopped by the Sinking Cove campground and hung out for a while with a few members of the Chattanooga Grotto.

Jacobs Mountain – Halley's Hole & Torode Pit

October 5 & 6 –In lieu of a bachelor party, the guys decided to have a weekend of surveying instead. Jason Hardy, Ben Miller, Clint Barber, Jim Campbell and Blaine Grindle met up near Jacob's Mountain and spent the weekend mapping Halley's Hole and starting the re survey of Torode Pit. They camped out in the Big Coon Valley and also enjoyed a nice 5 gallon keg that Jim Campbell brought. (So that's what I was told!)

Snowflake Pit

Franklin County, Tennessee

TFR# 136

Total Vertical extent 135.6 Feet (41.3 Meters)

Total Horizontal extent 213.3 Feet (65.0 Meters)

Leica Disto, Sunto Compass and Keson Fiberglass Tape

Grade 5 Survey By the Sewannee Mountain Grotto of the National Speleological Society

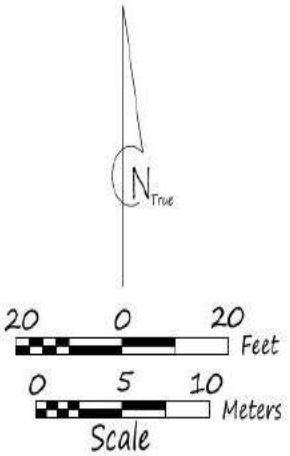
August 10, 2013

Jason Hardy

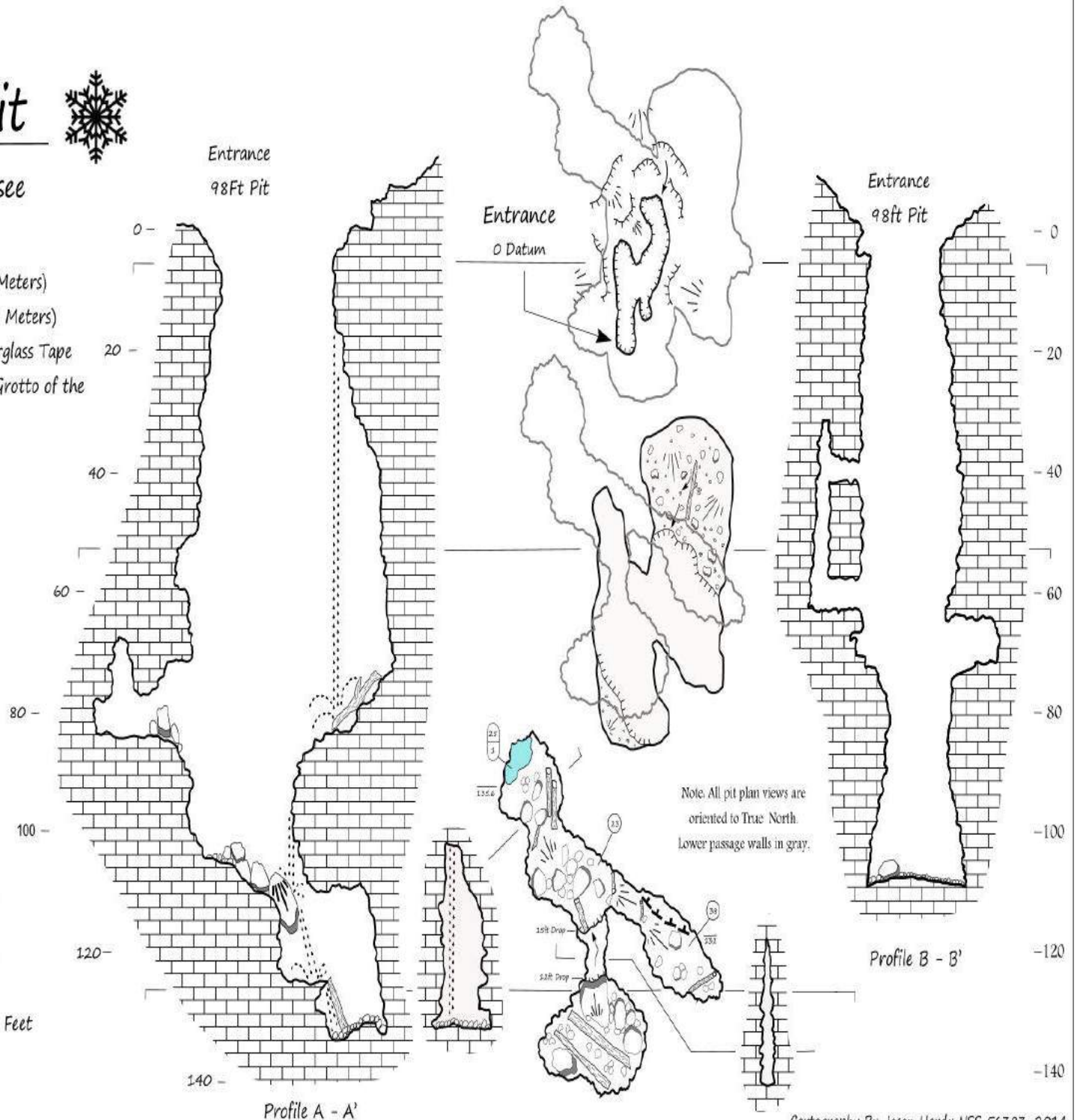
Kelly Smallwood

Mike Green

Lindsey Hanson



All Ceiling Heights & Pit Depths Are In Feet



Cartography By Jason Hardy NSS 56383, 2014

Gestapo Droppo

Franklin County Tennessee

TFR# 149

Total Vertical extent 107.4 Feet (32.7 Meters)

Total Horizontal extent 290.2 Feet (88.5 Meters)

Leica Disto, Sunto Compass and Keson Fiberglass Tape

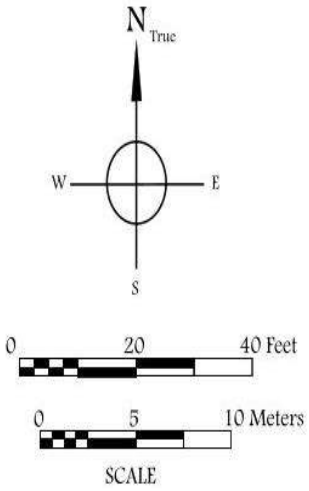
Grade 5 Survey By the Sewannee Mountain Grotto of the National Speleological Society

September 7, 2013

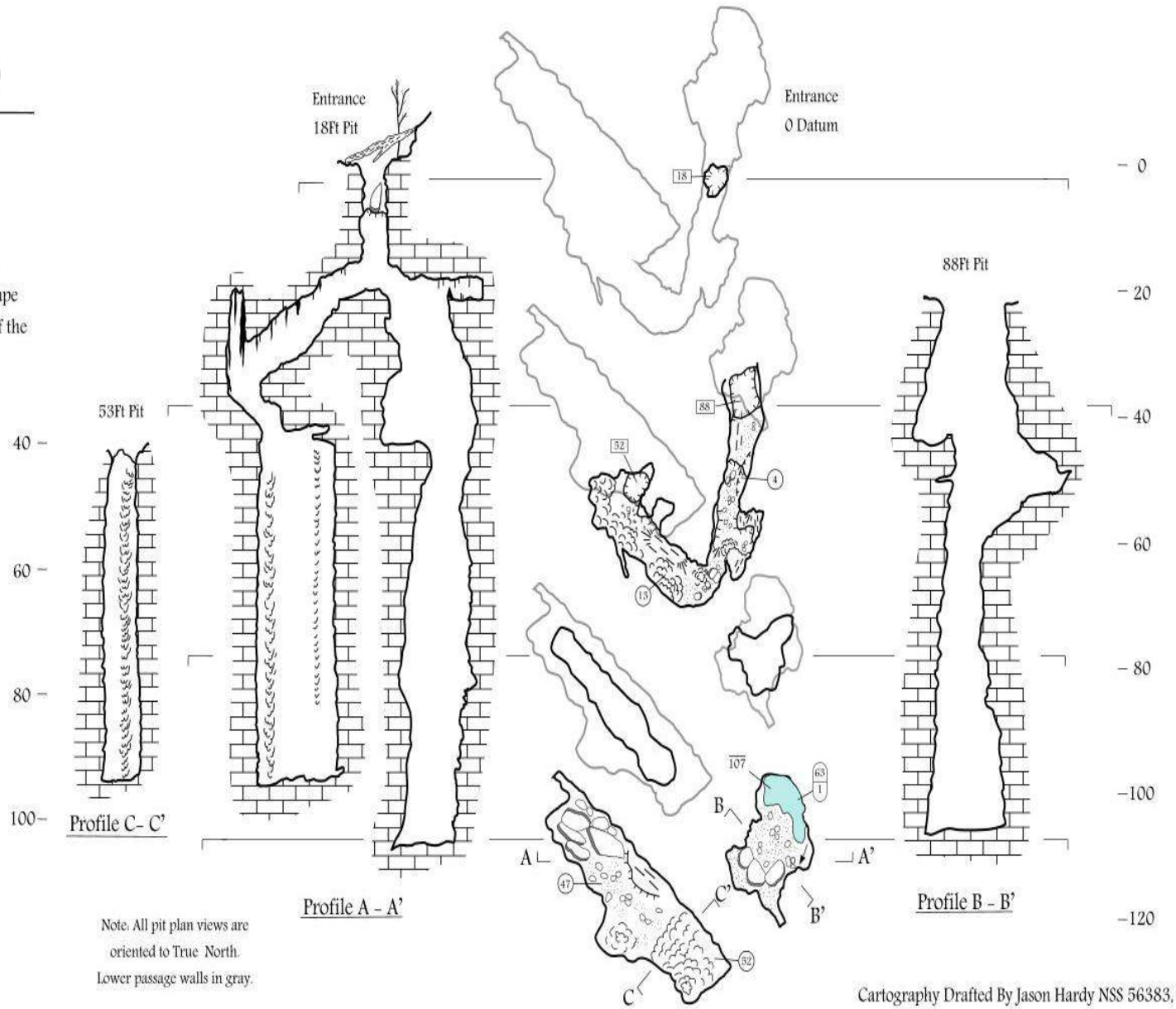
Jason Hardy

Kelly Smallwood

Sasha Shturma



All Ceiling Heights & Depths Are In Feet



Note: All pit plan views are oriented to True North.
Lower passage walls in gray.

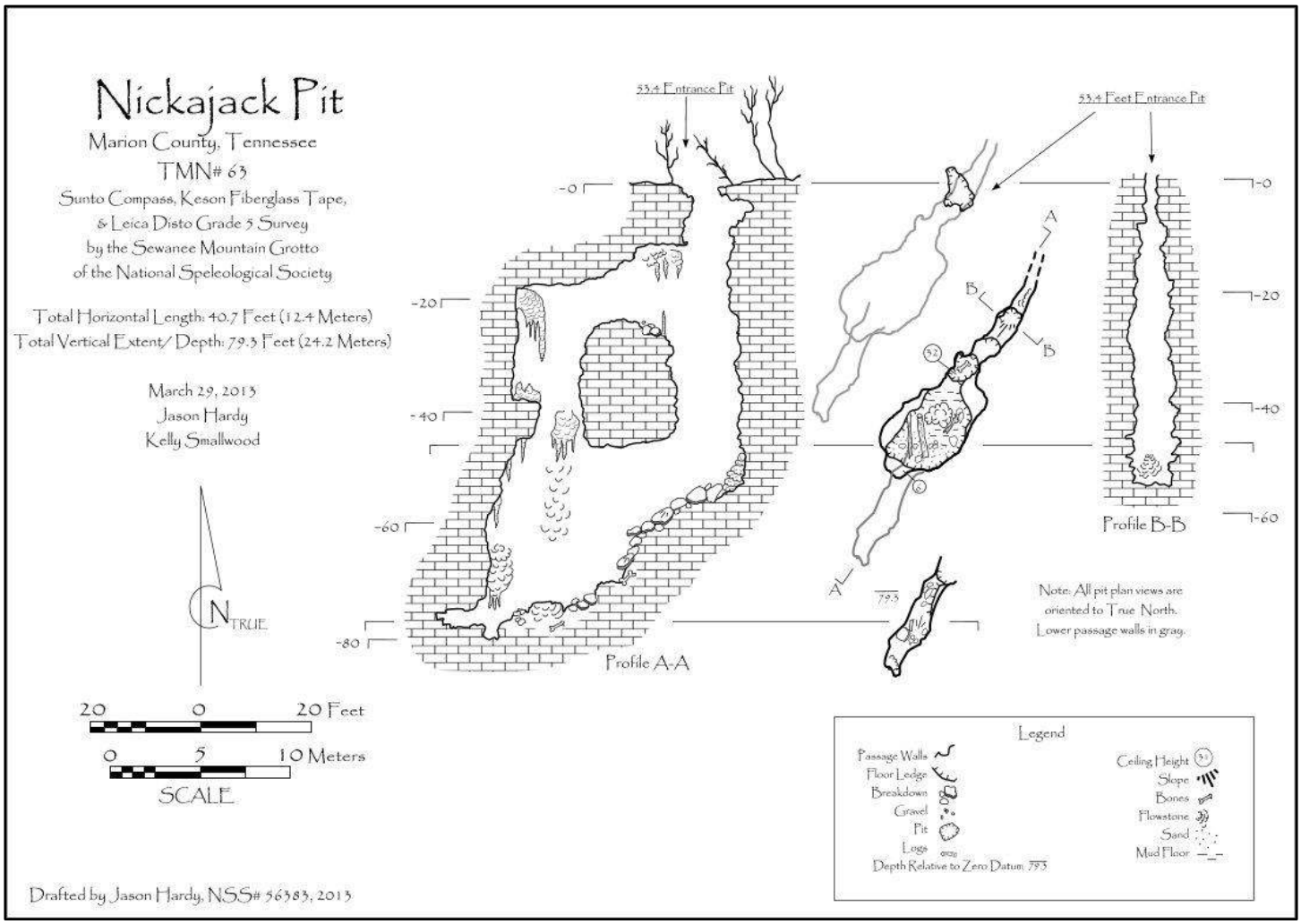
Cartography Drafted By Jason Hardy NSS 56383, 2014

Mirror Image Well

October 10 – Jason and Ben decided to take a stab at finishing up Mirror Image Well. Jason and I originally started the survey in 2011 but due to The Hell Sucker in 2012 and heavy rains in 2013 we were not able to get back in the cave. This time they accessed it from the top, realizing that is not the best way. After pushing beyond where Jason and I left off last time they encountered a lot of water in the bottom of the cave and determined it would be best to finish up the survey during a dryer time.

The Sinkhole

November 16 - After Ben acquired permission; members of the D.P.A.S (Deep Pit Assassin Squad) met up to re survey The Sinkhole which is located in Kelly's Cove in Marion County, Tennessee. Along for the survey were Ben Miller, Jason Hardy, Kelly Smallwood, Mike Green, Brian Ham, Cody Munday, and Anne Grindle. While Ben, Mike and Brian surveyed the pit entrance from multiple angles, Team JACK (Jason, Anne, Cody, and Kelly) made their way to the bottom of the pit and began to survey the estimated 500 feet of horizontal passage below. We began our survey going downstream and surveyed until we reached a point where too much debris and low ceiling prevented us from going any farther. At this point we then made our way back up the slope and towards the rest of the cave. Unfortunately, we were not able to finish the survey and will have to make another return trip in the future.



Gentle thrills on the historic Sequatchie River

By Jenni Frankenberg Veal
Published Sunday, February 9th 2014 on
www.nooga.com

The Sequatchie River flows through 70 miles of the Sequatchie Valley, the long and narrow divide between the Cumberland Plateau and Walden's Ridge. Throughout time, the river has played a major role in the cultural and natural history of the Sequatchie Valley. Today, this historic waterway offers slow and easy paddling opportunities, as well as the chance to enjoy the Sequatchie Valley's breathtaking landscape by water.

The Sequatchie River in Southeast Tennessee offers family-friendly paddling opportunities and the chance to enjoy the Sequatchie Valley's breathtaking landscape by water. (Photo: Sequatchie County Chamber of Commerce)

NASA satellite image showing Tennessee's Sequatchie Valley and the Cumberland Plateau. (Image: Aqua satellite, MODIS

The Sequatchie River begins and ends in the valley. Its headwaters originate in the valley of Grassy Cove just east of Crossville and drain through a series of mysterious underground passages for 8-10 miles. The river emerges from the head of the Sequatchie Spring in Cumberland County, part of the Cumberland Trail State Park, winds through the scenic valley, then empties into the Guntersville Lake impoundment of the Tennessee River. Each month, Friends of the Cumberland Trail sponsors an open day at the head of the Sequatchie site in order to introduce visitors to this unique site.

John Currahee on his blog, Chenocetah's Weblog, which delves into the origins and meanings of Cherokee-derived place names in the southeastern United States, references the thinking of American ethnographer James Mooney about the origin of the name "Sequatchie." Mooney though that the river, and therefore the valley, was named after the Cherokee community of Sigwetsi, a former settlement located on the south bank of the French Broad River near Knoxville, where, reportedly, stone for whitpeace pipes was quarried.

A trail developed to the west of Sigwetsi, through what is now Kingston, Tenn., that led to the Sequatchie Valley. The route became informally known as "the Sequatchie Road." Mooney's best approximation of the meaning of the name is "Opossum Place."

Remnants from early Archaic, Woodland and Mississippian communities remain within the landscape, including burial mounds, relics and recent cave art discoveries. Lands in the Sequatchie Valley belonged to the Cherokee Nation for generations; Cherokee fish traps (called fish weirs) are reportedly visible during times of low water.
In the 18th century, settlers began moving into the valley. A critical battle was fought between Native Americans and settlers near the base of the Sequatchie River in the late 1700s, which destroyed Cherokee leader Dragging Canoe's villages of Nickajack and Running Water near Chattanooga. Land cessations began in the late 1700s and early 1800s until the Cherokee Removal of 1838.

The Civil War also played out along the riverbanks of the Sequatchie River. In October 1863, Confederate Maj. Gen. Joseph Wheeler led a cavalry raid against a Union supply train that was attempting to relieve besieged Federal troops at Chattanooga. Wheeler burned an estimated 1,000 wagons and captured livestock in the battle known today as Wheeler's Raid.

The Sequatchie River flows through 70 miles of the Sequatchie Valley, the long and narrow divide between the Cumberland Plateau and Walden's Ridge. (Photo: Jenni Frankenberg Veal)

Early industries consisted of gristmills on the Sequatchie River. One of the earliest mills was built by Norman Mansfield in the 1850s near present-day Highway 127. Residents brought their wheat and corn by horse or wagon to be ground into flour or meal.

The Sequatchie River has been, and continues to be, the water source used for the Dunlap Water System. Water is drawn from the river east of Dunlap off Old York Highway.

Paddling through history

Scott Pilkington is the former owner of Canoe the Sequatchie, which operated along the Sequatchie River for 34 years until closing in 2011 after Pilkington suffered a back injury. His launch site is located at the intersection of U.S. 127 and John Burch Road in Dunlap.

"The Sequatchie River is a beautiful river with gentle thrills," Pilkington said. "There are two Class II areas, and the rest of it is Class I or slower with flat currents."

According to Pilkington, a small number of access points throughout the Sequatchie Valley allow for family-friendly paddling trips on the Sequatchie River:

—A 3-mile paddle trip begins at an access point near the Sequatchie County Courthouse in Dunlap and ends at the Old York Highway Bridge on Highway 127.

—A 4-mile paddle trip begins at the Old York Highway Bridge on Highway 127 and ends at the Stove Cave Road Bridge.

—A 6-mile paddle trip begins at the Old York Highway Bridge on Highway 127 and ends at the Frank Tate Road Bridge.

"Except in one or two places, major roads do not touch the river," Pilkington said. "Our launch site at the Old York Highway Bridge on Highway 127 is in the middle of the most canoe-able section of the river through midsummer."

Pilkington said his grandson, a college student, will likely reopen the Canoe the Sequatchie business this summer; however, that is not set in stone. However, if so, in addition to canoe rentals, he expects that fees will be charged to park at the Old York Highway Bridge on Highway 127.

Jenni Frankenberg Veal is a Chattanooga-based writer and naturalist who enjoys promoting the region's historical, cultural and natural assets through her work with the Southeast Tennessee Tourism Association. Visit her blog at www.YourOutdoorFamily.com.

Geologic wonder dedicated as Virgin Falls State Natural Area

By Jenni Frankenberg Veal

Published Sunday, December 15th 2013 on www.nooga.com

Supporters endured December's chilly temperatures to celebrate the protection of 1,157 acres through the Virgin Falls State Natural Area. (Photo: Whites Creek Journal)

Water spills out of Virgin Falls Cave, dropping 110 feet into the mouth of another cave, with no aboveground water source in sight. This spectacular water feature, located within Scott's Gulf near Sparta, Tenn., was officially dedicated as part of Virgin Falls State Natural Area Wednesday.

Virgin Falls, one of the region's most unique geologic features, is located within Scott's Gulf, an 18-mile canyon situated along the Caney Fork River. The waterfall emerges from an underground stream on the south slope of Little Chestnut Mountain, drops 110 feet and then vanishes underground again.

Virgin Falls, one of the region's most unique geologic features, is located within Scott's Gulf, an 18-mile canyon situated along the Caney Fork River. (Photo: Ted LaRoche)

For 40 years, the Virgin Falls area was managed as a natural area by the state through a lease with a private landowner. The land would have been open for possible development when the lease expired, so the Tennessee Parks and Greenways Foundation reached out to local government officials and individuals to help raise money to purchase the land from owners.

In November 2012, the state acquired the 1,157-acre site for $1.8 million with the help of a $1.5 million grant from the U.S. Fish and Wildlife Service, funds from the Tennessee Wildlife Resources Agency and private donations.

Virgin Falls is one of a handful of preservation projects to take place in recent years in East Tennessee. Cummins Falls State Park in Cookeville was dedicated in 2012 as the 54th state park. Rocky Fork State Park outside of Johnson City was dedicated in July 2013 as the 55th state park; and in September 2013, more than 1,000 acres in Rhea and Bledsoe counties were added to the Justin P. Wilson Cumberland State Park and the State Scenic Trail. Coming up in 2014, Seven Islands State Birding Park outside of Knoxville will be dedicated as the 56th state park—and the state's first birding park.

Gov. Bill Haslam, Tennessee Department of Environment and Conservation Commissioner Bob Martineau, Deputy Commissioner for Parks and Conservation Brock Hill and representatives from the community endured chilly temperatures Wednesday to celebrate the protection of 1,157 acres through the Virgin Falls State Natural Area, which is adjacent to the Bridgestone/Firestone Centennial Wilderness.

(From left to right) TDEC Commissioner Bob Martineau, Gov. Bill Haslam and TDEC Deputy Commissioner Brock Hill at the Virgin Falls State Natural Area dedication. (Photo: Tennessee State Parks)

At Wednesday's dedication, Mary Lynn Dobson of Roane County spoke on behalf of the Tennessee Parks and Greenways Foundation: "So why add more land here? Harvard's Pulitzer Prize-winning entomologist E.O. Wilson said that to save life on the planet, we must conserve large corridors so that ecosystems thrive. To do this, people must be inspired. Tennessee Parks and Greenways Foundation seeks to conserve the national treasures and destinations that link large corridors."

Virgin Falls State Natural Area—one of 82 sites protected by the Natural Areas Program—is noted for its unique geological and ecological features, including a number of waterfalls.

"Virgin Falls has been known for its natural features and also as an ecologically diverse site that is important to the protection and conservation of species here in Tennessee," said David Lincicome, manager of the state's Natural Heritage Program.

The area is home to four protected plant and wildlife species: Virginia spiraea, a native wildflower classified as federally threatened and state endangered; Cumberland rosemary, a native plant classified as federally and state threatened; the bluemask darter, a freshwater fish classified as federally and state endangered; and the Indiana bat, a medium-sized bat native to North America that is classified as federally and state endangered.

The 4-mile hike in to Virgin Falls is strenuous and passes by small rock houses, boulder fields, sinks, caves and waterfalls. From the parking area, the 8-mile round-trip hike can take five to eight hours, depending on pace. Leashed dogs are allowed on the trail, and backcountry camping is permitted at designated campsites.

Visit the Virgin Falls State Natural Area website for more information.

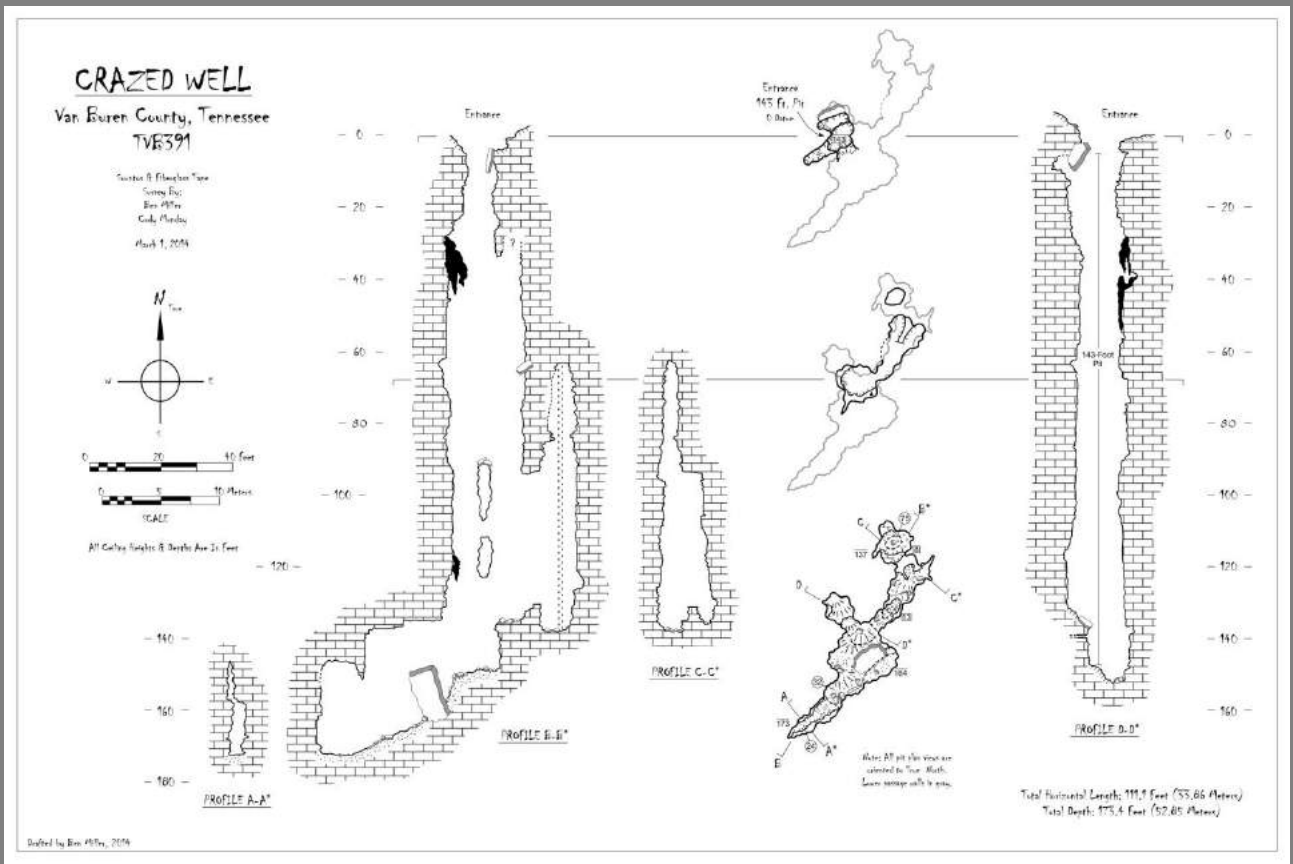
Directions to Virgin Falls State Natural Area: Virgin Falls is located southeast of Sparta, Tenn., and is accessible via Highway 70. Go to the community of DeRossett, 11 miles east of Sparta, turn onto Eastland Road and proceed 6 miles to Scott's Gulf Road. There, you will see a sign for the Bridgestone/Firestone Centennial Wilderness. Turn right onto Scott's Gulf Road and proceed 2 miles to the parking area and trailhead on the right side of the road.

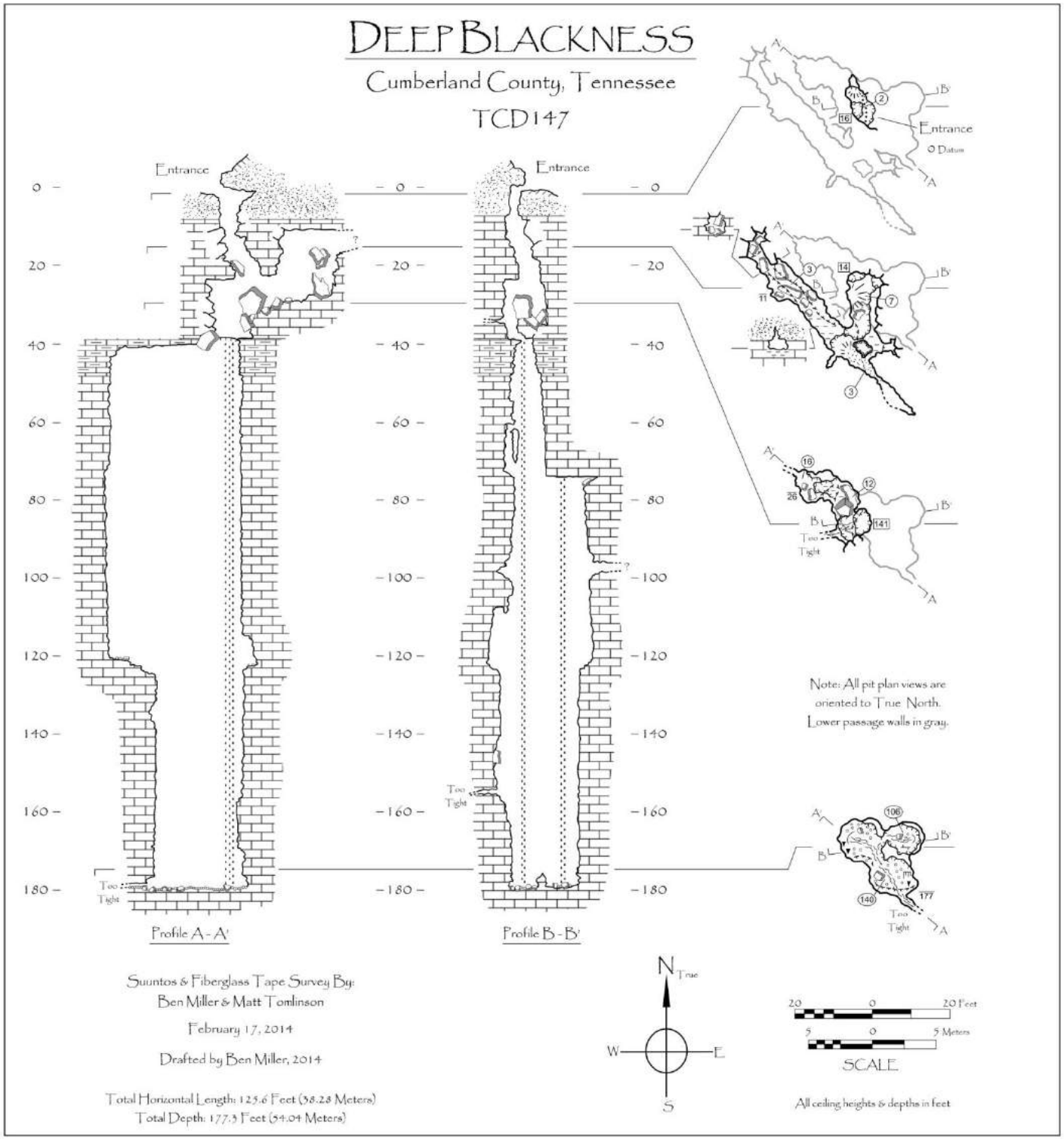
Jenni Frankenberg Veal enjoys writing about the natural world and exploration opportunities found within the southeastern United States, one of the most biologically and recreationally rich regions on earth. Visit her blog at www.YourOutdoorFamily.com.

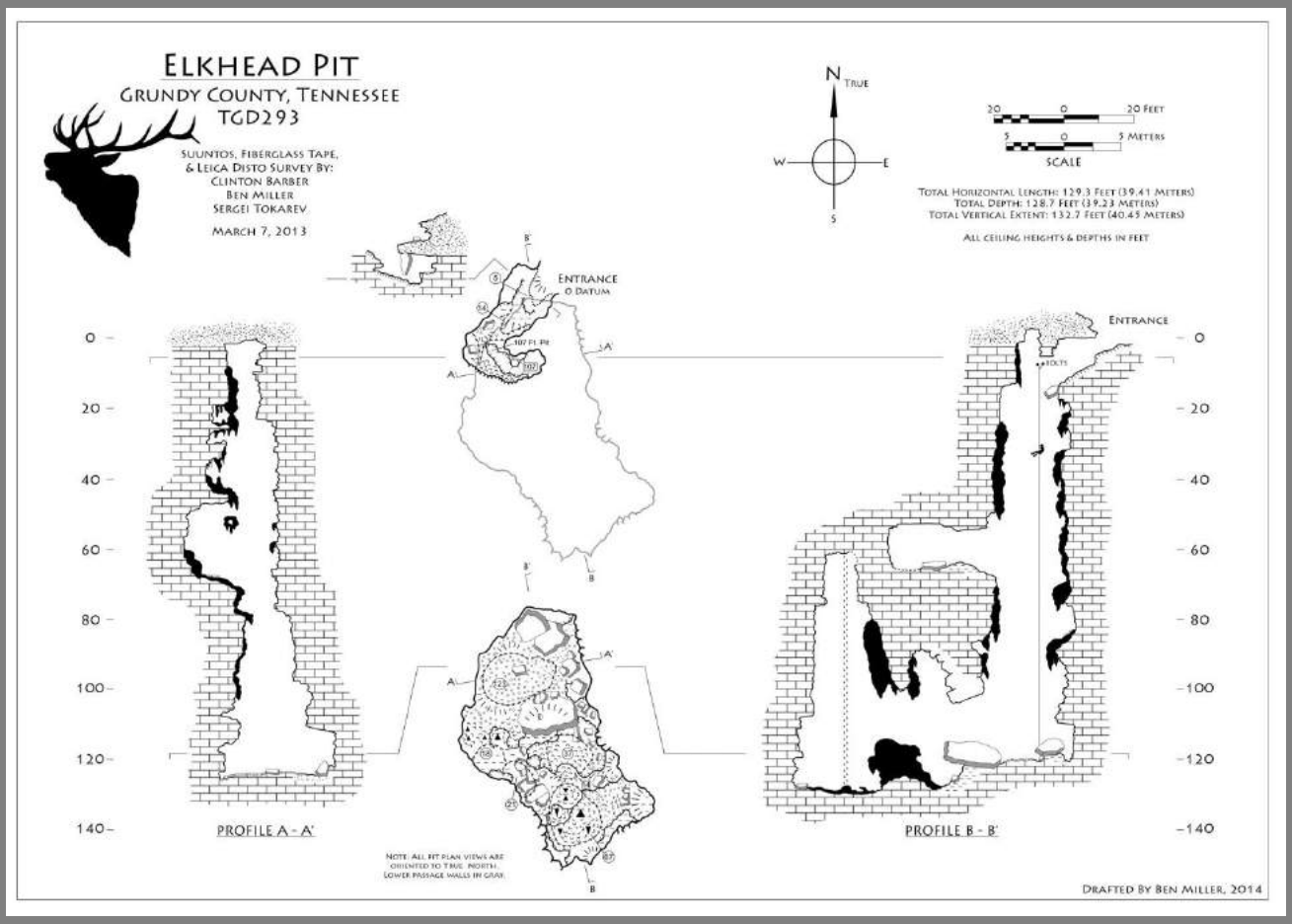
On Station and On Rope, Mapping the Deepest Unmapped Pits in TAG

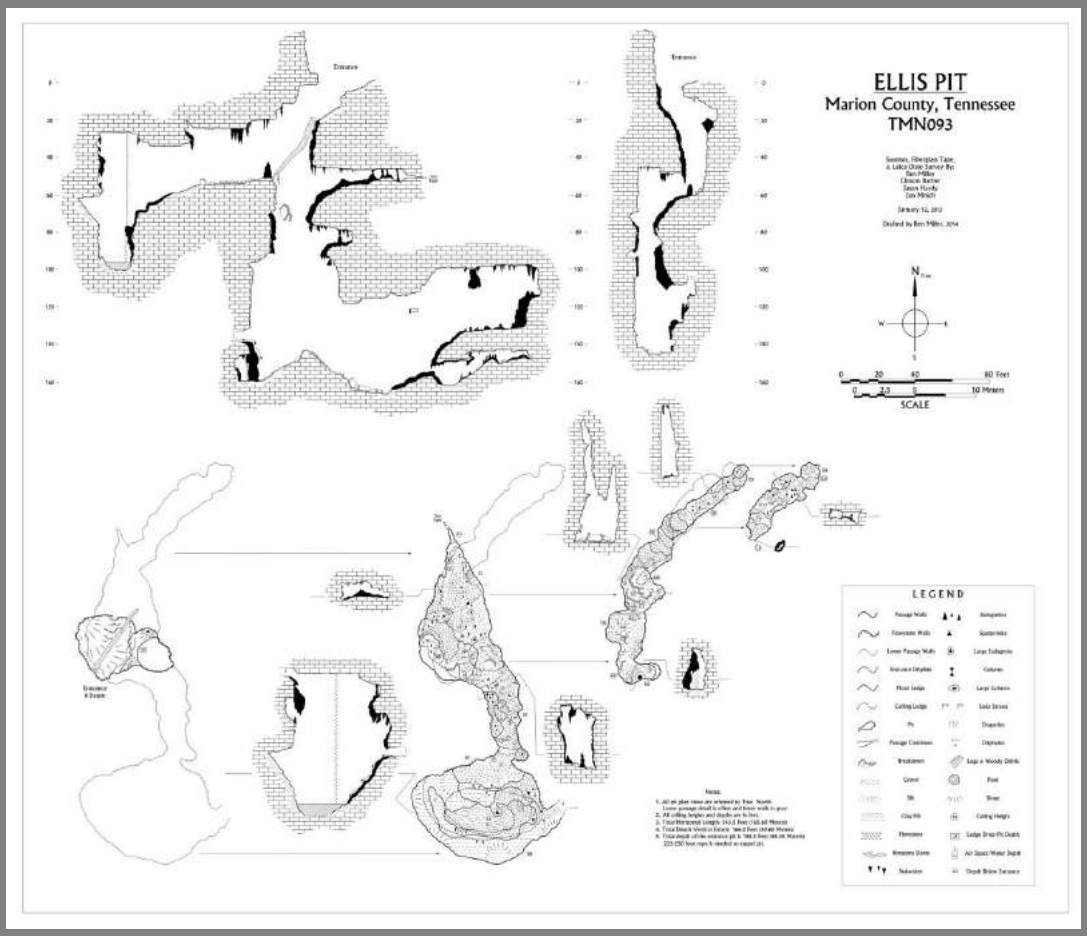
By Ben Miller, DPAS and Tennessee Cave Survey

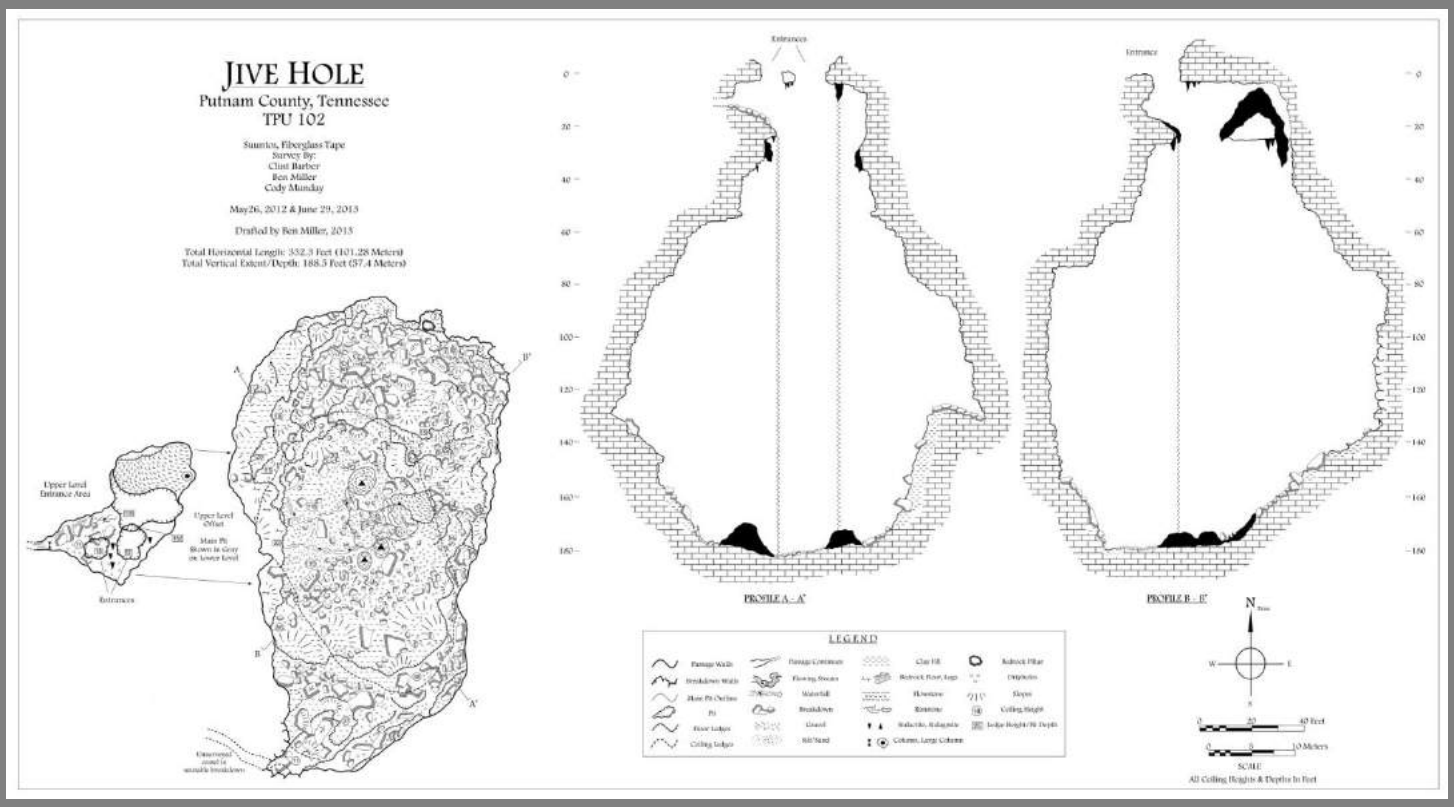
Deep caves, big rooms, and huge vertical shafts are trademark features of caves in TAG. In Tennessee alone nearly 10,000 caves are documented in the Tennessee Cave Survey database, with over 1,400 of these caves having been surveyed, leaving a large number of unmapped caves for the surveyor to choose from. In December 2011 a project was initiated by members of the Green River Grotto to begin mapping some of the deeper unmapped "classic" pits in Tennessee. The first of these pits, Ferris Pit, was the third deepest in the state and challenged the team with surveying the 252 foot-waterfall-drop in December. Since that time the group has grown to include surveyors from over six states, two countries and a variety of grottos. After surveying Ferris Pit work focused on Putnam County, Tennessee and the many pits of the Calfkiller Valley, including Jive Hole, Slime Nasty Pit, Mill Creek Pit and Massive Well. Eventually, after mapping the majority of the unmapped deep pits in Putnam County, the group began work in Marion County, Tennessee working with the Sewanne Mountain Grotto. The Battle Creek valley yielded many surveying opportunities with over 11 pits over 100 feet deep being mapped by the group, notably Jackpot, Ellis Pit, Deer Bone Pit, and Rock Buster Well. The group is now surveying in caves all along the Cumberland Plateau Escarpment and has also surveyed a number of deep pits in Alabama. As of March 2014 the group has netted over 1.6 miles of vertical survey in 45 different pits, mapping the vast majority of the deepest unmapped pits in Tennessee and Alabama. Unique survey techniques developed throughout the project have helped the group find ways to map the complex vertical environments found in TAG caves. Work continues today with new pits being mapped each month, as well as new deep pits being discovered by other cavers each year which provide ample opportunities for survey projects in the future.

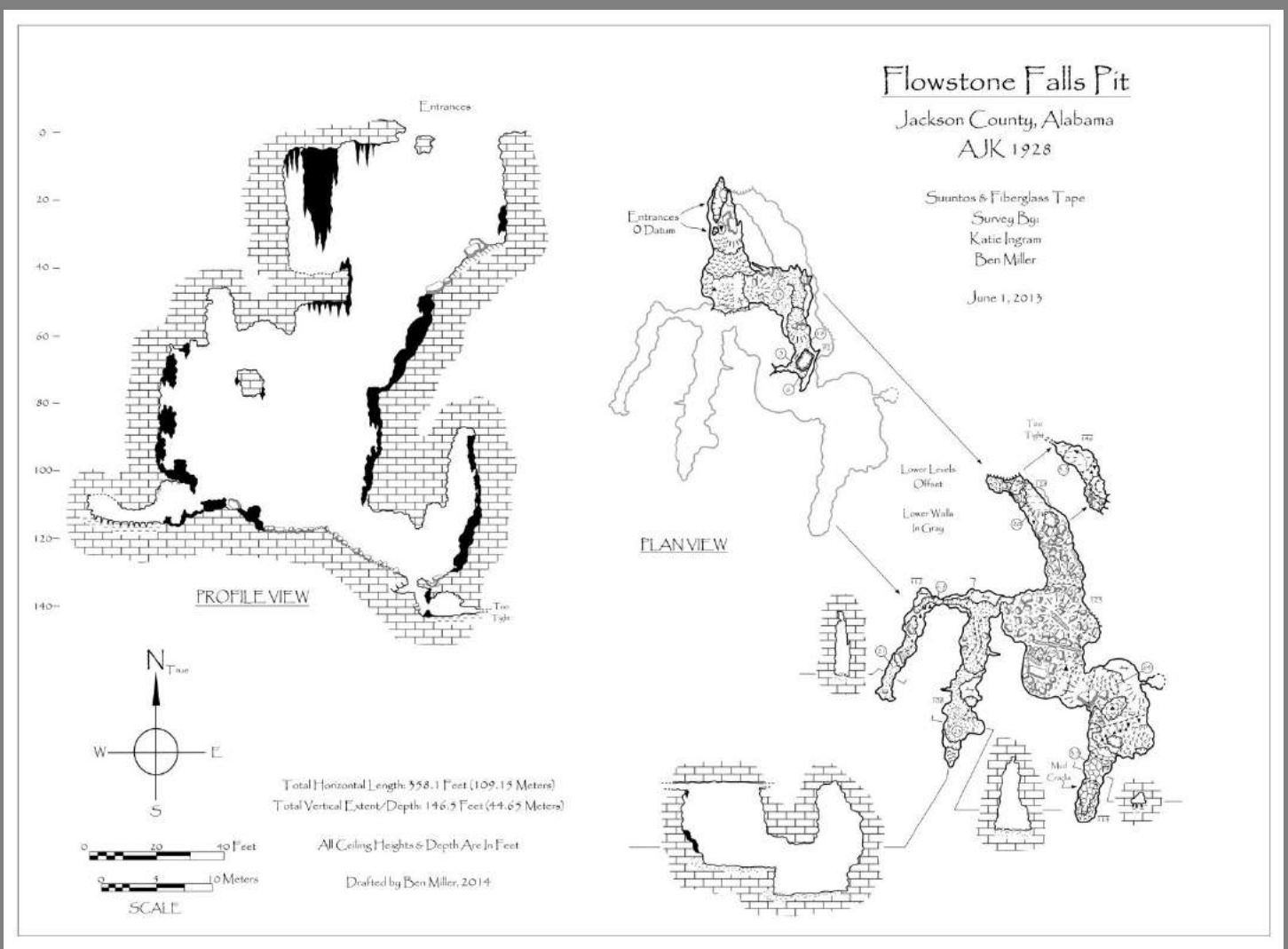


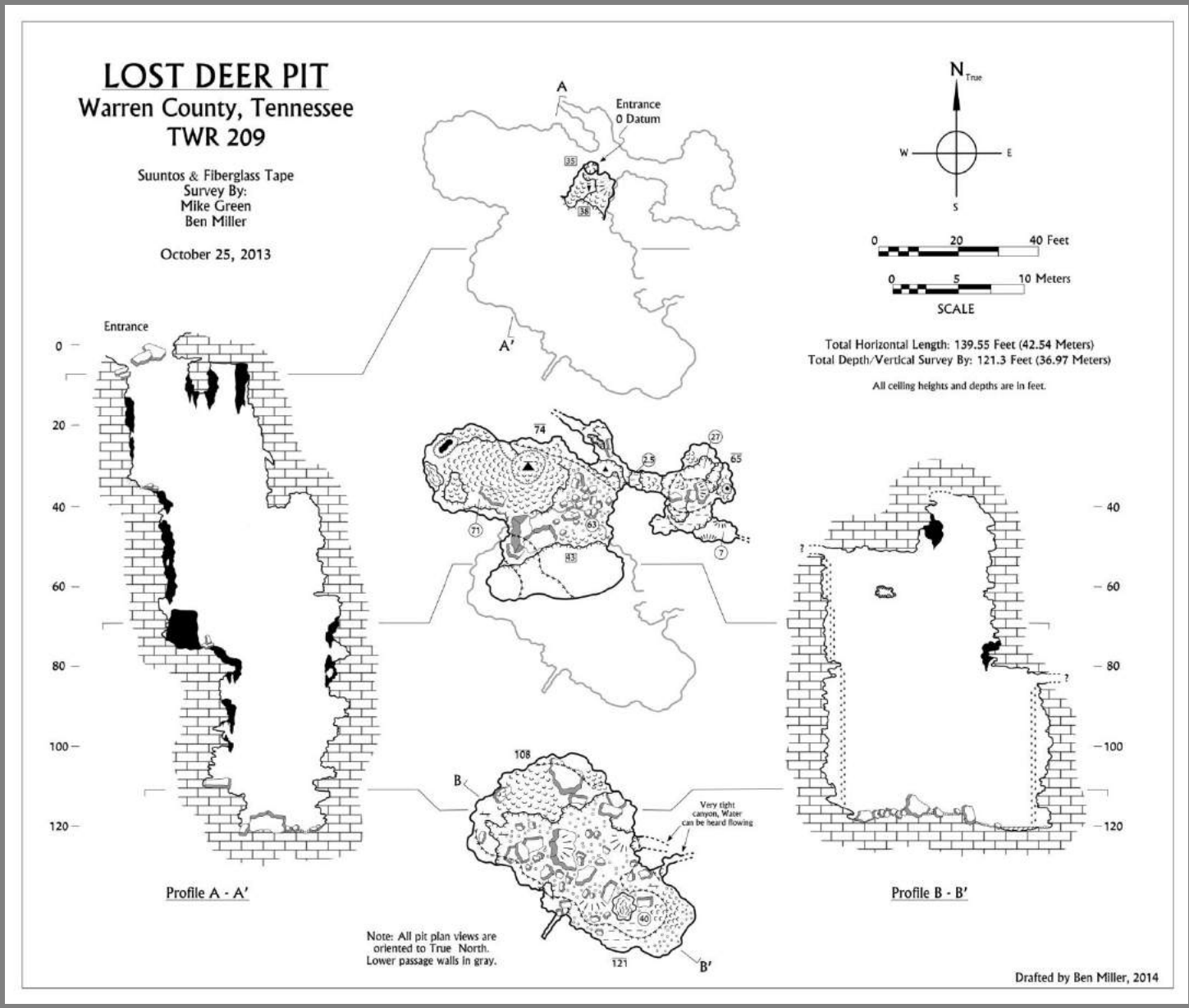

DEEP BLACKNESS
Cumberland County, Tennessee
TCD147
Entrance
Entrance
0
20
40
60
80
100
120
140
160
180
Too Tight
Too Tight
Too Tight
Profile A - A'
Profile B - B'
Entrance
0 Datum
Note: All pit plan views are oriented to True North.
Lower passage walls in gray.
Suuntos & Fiberglass Tape Survey By:
Ben Miller & Matt Tomlinson
February 17, 2014
Drafted by Ben Miller, 2014
Total Horizontal Length: 125.6 Feet (38.28 Meters)
Total Depth: 177.3 Feet (54.04 Meters)
N True
W
E
S
20 0 20 Feet
5 0 5 Meters
SCALE
All ceiling heights & depths in feet


ELKHEAD PIT
GRUNDY COUNTY, TENNESSEE
TGD293
SUUNTOS, FIBERGLASS TAPE,
& LEICA DISTO SURVEY BY:
CLINTON BARBER
BEN MILLER
SERGEI TOKAREV
MARCH 7, 2013
N TRUE
W
E
S
20 0 20 FEET
5 0 5 METERS
SCALE
TOTAL HORIZONTAL LENGTH: 129.3 FEET (39.41 METERS)
TOTAL DEPTH: 128.7 FEET (39.23 METERS)
TOTAL VERTICAL EXTENT: 132.7 FEET (40.45 METERS)
ALL CEILING HEIGHTS & DEPTHS IN FEET
ENTRANCE
0 DATUM
107 Ft. Pit
ENTRANCE
BOLTS
PROFILE A - A'
PROFILE B - B'
NOTE: ALL PIT PLAN VIEWS ARE
ORIENTED TO TRUE NORTH.
LOWER PASSAGE WALLS IN GRAY.
DRAFTED BY BEN MILLER, 2014


ELLIS PIT
Marion County, Tennessee
TMN093
SCALE
LEGEND

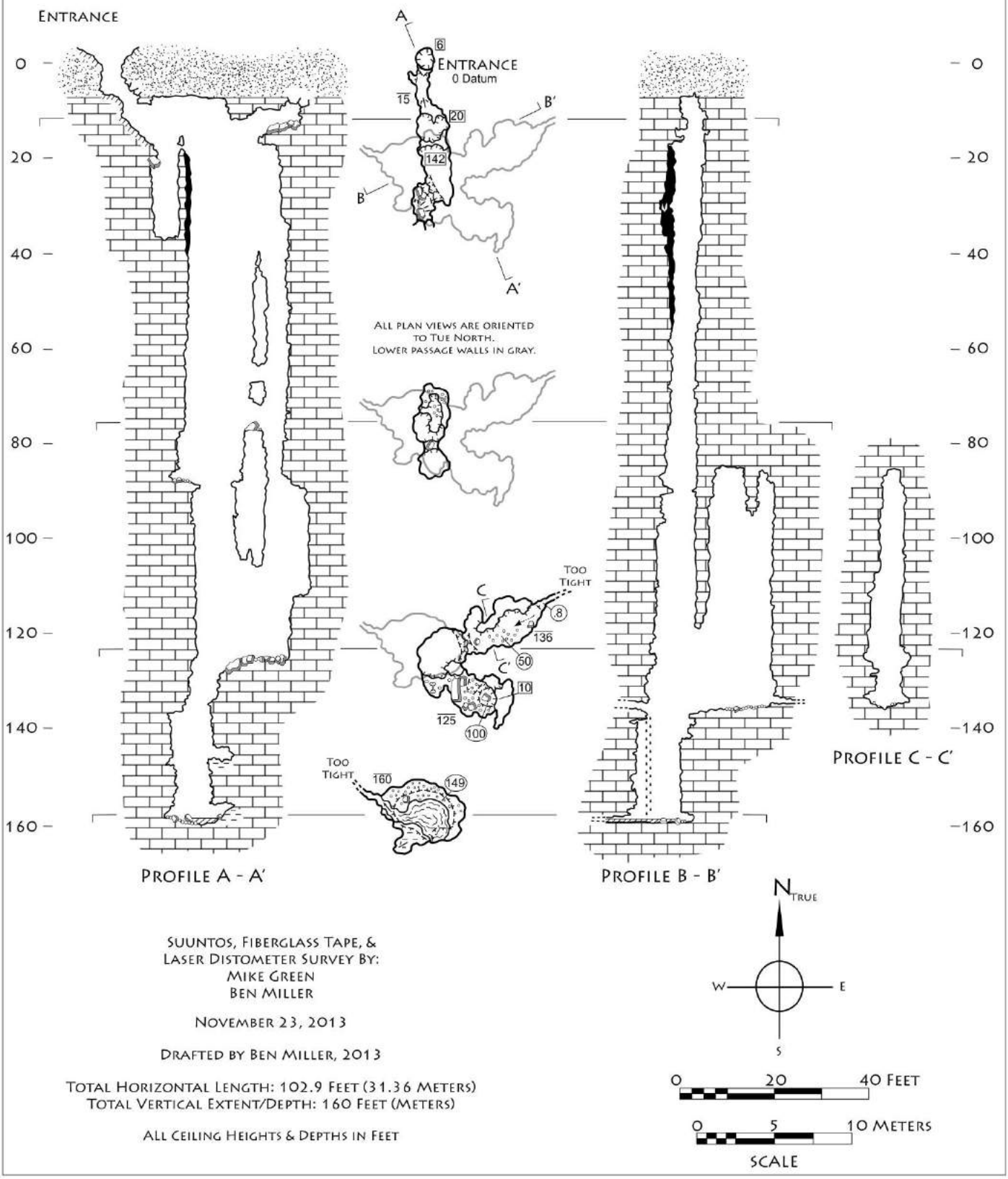

JIVE HOLE
Putnam County, Tennessee
TPU 102
Suuntos, Fiberglass Tape
Survey By:
Clint Barber
Ben Miller
Cody Munday
May26, 2012 & June 29, 2013
Drafted by Ben Miller, 2013
Total Horizontal Length: 332.3 Feet (101.28 Meters)
Total Vertical Extent/Depth: 188.5 Feet (57.4 Meters)
Upper Level Entrance Area
Upper Level Offset
Main Pit Shown in Grey on lower level
Entrances
Entrance
PROFILE A - A'
PROFILE B - B'
LEGEND
SCALE
All Ceiling Heights & Depths In Feet


Flowstone Falls Pit
Jackson County, Alabama
AJK 1928
Suuntos & Fiberglass Tape
Survey By:
Katie Ingram
Ben Miller
June 1, 2013
Entrances
0 Datum
Lower Levels Offset
Lower Walls In Gray
PLAN VIEW
Too Tight
Mud Crawl
Entrances
PROFILE VIEW
Too Tight
Total Horizontal Length: 358.1 Feet (109.15 Meters)
Total Vertical Extent/Depth: 146.5 Feet (44.65 Meters)
All Ceiling Heights & Depth Are In Feet
Drafted by Ben Miller, 2014
SCALE


LOST DEER PIT
Warren County, Tennessee
TWR 209
Suuntos & Fiberglass Tape
Survey By:
Mike Green
Ben Miller
October 25, 2013
A
Entrance
0 Datum
A'
N True
W
E
S
0 20 40 Feet
0 5 10 Meters
SCALE
Total Horizontal Length: 139.55 Feet (42.54 Meters)
Total Depth/Vertical Survey By: 121.3 Feet (36.97 Meters)
All ceiling heights and depths are in feet.
Entrance
0
20
40
60
80
100
120
Profile A - A'
B
B'
Very tight canyon, Water can be heard flowing
Profile B - B'
Note: All pit plan views are oriented to True North.
Lower passage walls in gray.
Drafted by Ben Miller, 2014

Rock Buster Well

Marion County, Tennessee
TMN 556



Suuntos, Fiberglass Tape, &
Laser Distometer Survey By:
Mike Green
Ben Miller

November 23, 2013

Drafted by Ben Miller, 2013

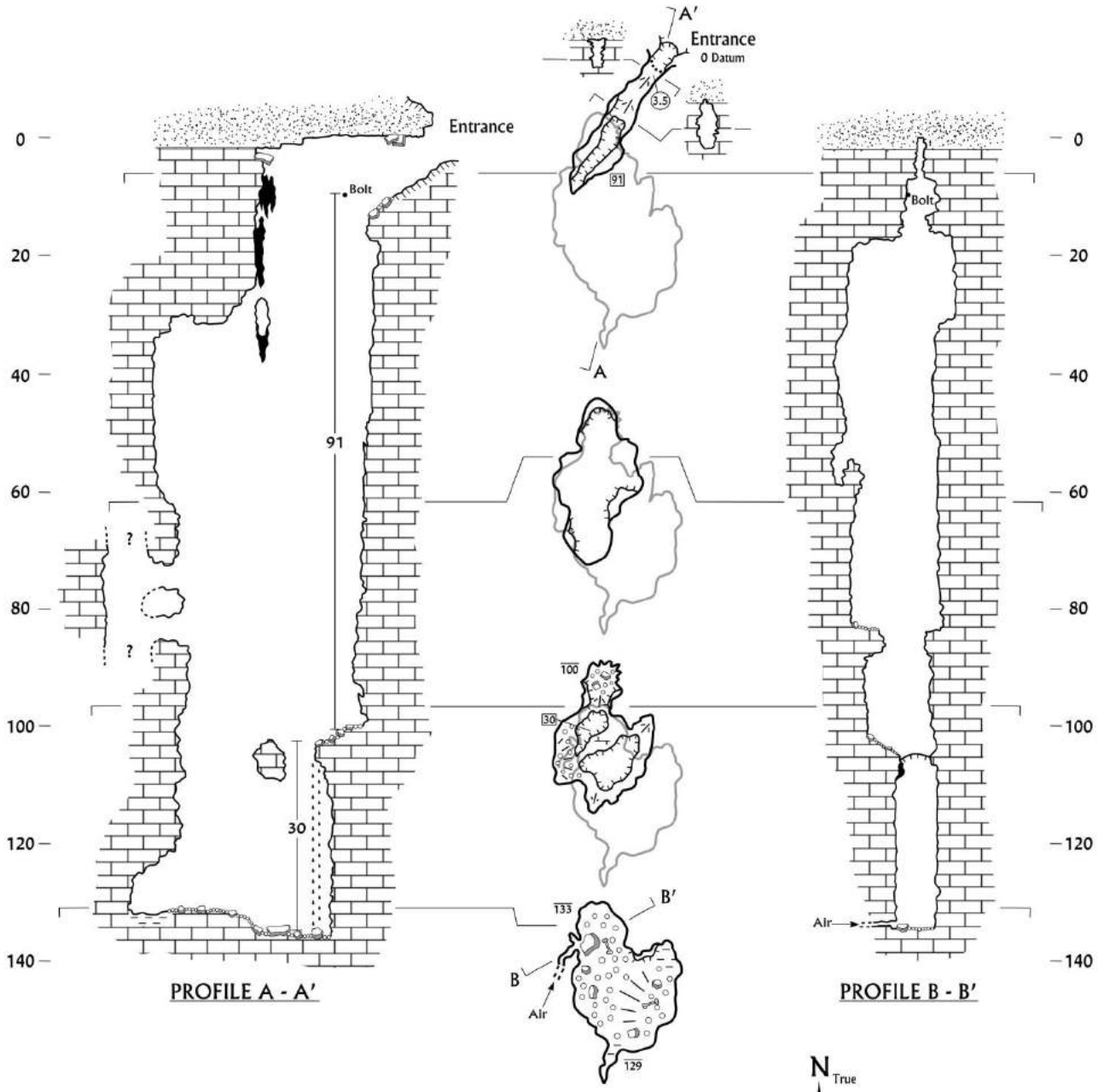
Total Horizontal Length: 102.9 Feet (31.36 Meters)
Total Vertical Extent/Depth: 160 Feet (Meters)

All Ceiling Heights & Depths in Feet

SUGARCAMP HOLLOW Cave

Marion County, Tennessee

TMN 561



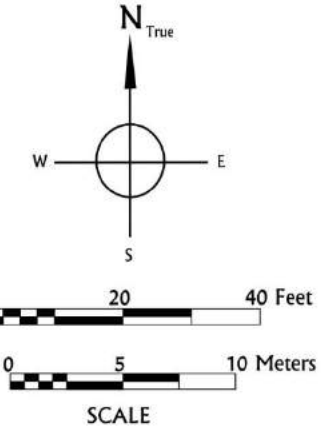
Suuntos & Fiberglass Tape
Survey By:
Jason Hardy
Ben Miller
Kelly Smallwood

January 25, 2014

Total Horizontal Length: 53.8 Feet (16.40 Meters)
Total Depth/Vertical Extent: 133.6 Feet (40.72 Meters)

Drafted by Ben Miller, 2014

All Ceiling Heights & Depths Are In Feet



Fenix TK76 Review
By Clinton Barber

After two months using this light in every application I could think of, I could only come to one conclusion. The team at **Fenix Worldwide** has outdone themselves, and my expectations for a good light will never be the same. Whether it was used for hiking in the mountains of Tennessee, lighting the house during a power outage, shed hunting in the open sagebrush flats in Oregon, navigating rivers and fields on search and rescue operations in Kentucky, or lighting the deep pits in T.A.G. for epic photo shots, it performed flawlessly. Not once did I have to worry about the ruggedness or reliability of this flashlight. I was able to use this light without inhibitions due to its impact resistance of a meter and it being waterproof up to two meters. With more lighting configurations than one could dream of, I was always finding myself with the absolute perfect amount of light for the task at hand. Convenient lanyard holes meant that my hands were free when needed, and that the light was always readily accessible.

Bezel/Head

This is the source of beauty for this bad boy. With two Cree XM-L2 (U2) LEDs and one Cree XM-L2 (T6) neutral white LED (the highest-performing, commercially available, single-die LED[1]) arranged in a triangular configuration, the **TK 76** will remind you of something straight out of a sci-fi movie. Darth Vader himself would have been proud to have wielded this beast. Not only does the triangular configuration help set this light apart from any other light out there, but it also serves an important anti-roll function. When you set this light down (on any surface) it stays where you put it! This is something all those round designs cannot attest to. Toughened ultra-clear glass lenses with anti-reflective coating and quality PC lens ensures that you get maximum output from each LED and you don't have to worry about scratching or pitting them. Each LED also has its own power level indicator which allows you to instantly know what setting you're in without having to cycle through settings to figure it out or wasting battery life because you thought you had it on low.

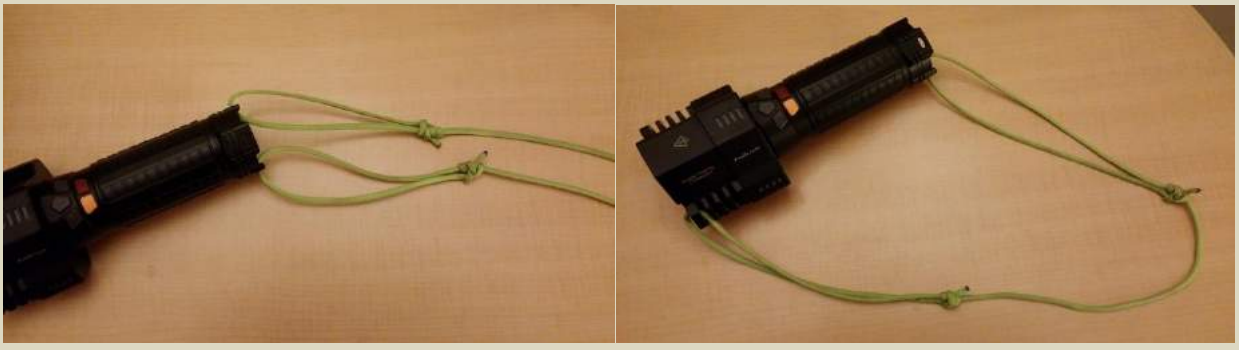
[1] http://www.cree.com/LED-Components-and-Modules/Products/XLamp/Discrete-Directional/XLamp-XML2


Switches

With so many lights and options, the five switches resemble something like a control console on a futuristic space craft, but once you learn their functions, you'll be glad to have them all. There is a red master on/off switch. A single quick press of this switch will turn on all of the lighting heads and the light remembers the last mode each light was set at; another quick press will turn all of them off. Each lighting head has its own independent mode switch that cycles the light through its different power settings with a quick press and can be used to activate or turn off individual heads by holding them down. There is a yellow switch that activates the instant turbo mode. This means that it instantly activates all three heads to run at the highest levels with the remaining power. Releasing the switch will return the light to its former brightness level. If the switch is held for more than five seconds the light will remain in turbo mode until any other button is pushed. The light is also equipped with a strobe mode (which works really well to disorient your foes) and an SOS mode. These are attained by pressing and holding the power button for one second for the strobe mode, and pressing and holding for three seconds for the SOS mode. I highly recommend looking away from the light before doing this. It can cause nausea. Another awesome feature, besides debilitating your enemies, is the power check feature. With two quick presses of the middle mode switch, the center mode LEDS will change from blue to purple, showing you just how much juice you have left in your batteries, and returning to normal after three seconds. I can't express how handy this is for monitoring just how much battery you've been using.


Body

The body (along with the bezel) is made of aircraft-grade aluminum and topped off with a premium Type III hard-anodized anti-abrasive finish. I can attest that it stands up to abuse. After several caving trips it has maintained its new appearance and there is no harsher environment for gear than a cave. The handle has a textured design that feels good in the hand and doesn't lend itself to slipping when your hands are wet. The **TK 76** is well balanced and fits nicely in your hand, weighing in at 800 grams or 1 ½ lbs. without batteries, and right around 980 grams or just over 2 lbs. 2oz. with batteries. It may seem a bit heavy at first, but then again, how often have you held an artificial sun in the palm of your hand? The end cap has a really neat feature in that it has holes for a lanyard. It can easily be hung around the neck or stored on a coat rack by the door for easy access. I made my own lanyard from 550 cord and used one of the heat sink slots in conjunction with the tail slot to make a sling that allows the light to shine in a forward direction hands free. The overall feel is just solid and aesthetically pleasing.



Specs/Technical

(Table 1. Technical specifications courtesy of Fenix Worldwide)

ANSI/NEMA FL1	GENERAL MODE								STROBE	SOS
	SINGLE HEAD				THREE HEADS					
	Turbo	High	Mid	Low	Turbo	High	Mid	Low		
OUTPUT	933 Lumens	350 Lumens	135 Lumens	7 Lumens	2800 Lumens	1100 Lumens	420 Lumens	20 Lumens	2800 Lumens	420 Lumens
RUNTIME	3h 30min	11h 30min	33h	200h	1h 10min	4h	11h	66h		
DISTANCE	450m (Max)									
INTENSITY	50800 cd (Max)									
IMPACT RESISTANT	1m									
WATERPROOF	IPX-8, Underwater 2m									

Batteries

The **TK 76** can operate on a range of batteries. It takes four 18650s or eight CR123As. This is great news for folks that already own one or the other and don't want to invest in another set of batteries. Another great feature that amazed me about this light is that it will operate on just two of the 18650s or four of the CR123s should something happen to the other batteries and you need to discard them while out in the field. This means even more built in redundancy and reliability for those involved in serious situations that won't wait for you to come up with replacements on the fly. Run time is affected, but it will allow you to at least get back to base without leaving you stranded. It is also equipped with intelligent over-heat protection. In the event of temperatures getting too high, the light will automatically downshift to avoid overheating and ruining any critical components. When the temperature lowers, it automatically resets to the original brightness level. Intelligent low-power warning is also a built-in feature, which means if low-voltage is detected, the mode indicators will turn red and the foremost indicator will blink to show that the power will not support the light running at the current brightness level. If the voltage is too low, the light will automatically downshift to a lower brightness level and turn blue again. The light will work until the batteries run out completely.

Likes

I really cannot say enough about the **TK 76.** Nothing I've used comes close to the output of this **Fenix** light. Hitting the market right at $300/US, you definitely get bang for your buck. The look, feel, and performance are just unmatched in my opinion. This light will definitely make you the envy of your Mag-lite loyalist friends. I was lucky to make it out of the battery store with this torch. The workers actually shut down the store to come outside to see just what the **TK 76** could do and had offers for purchase on the spot.

Dislikes

The only thing I'd like to see changed is to have a lock-out feature to keep the light from accidentally being activated while in a pack. There are ways to solve this however, by simply unscrewing the tail cap a half turn. In a cave environment this is not always conducive to preventing damage from water, but it works. It is bulky, but that's not a complaint. It couldn't be any smaller and still perform the way it does.

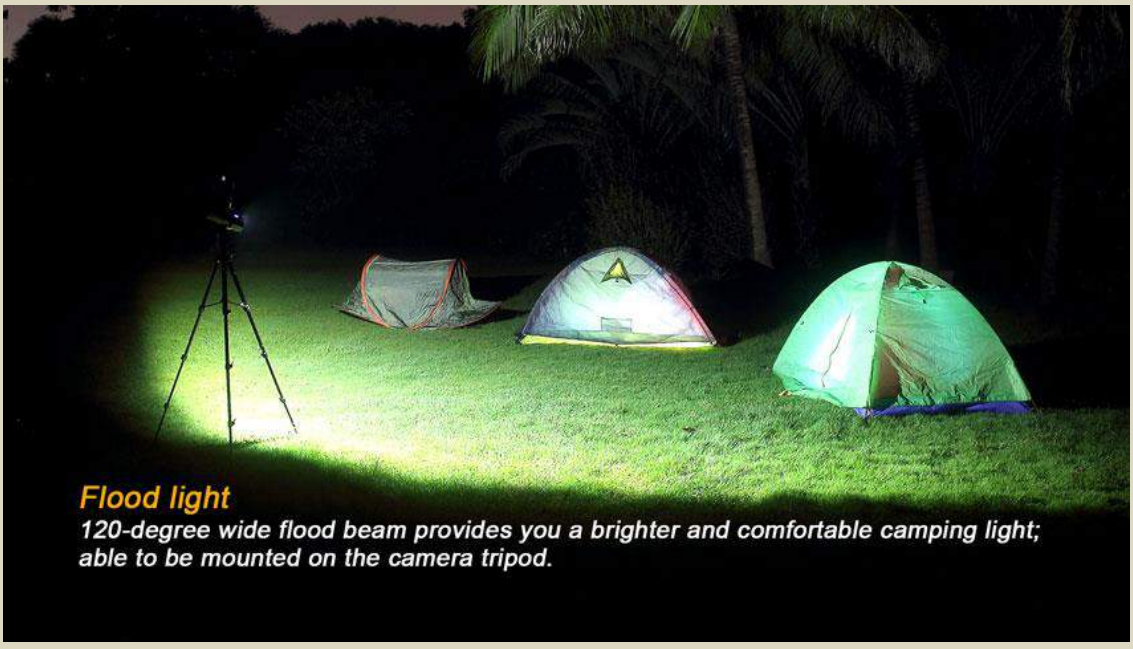
Conclusion

There are times when lights can mean the difference between life and death. For me there is no substitute for a good light when performing search and rescue operations or going caving for days at a time. The **TK 76** is an absolute staple in my search and rescue pack now, and illuminates caves for photography without the need for delicate and bulky flashes. This saves space in a pack and illuminates better than multiple flash bulbs. It has a 130 degree angle of flood which illuminates nearly your entire field of view and throws light 450 m, which is about as far as one could ever wish to see in the dark. At that distance it's hard to even make out objects in the daytime. It's also always fun to simply blow people's minds with its power.

Photos by: Kelly Smallwood


FENIX
Illuminate Your Adventure
TK76
MAX 2800 Lumens
Waterproof to IPX-8 standard
underwater 2m for 30 minutes


FENIX
Illuminate Your Adventure
TK76
MAX 2800 Lumens
Three individually-controlled light sources
Instant turbo
Instant strobe
Intelligent circuit design


Flood light
120-degree wide flood beam provides you a brighter and comfortable camping light; able to be mounted on the camera tripod.

20th Annual SERA Map Salon Results
By: Brent Aulenbach

The 20th annual SERA Map Salon was held on Saturday, February 22nd, 2014 at the SERA Winter Business Meeting. The meeting was hosted by the Pigeon Mountain Grotto in LaFayette, Georgia. The goal of the map salon is to encourage mapping of SERA caves, to provide a venue for cartographers to display their maps, give an opportunity to view other cartographer's maps and techniques, and to provide an incentive for improving cartographic skills and techniques through critique and competition. There were 5 maps entered for competition this year, representing the work of two different cartographers with caves from two different states (Tennessee & Georgia).

Maps were judged in a single category. Two of the five maps received awards.

A Merit award (for achieving a high level of quality) went to Marty Abercrombie for Crudlink Cave, Van Buren Co., TN (TVB 50).

And Best of Show went to Marty Abercrombie for Pryor Cave Spring, Marion Co., TN (TMN 129).

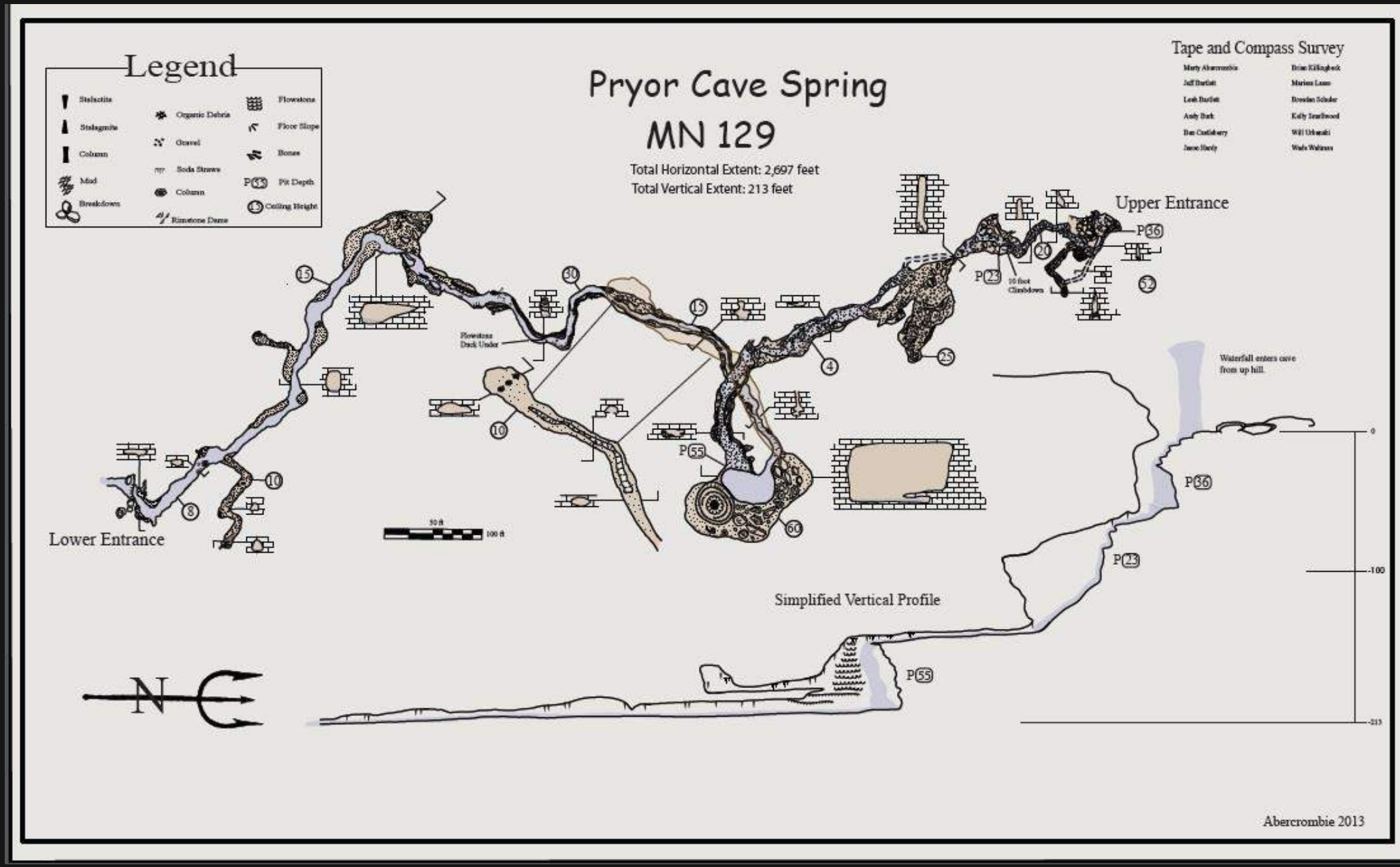
Congratulations to Marty!

Thanks goes to the judges: John Klayer, Allen Padgett, and Ken Pasternack.

Looking forward to everyone's great maps next year!

-Brent

http://www.caves.org/region/sera/MapSalon.htm


Legend
Stalactite
Stalagmite
Column
Mud
Breakdown
Organic Debris
Gravel
Soda Straws
Column
Rimstone Dams
Flowstone
Floor Slope
Bones
P33 Pit Depth
15 Ceiling Height
Pryor Cave Spring
MN 129
Total Horizontal Extent: 2,697 feet
Total Vertical Extent: 213 feet
Tape and Compass Survey
Marty Abercrombie
Jeff Bartlett
Leah Bartlett
Andy Burk
Ben Castleberry
Jason Hardy
Brian Killingbeck
Marissa Lane
Brendan Schuler
Kelly Smallwood
Will Urbanski
Wade Wahrmund
Upper Entrance
Lower Entrance
Flowstone Duck Under
Waterfall enters cave from up hill.
10 foot Climbdown
50 ft
100 ft
Simplified Vertical Profile
0
-100
-213
Abercrombie 2013

Fenix HP 15 Headlamp
By Jeff Cody

Fenix has introduced many new products recently and The HP 15 headlamp is one of their new offerings. The specs for this light are a turbo mode of 500 Lumens, high at 275 Lumens, Mid at 125 Lumens, Low at 45 Lumens and Echo at 4 Lumens. Like many sport lights it also has a strobe at 125 Lumens. Listed run times with 4 NI MH AA batteries are 2 hours for Turbo, over 4 hours for high, 10 hours for mid, over 25 hours for low. The spec sheet says it will run on turbo for 3 minutes then switch down to high as the 2 hour run time is accumulated time. Run times for alkaline are a bit less. Unlike the HP 25 this light has a single LED. This light comes with a snap on diffuser if more of a flood is desired. The battery case appears to be the same one as The HP 25 that opens with a thumb screw to remove the inner case from the outer case with the wire attached to the inner case. Maximum beam distance is listed at 172 meters .Impact resistance is listed at 1 meter. The water resistant rating is IPX 6 like many other Fenix headlamps. This rating is resistant to a certain amount of spray of water at various angles. I have other Fenix headlamps of the same rating and have dunked them several times and have had no issues so far. The light comes with a headband mount, extension cable that will allow for the light to be used with the battery box on the head or to have the box in a pack or a pocket if desired. The cord has a quick release connector to allow the use of the extension cable. It also comes with a cable clip, diffuser lens and a set of AA batteries. The light is controlled by a single switch that allows you to cycle through the five output settings. To use the SOS you press and hold the switch for 3 seconds then press again to turn SOS off. This light like other Fenix products have a memory to return the output setting to the last one used when turned back on. It also has overheat protection in turbo mode to drop down to the next lower setting when it gets too hot.

Fenix was kind enough to send me The HP 15 in exchange for me comparing this to my other lights and writing this review and posting it on the various forums I frequent. In full disclosure I would like to add that I do not possess any specific educational credentials on electronics or LEDs, I am just someone who is interested in lights and likes to compare lights and report what I see and give my opinion. I received this light about a week after Christmas. I got a Black Diamond Half Dome helmet and soon attached it via a hard mount using zip ties and industrial Velcro to mount both the head and the battery box. I loaded it up with Duracell (Duraloop) NI MH AA batteries and ran through the five output settings. The first thing I noticed was how wide the angle was compared to other spots on my other multi-purpose sport headlamps. I waited until it got dark outside and took it and other lights I have out in the back yard to compare beams. The first comparison I wanted to make was with my Fenix LD 41 520 Lumen hand held flashlight. This light is the only one I have of similar 500 Lumen output. The LD 41 had a much tighter narrow spot and did appear to be brighter than The HP 15. The HP 15 was a much wider angle. When I used the optional diffuser it did give a nice flood that lit up the entire area around me including my feet when looking forward. The diffuser may not last long in a cave environment. I would prefer a screw on diffuser that is made of aluminum around the edges, I feel this type would fare better in a cave. I feel hand held flashlights have an advantage as the reflector design is different being larger diameter and deeper than commonly found on headlamps. I also compared it to my Fenix HP 25 and Fenix HP 10 headlamps. These headlamps are rated at around 200 Lumens. Once again the HP 25 on its spot mode and The HP 10 appeared to have a brighter white pin point spot but was a narrow beam compared to The HP 15. It is easy for me to see how a wide angle spot will swallow up brightness when doing direct comparisons to lights with a narrow spot, even lights of lesser Lumen output. The flood on The HP 15 using the optional diffuser was a much wide angle flood than the flood on The HP 25. In fact the flood with the diffuser was a similar angle to the flood on my El Speleo but of course was not a bright as the flood on The El Speleo.

My final thoughts on this light is that it can be a lower cost option for cavers who are looking for a 4 AA headlamp as the optic seems to be more “cave specific” than other similar priced sport lights. I was a bit disappointed that the brightness did not really look like 500 Lumens to me but I do understand how the angle of the beam can make

a light not look as bright as what you might think it should be. I notice that with my 1000 Lumen El Speleo spot, my 500 lumen hand held appears to be a brighter white pin point spot than the wider angle on the more expensive and cave specific El Speleo. We as cavers do not have many low cost lights that are specifically designed for caving by cavers so unless you want to spend several hundred or more on a small batch high output cave specific lamp you likely will have to settle for a multi-purpose sport light like Fenix or Princeton Tec .The Fenix headlamps seem to fill that particular "niche" market especially if someone is not willing to spend 50 bucks or more to convert to Lith Ion and another 40 or so for a quality charger for Lith Ion. If the flood optic is important to you this may be a better option than The HP 25. My biggest concern is the diffuser. I feel a diffuser that screws on to the lens is possible for a light in this price range built by a volume manufacturer like Fenix.

Wild hog eradication efforts underway in Marion County

By Richard Simms
Published Monday, February 17th 2014 www.nooga.com

TWRA wildlife officers Marty Griffith (left) and Russell Vandergriff with three wild hogs recently taken from the northwest section of Marion County. Vandergriff said the population of wild hogs has grown there to the point of becoming a problem for landowners. (Photo: Contributed)

Wildlife officers in Marion County are conducting intensive eradication efforts on wild hogs that have invaded one section of the county.

Officer Russell Vandergriff said the hogs have been in the northwest portion of the county for several years, but the population has grown to the point of becoming a problem. He says wild hogs have been sighted in Hargis Cove and Fiery Gizzard Cove; however, the majority seem isolated to Cave Cove. That is the rugged terrain you see just east of Interstate 24 as you are traveling up Monteagle Mountain.

"They are pretty much confined to that one area." Vandergriff said. "They haven't spread out that much yet. We've just started trying to do some eradication."

Vandergriff said they're not sure how the hogs got there. They could have been illegally stocked, but many in the area think the hogs belonged to a farmer who passed away. When the farmer passed away and no one was left to feed and manage the hogs, they escaped and turned feral, meaning they basically went wild.

Such populations of hogs have started springing up across Tennessee, prompting wildlife officials to dramatically alter their management efforts. Following in the footsteps of many other states, TWRA declared no hunting seasons for wild hogs. They hoped that action would dissuade hunters who were illegally importing and releasing wild hogs. One veterinarian in Franklin County was fined $5,000 for illegal possession of hogs.

At the same time, TWRA began issuing hog exemption permits to landowners. Those permits allow landowners to take drastic action to try to eradicate damaging hog populations—including trapping, baiting and night hunting with spotlights.

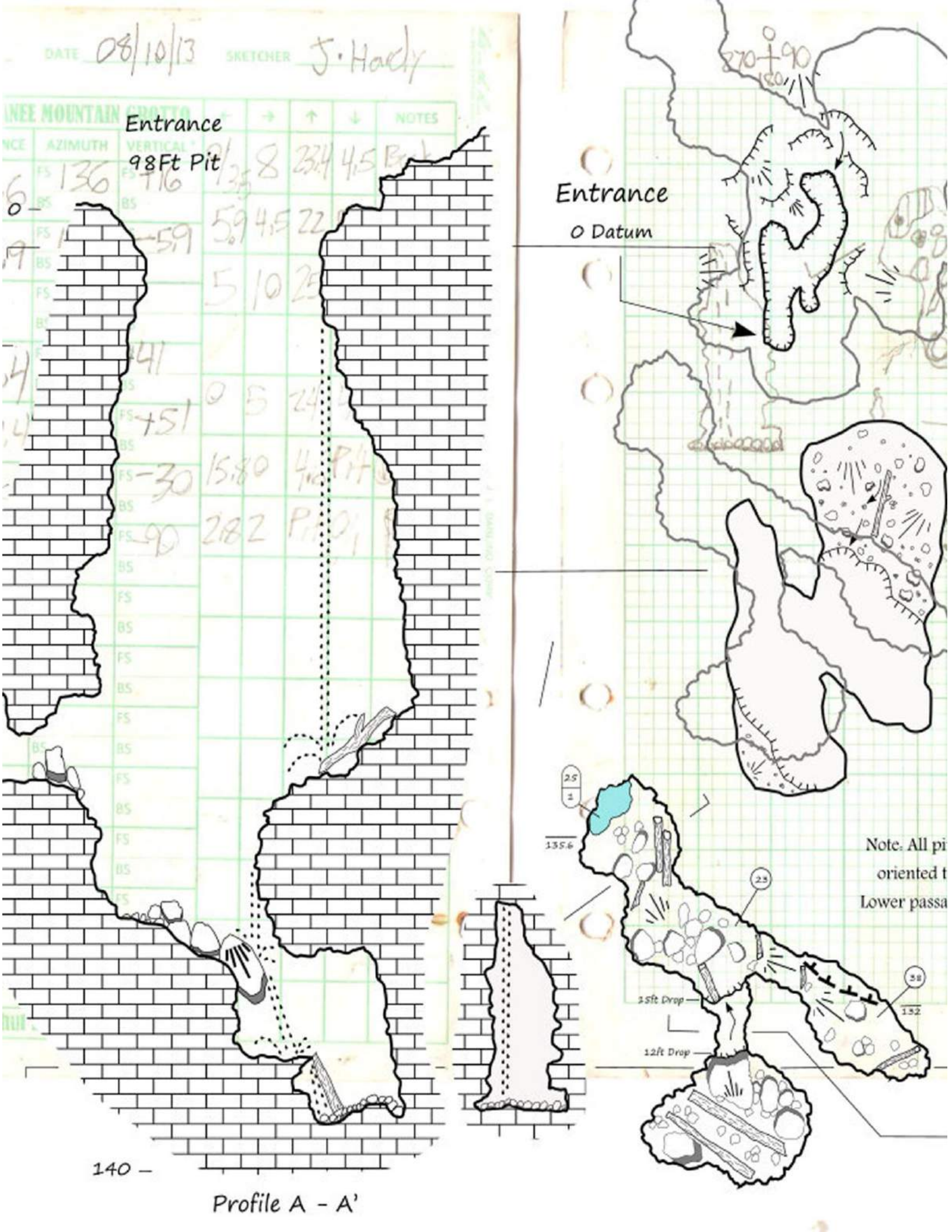
"They haven't hit any of the agricultural fields yet [in Marion County]," Vandergriff said. "But the hunting clubs in the area can't grow food plots. The hogs are competing with the deer, and deer sightings have gone down drastically since the hogs have appeared."
Vandergriff said he has seen trail camera photos with as many as 30 or 40 hogs in one picture. He thinks there are at least a hundred hogs in the area, potentially several hundred. He said they are working with landowners and property managers on how to take as many hogs as possible, including trapping.

"We're showing them how to set up the traps and how to bait them properly," he said.

Of course, when any hogs are captured, wildlife officers must be contacted. Vandergriff said they have been taking blood samples from the animals to analyze for any diseases.

TWRA officials said wild hogs are known carriers of at least 45 different parasites and diseases that pose a threat to livestock, pets, other wildlife and—in some cases—human health.

Vandergriff said it is unlikely they can totally eradicate the animals from the rough, remote terrain.
"We hope we can at least thin them out before they do start spreading," he said.
For more information on wild hogs, click go tohttp://www.tn.gov/twra/wildhogs.shtml or to watch the video go to http://youtu.be/weWWtSQqSfUwatch.
Richard Simms is a contributing writer, focusing on outdoor sports.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