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SPELEOLOGICAL SOCIETY,INC

C.O.G.nizance

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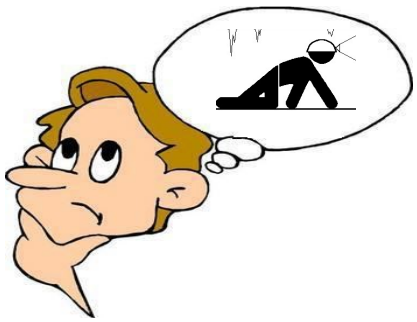
IT IS NOT CERTAIN WHEN THE NEXT MEETING WILL BE DUE TO SOCIAL DISTANCING AND NEEDING TO STAY AT HOME! EVERYONE BE SAFE!



TREASURER'S REPORT

END OF THE YEAR 2020 TREASURERS'S REPORT

1/1/2020	**BANK BALANCE**	**$1,997.88**
	CASH ON HAND	**$ 70.05**
	TOTAL	**$2,067.93**

INCOME			**EXPENSES**		
Dues	$	36.00	Printing	$	(32.46)
Dividends	$	1.06	Postage	$	(26.10)
Pub. Sales	$	58.86	Tax	$	(2.68)
Donations	$	3.40			
TOTAL	**$**	**99.32**		**$**	**(61.24)**

BANK BALANCE		
CASH ON HAND	$	106.05
CHECKING	$	628.62
SAVINGS	$	1,416.13
TOTAL	**$**	**2,150.80**

TOTAL **$151.02**

PREPARED BY TREASURER JOHN TALBOT NSS#3054RE
1/14/2021

ANNOUNCEMENTS

*No trips planned at the present time

*No meeting in January, 2021.

WHITE-NOSE SYNDROME DECONTAMINATION PROTOCOL, September 2018

This is the latest formal revision of the national decontamination protocol to prevent spread of the fungus that causes white-nose syndrome. This document is the product of a collaborative effort with multiple federal and state agencies and several non-governmental organizations. Go to this website to view the detailed suggestions listed to help stop the spreading of WNS.
https://www.whitenosesyndrome.org/static-page/decontamination-information

MEETING PLACES FOR 2021??

MINUTES

No minutes to publish this month.

POTPOURRI

Caving Positions with Montana Conservation Corps
From Bryan Wilson
Wed, Jan. 13, 2021

Hello,

I wanted to pass along an opportunity we have this year for folks interested in summer caving work. More information and a link to apply are listed below and anyone interested can contact me for more details. Feel free to share as you see fit!
Thanks!

Position Information
The Montana Conservation Corps is partnering with the U.S. Forest Service and Bureau of Land Management to conduct cave inventory and monitoring of cave resources. Cave entrance location from a November 2017 recon flight and other information sources will be used to identify potential caves for inventory, monitoring and significance evaluation. Those with previous caving experience are strongly encouraged to apply!

Duties will include:
Navigating to the points collected during the helicopter flight use GPS
Investigating to see if the location is a cave entrance, document what they find using a standardized inventory protocol and digital photos
Locating and entering cave systems to document and monitor physical cave characteristics, including biologic, geologic, hydrologic, and cultural resource
Incorporating findings into work on USFS and BLM Cave Management Plans and Federal Cave Resources Protection Act significant cave designations
Additional time will be spent organizing and compiling data, including digital photos, populating inventory databases and/or hard copy files.
Program Dates: Two Caving Positions - 1 Conservation Fellow & 1 Conservation Intern
Conservation Fellow - May 12th - October 1st
Conservation Intern - May 12th - August 13th
Benefits:
AmeriCorps Living Stipend - $504 biweekly
AmeriCorps Education Award Conservation Fellow: $2,417; Conservation Intern: $1,678.57 upon completion of the program
Health Insurance at no cost (Conservation Fellow)
Shared bunkhouse housing provided
Member Assistance Program: Free access to confidential mental health services, medical advocacy, financial assistance, legal assistance, life coaching and more…
Anyone interested should apply HERE or at https://www.mtcorps.org/joinmcc/individual-placement-programs/conservation-interns-and-fellows.html

Preferential Application Deadline: February 14, 2021 early applications are welcome and encouraged.

Thank you!
Bryan

Bryan Wilson | Director-Individual Placement Programs | Montana Conservation Corps | 301 N Willson Ave, Bozeman, MT 59715 | Office: 406.587.4475 | Cell: 330.242.4482 | bryan@mtcorps.org | www.mtcorps.org
Montana Conservation Corps inspires young people through hands-on conservation service to be leaders, stewards of the land and engaged citizens who improve their communities.

Newly Discovered Bat Species Has Halloween Colors

By Theresa Machemer
SMITHSONIANMAG.COM
JANUARY 15, 2021
178123https://www.smithsonianmag.com/smart-news/newly-discovered-bat-species-has-halloween-colors-180976776/

The six-ounce bat lives in abandoned mine shafts in Guinea's Nimba Mountains
Close-up on an orange bat held by a person wearing a green glove
Myotis nimbaenis was named for the Nimba Mountains where it was found. (© Bat Conservation International)

With a large net and a stroke of luck, scientists have discovered a new species of bat that has bright orange fur and black wings. The researchers describe the species, which they name Myotis nimbaenis, in the journal American Museum Novitates.

Jon Flanders, the director of endangered species intervention at Bat Conservation International, was leading an expedition with eight other researchers in the Nimba Mountains in Guinea when they found the orange bat. Many bats live in the mountains' abandoned mineshafts that are now unstable and unsafe to enter, so researchers tossed nets at the entrances to trap bats while they flew, reports Darryl Fears for the Washington Post. One night in January 2018, a brightly colored bat stood out among its dark-furred neighbors also caught in the net.

"The color is just phenomenal," says Flanders to the Post. "Its wings are black with these orange fingers. There aren't a lot orange bats in the world. I don't tend to work with that many brightly colored bats. It's definitely an unusual one for me."

Illustration of an bat with orange fur and black wings on a light blue background

Scientists working in Guinea found the bat while searching for an endangered species that lives in abandoned mine shafts. (Illustration by Fiona Reid)

There are about 1,400 bat species in the world, including a few orange ones in China and South America—far from M. nimbaenis' home in West Africa. For the past several years, more than 20 new bat species have been added to the list, but those discoveries usually come about when scientists tease apart the slight genetic and physical differences between nearly-identical species.

"This sort of situation where experienced researchers went out in the field and caught an animal and held it in their hand and went, 'This is something we can't identify,' that's much more unusual," says the American Museum of Natural History's curator of mammals, Nancy Simmons, to the New York Times' Rachel Nuwer.

Flanders and his colleague Eric Moïse Bakwo Fils, a biologist at the University of Maroua, were looking for the endangered Lamotte's roundleaf bat when they noticed a bright orange bat in their net, reports the Washington Post. At first, the scientists thought it might be an unusual color variation of an already-known species. But after the pair spent all night looking through identification guides, textbooks and online resources for a species match, they couldn't find one.

"We walked in the room in the morning and simultaneously said 'I think we've got a new species.'" Flanders tells the Washington Post.

To make sure that they had found something new, the expedition team re-captured the first bat they had found, a male, and another female specimen. Then they contacted Simmons, who is also the International Union for Conservation of Nature's chairwoman of the bat taxonomy group. Simmons consulted the bat collections at the American Museum of Natural History in New York, the Smithsonian National Museum of Natural History in Washington, D.C., and the British Museum of Natural History in London to see whether any of their collections contained a match for the brightly-colored bat's genetic blueprint or physical features.

The team concluded that the new species of bat is at least five percent different than the closest-related species, reports the Times.

Next, the scientists hope to study more about M. nimbaenis' ecology—where it lives, what it eats, and what it needs in a habitat.

"These bats are found only in this area atop the Nimba Mountains," Simmons tells the Washington Post. "They could have gone extinct and no one would have ever known."

Because the bats are probably only found on these mountains, which are isolated peaks in an otherwise flat landscape, they are probably an endangered species. But Flanders tells the New York Times, "The more we know about it, the more we'll know how to protect it as well."

A Ray of Hope in a Slimy Southern Cave

By Michael Ray Taylor

Mr. Taylor is the author of "Hidden Nature: Wild Southern Caves."

Jan. 16, 2021

https://www.nytimes.com/2021/01/16/opinion/tenneessee-cave-species-conservation.html

Residents in the South are coming together to protect their underground ecosystems.

One day in 2019, back when crossing state lines to go caving seemed perfectly safe, I drove eight hours from Arkansas to central Tennessee and soon found myself in a muddy belly crawl. Pushing a cumbersome pack in front of me, I used my toes to inch forward. Four younger cavers ahead had exited the tunnel and stood comfortably in a large passage, waiting to continue in the 15-mile-long system.

As a bookish professor who had recently turned 60, I felt it reasonable to pause and catch my breath before joining them; it had been a year since my last crawlway. I studied the limestone inches from my face. Even a muddy, featureless tube teems with life in a Southern cave, if you look carefully. I spotted a nickel-size, cave-adapted springtail, the insect's body translucent in the light from my helmet lamp. Nearby were brownish cave crickets, clumped together on the ceiling. In a wide crack just beyond my head lay a shadow shaped like the letter "S," darker than the blackness of the cave.

I removed my helmet to light the shadow. A galaxy of white dots glowed against a black background. I was looking at a slimy salamander, specifically Plethodon glutinosus, the northern slimy salamander. Its shimmering black eyes studied the intrusive light, its head broad and somehow childlike relative to its amphibian body. It occurred to me that this was probably the species DreamWorks artists had used as inspiration for their cartoon dragons. Slimies travel back and forth from cave to forest — a sign that I was still relatively close to the entrance.

Restored by nature, I put on my helmet and left the salamander to its dark crack. I wriggled onward to the walking passage and a pleasant day underground. Later our team spotted a pure white cave-adapted salamander stalking the floor of a hidden pool, ghostlike on spindly legs. Hatchlings flitted about like flakes in a snow globe. I was glad the cave's private landowner allowed very few visitors to intrude upon this delicate realm.

The day before the presidential election, I was reminded of this trip by a photo on Facebook. Taken by Bradley Jones, an Alabama caver, it showed a half-dozen slimy salamanders clustered on a limestone wall in Butler Mountain, north of Birmingham, Ala. Mr. Jones said he had seen over 50 at the site. He has been documenting salamanders, springtails, various myotis bat species, pseudoscorpions, rare cave flatworms and other creatures in about 20 caves and karst features at the mountain — all of which are threatened by a proposed limestone quarry that would remove the rock enclosing them.

It's the most beautiful area in Jefferson County," said Mr. Jones, who has discovered and mapped several caves there.

Residents of Clay, population 9,600, in Jefferson County have formed a group opposing the quarry, planned by Vulcan Materials, saying it would destroy not only caves but also a mountainside rich in native hardwoods, wildflowers and waterfalls. A planned October meeting of the City Council was postponed when it became clear that the small meeting space would be overwhelmed by angry residents. They fear that quarry operations would destroy natural habitat and expose nearby schools and homes to harmful blasting and dust.

….it showed a half-dozen slimy salamanders clustered on a limestone wall in Butler Mountain, north of Birmingham, Ala. Mr. Jones said he had seen over 50 at the site. He has been documenting salamanders, springtails, various myotis bat species, pseudoscorpions, rare cave flatworms and other creatures in about 20 caves and karst features at the mountain.

Mr. Jones has been sharing aerial photographs of a 40-year-old similar limestone quarry on Drake Mountain in Huntsville, Ala. While passing drivers might miss it, from the air the quarry presents a stark white gash in green surroundings, its steep sides darkened by dripping springs — the lifeblood of vanished caves.

"Are we going to let history repeat itself?" he asked in a social media post urging residents to sign a petition against the planned quarry.

The fight for Butler Mountain is one of several small environmental battles playing out throughout the South — fights that tend to go unnoticed amid a frenetic news cycle. A similar dispute rages in Coffee County in Tennessee, where a planned zoning change could allow multiple quarries in hills containing 71 caves and abundant wildlife.

"There's nothing like going out on the farm and seeing turkey or deer," said Carol Sandstrom, a resident whose family owns 40 cave-spring-fed acres bordering one proposed quarry site. "It's our own little nature preserve. The thought of that being damaged breaks my heart."

My chosen pastime surrounds me with wildlife. At 19, I first traveled to the wild caves of TAG, an acronym for the cave-rich region surrounding the juncture of Tennessee, Alabama, and Georgia. I learned that surface pollution becomes greatly amplified in the subsurface. Hidden cave life has adapted to unique ecological niches over thousands of years, isolated environments where even small changes overhead can wipe out species. A cave flatworm can serve the same purpose for an ecosystem as a canary in a coal mine. Caves taught me to pay attention.

At annual gatherings like the TAG Fall Cave-In and the SERA Cave Carnival, I join cavers in remote valleys, swapping around campfires news of discoveries and environmental threats, as well as tall tales and folk music. One lyric from my early caving days still echoes through the hills at such meetings, the refrain of the late John Prine's environmental anthem "Paradise": "I'm sorry, my son, but you're too late in asking. Mr. Peabody's coal train has hauled it away." *(continued on page 5)*

Of course, local fights for wilderness are not confined to cave country. They brew quietly throughout the South, from a threatened maritime forest in South Carolina to a proposed turnpike in a Florida wildlife corridor. Beyond environmental damage, the potential loss of these sites most directly affects the few people who live there. Amid the Covid-19 economic downturn, rural residents can find themselves torn between their love of the land and a desperate need for jobs.

The need may be no more desperate than in Jefferson County, which in 2011 made headlines with a $4 billion municipal bankruptcy. In 2020, analysts saw its continued economic collapse as a dire warning of what could happen elsewhere in a pandemic-related recession.

Yet rural residents in the South are coming together on the side of preservation. At a meeting of the Coffee County Commission on Nov. 10, opponents spoke against zoning changes for three hours, prompting commission members to withdraw the quarry proposal — temporarily, they said, to make revisions. A new plan that would essentially open even more county land to quarries is scheduled for a vote on March 9.

Nationally, there are always bigger environmental concerns — climate change, clean water, clean air, sustainable energy, public lands opened to mining by the Trump administration, possible positive actions by the Biden administration. The big stories can leave smaller threats unnoticed beyond county lines, like salamanders overlooked in a cave.

In 2017, I interviewed Mr. Prine for a literary website, asking whether he had traveled lately to Kentucky's Green River, where the town of Paradise once lay. "The few times I've had access to a boat in the latter years and been able to go down the river," he said, "it surprisingly looks a lot like it did when I was a kid."

He paused to explain. "When you're on the river, everything's grown up, the grass and the bushes, and you can't see all the damage that's been done. Except when you go right by where the town sat. You know, of course, the coal chutes and everything are on the river where they loaded the barges up."

Mr. Prine taught me to appreciate nature as fleeting. So did exploring caves. Whenever I pause underground to consider my way forward, I spot nature inches away. If the fight for Butler Mountain is lost, chances are that the surrounding land will still look much the same to casual travelers. But it will look forever changed to residents, cavers and slimy salamanders.

Vulcan Materials will have hauled it away.

Researchers have uncovered the remnants of a huge, fossilized shark head in the walls of a cave in Kentucky.
Newsweek; February 3, 2020
https://www.newsweek.com/head-giant-330-million-year-old-shark-wall-kentucky-cave-1484825

The remains of the ancient animal are located in Mammoth Cave National Park, which is home to the longest known cave system on Earth—one that extends for more than 400 miles, according to the National Park Service.

The shark fossil—dated to around 330 million years ago—was first spotted alongside several others by Rick Olson and Rick Toomey, two Mammoth Cave experts who were conducting investigations of the area, the Louisville Courier Journal reported.

Santucci also passed the images on to John-Paul Hodnett, a paleontologist at Dinosaur Park in Maryland. This site contains rare fossil deposits from around 115 million years ago.

Hodnett was able to identify most of the shark fossils in the images, however, he became particularly interested in one set of remains.

"One set of photos showed a number of shark teeth associated with large sections of fossilized cartilage, suggesting there might be a shark skeleton preserved in the cave," Hodnett told the Journal.

Shark skeletons are made of cartilage, which does not fossilize as well as bone so is rarely preserved. Shark teeth fossils, on the other hand, are commonly found all over the world.

Sharks in Kentucky? What explorers found in Mammoth Cave is blowing researchers' minds
Preserved in the walls of Kentucky's Mammoth Cave were parts of a large shark head — from a shark that lived about 330 million years ago.

After reviewing the images, Hodnett decided to visit the park and examine the fossils for himself. "I wasn't exactly sure what I was going to see in the cave during my trip in November," he told the Journal. "When we got to our target specimen my mind was blown."

While the palaeontologist was not able to uncover a full skeleton, he did identify a skull, lower jaw, cartilage and several extremely-detailed teeth. Given the dimensions of these remains, Hodnett estimates that the shark was about the size of a modern day great white, which grow to an average of around 15 feet, according to National Geographic.

He said the remains likely belong to a species known as Saivodus striatus which lived between 340 and 330 million years ago during the Late Mississippian geological period.

For much of the Mississippian period, which lasted between 359 to 323 million years ago, the area that is now Kentucky was submerged beneath shallow tropical seas. As a result, many marine fossils are found in the area.

The latest discovery was made as part of the Mammoth Cave National Park Fossil Shark Research Project, which so far has identified around 100 individual specimens in the cave system.

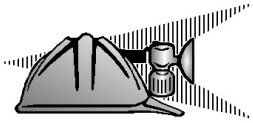
"We've just scratched the surface," Hodnett said. "But already it's showing that Mammoth Cave has a rich fossil shark record."

The latest find is not the only prehistoric shark to have been recently discovered in the United States. In November, researchers announced that they had identified an entirely new species of shark in Kansas, which lived around 91 million years ago.

According to a study published in the Journal of Vertebrate Paleontology, the shark could have measured around 17 feet in length.

Central Oklahoma Grotto is a non-profit organization and a chapter of the NSS (National Speleological Society), Cave Avenue, Huntsville, AL., 35810. Dedicated to cave conservation and safety, C.O.G. published general information in a monthly newsletter ($6.00/year) and detailed cave surveys and related Speleological items in a yearly publication, *The Oklahoma Underground* ($3-$8/ issue) Membership is by sponsor and is $12 per year for adults, $6 for spouses and students, and $3 if under 18. Central Oklahoma Grotto meets once a month on the second Friday of each month. For information, write Lil Town, 25692 Mosier Circle, Conifer, CO 80433: All submissions to the newsletter should be sent to the editor: Lil Town, 25692 Mosier Circle, Conifer, CO 80433: Telephone: (580)471-1238: E-mail: cavemoose@gmail.com. The deadline for submissions for any particular month's issue is the 20th day of the previous month. If you wish material returned. Please include a SASE with submission. All materials in this newsletter is available for reproduction, provided proper credit is given with the article when you print it. Trade publications are welcomed.
Cave softly and safely! **Website: http://www.okcavers.com**

No meeting is scheduled for January, 2021.
Stay home and be safe!



Central Oklahoma Grotto
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