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SPEAKERS

Maggie Farmer, Nicole Cox, Kyle Riesterer, Michael Dauphinais, Christopher Conover, Zac Ziegler, NPR promo

- Michael Dauphinais 00:00

 The following is an azpm original production.
- Christopher Conover 00:09

Welcome to The Buzz. I'm Christopher Conover. This week, an Arizona landmark celebrates a pair of anniversaries. The 2024 election is in our rear view mirror, and to say it was an eventful election cycle would be an understatement. If all of the news coverage made you want to crawl in a hole in the ground. You're not alone. So on the day before the election, we decided we would head down one of Arizona's most infamous spots to do just that. It's been nearly 50 years since Gary Tennan and Randy Tufts decided to take a break from their studies at the University of Arizona and go looking for caves in Cochise County. What they would find on that trip would open to the public 25 years later as karchner Caverns State Park giving us a tour the day before the election, was assistant park manager Kyle Riesterer. He took us to an area beside the cave before heading in.

- Kyle Riesterer 01:10

 Behind this chain link fence. This is the actual sinkhole where the cave was discovered from in November 1974
- Christopher Conover 01:16
 When you say sinkhole, I'm from Florida, I think of those types of sinkholes, same thing, basically.

Kyle Riesterer 01:23

Same geologic principle. You know, this is just a small area where the ground is collapsed and sunk in here, and then mine that curb get up to it. The cave was discovered by two guys, Randy Tufts and Gary Tennen, who were cavers from Tucson, who were at the U of A at the time, and they were out here actively looking for caves. They had received a tip from fluorite miner he used to mine in the Whetstone Mountains, that there were some openings and sinkholes down here. And they actually were checking out two holes on the back side of this hill, and they didn't really go anywhere. Gary and Randy decided to check out this hole. Well, there was a storm in the area, and there was dropping air pressure outside. Caves breathe in and out with drops in barometric pressure, higher pressure air stuck inside the cave was making its way rapidly out of this opening, and they realized when they went down the sink, oh, wait a second, there's there's more space here that people hadn't realized before. So they sort of tracked the air back to a little ledge. Crawled through that little ledge for about 25 feet, reaching what two most reasonable people would have been the end of their day, they came to a two inch hole in the rock. Realizing that that air was coming through that opening, that there had to be space back there, they pulled out a hammer they had with them, knocked it open for a couple of hours, and then made their way 400 feet under the ground into an area that came called the big room.

Christopher Conover 02:48

Okay, that takes a lot more guts than I would have had, but I'm not a spelunker.

Kyle Riesterer 02:53

You know, I've actually had a good conversation with Gary 10 and recently, and he said that what we did, as far as cavers go, wasn't necessarily difficult or hard. It was what we did after that was the hard part. It was finding a way to protect and preserve the cave and turn it into something that would be protected for everybody. Because as you can see here on the top of the hill, we can see Arizona 90 right there. When they opened up that hole and got into the cave, they felt a sense of responsibility for what they found, because they just made it easier for people to get in there, people who maybe wouldn't have had such a developed sense of caving ethics that they had. So they kept a secret, an official secret, for about 14 years, but they kept it amongst themselves and a group of caving and non caving friends for some time. By 1978 they told the karchner family, who had owned this land since the early 1940s about what they'd found. And then the Kartchners, working with Gary and Randy for another decade, came up with a plan, before finally selling the land in the cave to the state of Arizona in 1988. From there, we head for the entrance that all tours use. That we includes me, Riesterer, but also show producer Zac Ziegler and our new production assistant, Maggie Farmer. You'll hear their voices occasionally throughout the episode. You feel the immediate change on this side of the door the caves about 72 degrees Fahrenheit and 99% humidity year round, with a system of interconnecting doors to keep that semi desert air out and the warm, moist cave air in.

Christopher Conover 04:29

You can really feel the difference as we walk in and now this second, Wow, you really feel it

when we go through that second door.

Kyle Riesterer 04:37

So what we're walking through now is not part of the cave. This is a constructed tunnel system which was mined out starting in 1995, finished in 1997 and then after that, they constructed the pathways through what we call the rotunda throne room tour from 1997 to 1999 and then they did the pathways through the big room side from 1999 to 2003. So if you think about this cave has probably been here for 200,000 years, basically in the form it is today. Has only been the last 25 years that's been shared with the public.

Christopher Conover 05:09

You can see signs that the tunnels were man made. In the walls, there are drill holes where small explosives cleared space. It took crews 21 months to complete the work. Because of Arizona's history with mining. Is there anything, and not that we're suggesting that the state start mining this, this cave, but is there anything in here? There's a lot of copper mining in the area. There's a history of gold and silver mining in the area, or is this just a natural occurring limestone cave?

Kyle Riesterer 05:44

Just a naturally occurring limestone cave, no copper, gold, silver found in this immediate vicinity here. Of course, you know, we're about an hour away from Bisbee, which has the copper Queen Mine. And tombstone was founded, of course, because of a silver strike. But nothing here in what is now Kartchner Caverns. What you're hearing back there is a small misting system we're gonna walk through there. Hopefully it doesn't affect the audio equipment too much. What's designed to do is to add a little bit of moisture to us, because we came in from, I don't know, 6-7% humidity out there. We're really dry right now. If we were to take our 150,000 or so visitors a year through the cave, all day, every day, without adding a little bit of moisture back to them, they'd start to rob that from the cave. So we're going to mismists people down right before we go in. Another purpose for that is we're trying to keep things like loose hair and skin cells and lint for your from your clothes, either stuck to your body or else blasted down to the trail below. Because lint, this little stuff you pick out of your dryer, is a big problem in caves. It'll flow through the air, stick to the wet formations, and it can start to cause some damage over time.

Christopher Conover 06:45

As we make our way through the last of the doors that seal the cave from the outside world,

Kyle Riesterer 06:49

That sound has gotta be great on the mic.

Christopher Conover 06:53

These are the things that make Zac really happy. We walk into the first large open area that is cool. Oh, that's amazing.

Kyle Riesterer 07:01

The area we're in now is called the rotunda room. Takes his name from the shape of the ceiling, has sort of a rounded shape to it. As we're looking across the room, you can see those tracks down in the mud. That's actually part of the original foot trail of Gary, Tennan and Randy Tufts, and then later, members of the cartridge family, and then every Ranger, scientist and engineer who's ever had to access the floor there has passed that same pathway because we don't want to expand the area of the cave that's been walked on over time. I actually had my first opportunity to go through that mud back in March of this year, and it is a lot of fun, I have to tell you, it's exhausting. It's very sticky, very heavy mud, but it's very fun to go through it.

Christopher Conover 07:42

Has any of this been opened up, or is this the way when they first came through here? This is minus the lighting and the new pathway, what it looked like,

Kyle Riesterer 07:57

absent the lights, the rails and the trails, this is very much what they would have seen when they came into this portion of the cave for the first time in early 1975 the mud flat would have been there. This sort of hill would have been what we call breakdown rock slope. Instead of the small chunks that you see, which have obviously been made from the rock that was in the cave into kind of facing stones, it would have been bigger chunks like this debris field down here,

- Christopher Conover 08:20 right
- Kyle Riesterer 08:21

Gary and Randy, the first time they accessed this room, they crossed across that mud flat came up over where this hand drill is today, past where we're standing now, which this would have been a kind of a flat rock area up this pathway, which you can still see, kind of worked into the cave floor here, through that crack in the rock, and then over into the section of the cave we call the throne room. When Gary and Randy came in, they started to make what some people call an elephant trail, where you remember where you walked. You walked the same place every time, so you don't get lost in the cave.

Christopher Conover 08:51

When you were talking about the trail across the mud flat here, you talked about scientists. Is there a lot of active science going on?

Kyle Riesterer 08:59

Yeah, we have a Cave Resource Manager here at the park, and what her job is is to coordinate with research universities and visiting sciences scientists to conduct different experiments and studies here at the cave. We have long term relationships with a bat biologist as well as an entomologist studying insects here in the cave. So we have these partnerships, and we want to see those continue for the future.

Christopher Conover 09:21

It's interesting. Having been through other caves and caverns over my life, you always think about the big formations of stalactites and stalagmites. We have a couple of cool ones here, but a lot of them are much smaller. Is that typical of an Arizona cave, or is that unique to Kartchner?

Kyle Riesterer 09:42

What is unique maybe not unique to karthiner, but what is special about Kartchner is it does have the very fragile, what are called soda straw formations remaining in the cave. In a lot of caves, they have been broken off by explorers and discoverers who, you know, just weren't as modern as what we might think today. They didn't really. Realize that caves are a valuable resource, and that any damage you cause in a cave is going to leave a lasting impact, basically forever. But I will say you haven't seen anything yet. We do have quite a few big stalactites, stalagmites in this cave, and we'll take a look at those a little bit later.

Christopher Conover 10:15

As we walk we see formations hanging from the ceiling that look more like ribbons than a typical stalactite.

Kyle Riesterer 10:22

That is what's called a drapery. It's formed not by water dripping straight down, but rather by water flowing down the angle of that side wall, leaving a curtain or drape like formation behind it's all calcite. All the formations are made of calcite, which is calcium carbonate deposited by water over time.

Christopher Conover 10:40

We also see another formation that looks rougher and a bit like popcorn ceilings in older

homes, and it shares that descriptive name. It's called cave popcorn.

Kyle Riesterer 10:51

So what you would have had is you would have had calcite laden water vapor moving through the air, and it would have condensed on a slightly cooler surface, and over time, it left that dissolved solid, that dissolved calcite, and it left behind is sort of popcorn like, or clustered like. That's called cave coral formation.

Christopher Conover 11:07

And that's, of course, the basic science all the the formations are formed by water, depositing calcite, calcium and calcite.

Kyle Riesterer 11:16

If you want to strip away the kind of mystery of it, imagine you've got a faucet with some calcite buildup on it, but for the last 200,000 years, that's pretty much what you're looking at in here.

Christopher Conover 11:26

So those of us who live in Tucson with hard water, if we don't clean our faucets, this is what we get.

Kyle Riesterer 11:31
That's what you're gonna get

- Christopher Conover 11:32 200,000 years from now. Okay,
- Kyle Riesterer 11:34
 we always say CLR is the enemy of caves.
- Christopher Conover 11:39

As we've wandered through here, I've seen a couple of what look like little tables, if you will, with with metal bowls under them. I'm guessing you're not trying to catch the water from a look. What are those?

Kyle Riesterer 11:52

So what you're seeing are called environmental monitoring stations. It's pretty basic stuff. You've got a plastic table with a cookie sheet on top to stop new drops of water from coming into a pre measured amount of water in a pie pan down below. And what those are checking for is the rate of evaporation of water. There's some other things that are taken at those stations as well. There's little data logger on top that's taking temperature. And then every other week, our cave unit rangers will come. You see there's a turkey baster there and a graduated cylinder, they'll measure the amount of water that's left in that pie pan and to check evaporation rates. They'll also get some rock temperatures and some soil temperatures. And these monitoring stations allow us to make sure that visitation is not having a negative impact on the cave environment.

Christopher Conover 12:34

It's interesting looking at these stalactites, these soda straw stalactites with the lights on them, you can see little drips of water, so still forming.

Kyle Riesterer 12:44

Yeah, Kartchner Caverns is an active cave. About 95% of the formations here received some water over the course of the year, and you can see those drips of water. Now, rain last night, but previous to that, hasn't rained since the end of the monsoon, so it's been weeks without rain, and yet there's always water coming in. You have to think that limestone might not be as solid as you think it is. It's a fairly porous rock, and there's about 250 feet of rock up above us right now, so there's water trickling through every little crack, and fissure and pour in the limestone, eventually making its way into the cave. And when it makes its way into the cave, it's carrying dissolved limestone with it, and it's depositing that calcite one layer at a time, giving you all the calcite formations around us.

- Zac Ziegler 13:24
- Kyle Riesterer 13:27

Say, if one lands on you, it's called the cave kiss, and it's good luck. Yeah, a lot of people think, well, it's no coincidence that these are so close to where Gary and Randy walked. They must have broken these when they came through. No, that is not the case. These were already down in 1975 and Gary and Randy, and then later, members of the Kartchner family came through. You can see how conservation minded they were. They were sort of headed towards these broken formations, and they walked around them. They didn't want to damage even broken formations here in the cave.

Zac Ziegler 13:54

Those, those tracks, are deeper than I was expecting.

Kyle Riesterer 13:57

You know, an adult goes out there and you sink in that mud to maybe your your mid shin there, and then there's other places that we can't see, quite out of view, where it's even deeper. It's just very sticky mud, hard to slog through. I said it was a lot of fun to go through it. We were back off trail for a couple of hours about halfway through. You're kind of over it.

Zac Ziegler 14:21

You lose that novelty,

Kyle Riesterer 14:22

You lose the novelty and then I'm just walking through the mud.

Christopher Conover 14:25

How hard is that cave floor? You say you don't want to damage it when you're walking across it, which makes sense. But how hard is that? Because we see rocks sitting on top of it, sure.

Kyle Riesterer 14:37

So this is, believe it or not, it may not look like it, but it's still very moist mud. There's still a lot of water content there. There are other areas of the cave where you have rock floor, more of a durable surface, harder to damage, but the cave mud here very easy to kind of mess it up. So we don't want to walk any area other than the already established trail. We'll continue on through as I fall into a wall, which, by the way, if I had done that, we have a flagging system here to mark where touches occur, because we don't want people to touch things in the cave, including rocks, because it can build up lint from clothes, oil from skin. So tonight, what we'll do is we'll record where people touched. We'll mark that with a flag, and then our cave unit ranges will come in, and they'll just spray the formations with plain water, trying to disrupt that oil from building up or from lint sticking to formations.

Christopher Conover 15:37

As we enter the spot known as the throne room, we walk past a unique formation where a large flow of calcite looks almost like it's melted together over the centuries.

Kyle Riesterer 15:48

This is what we call flowstone wall, which I think is a fitting name. It's where you have this large wall of calcite formations, and then coming around the corner, off the left, we have the single largest cave formation. This is what we call Kubla Khan. Is the only officially named formation in Kartchner Caverns, and it gets that name because when Gary Tennan and Randy Taos were first exploring and mapping out the cave, they had not yet met the Kartchner family. They certainly did not call the place Kartchner caverns. Gary and Randy had a little code name for the cave. They called it Xanadu. Xanadu is very old name. It's been used for a lot of different things, but where they got the name was from the Samuel Taylor Coleridge poem Kubla Khan, which describes Xanadu. In the poem, it talks about caverns measureless to man, and they thought it was a very fitting name for the cave system. And when they got to this section, they saw that big shape out there in the darkness. Now we're seeing it all lit up. You have to remember, they were using open flame carbide lamps. They could maybe see 20-25, feet in front of them, with a fairly narrow beam of light. So they said, What's that? They looked a little bit closer. And they said, you know, if we're in Xanadu, that must be its ruler, Kubla Khan, and we were in the throne room, which is how this section of the cave got its name.

Christopher Conover 16:58

That must have been because, as you said, we're seeing it all lit up. We can see bottom to top of it. It's got to be 75 feet tall, I guess.

- Kyle Riesterer 17:09
- Christopher Conover 17:10

All right, I was off, but still, that's a massive piece of structure. But to see that with just open flame carbide light, I'm just trying to imagine seeing that. That had to have been an awe inspiring moment for them.

Kyle Riesterer 17:26

And this was fairly late in the game. This is one of the last major sections of the cave discovered. So from the sinkhole to here, this is about as far into the cave system as you can be.

- Christopher Conover 17:37
 What is the distance, as the bat flies we'll say?

Kyle Riesterer 17:41

There's 2.4 miles of cave passageway here, which is actually a fairly small cave system. Just for comparison, if any of you have taken a trip to Kentucky, Mammoth Cave, the longest known cave system in the world, over 400 mapped miles of passageway.

Zac Ziegler 17:56

So is this all just like drip, or was this kind of, you know, stalactite and stalagmite meeting?

Kyle Riesterer 18:04

Probably a little column A, column B. So we have some major stalagmites down below, with some formations reaching down from the top as well. And it doesn't always work out that way. You don't always have a stalactite and a stalagmite that are going to meet. It's really there are a lot of different factors, and it's all highly variable as to where the calcite is going to be deposited. We might think of the cave as static, but it is changing every day in a very, very, very tiny way.

Christopher Conover 18:29

So the color that one pillar we were just talking about was very white. Others are more golden brown, for lack of a better term. Is that just different minerals over time coming through?

Kyle Riesterer 18:44

Yeah, so there's a lot of different color variation here at Kartchner Caverns. The plain white or clear is what natural calcite crystals are like, the sort of yellow or butterscotch color, that comes from decayed plant animal material coming in with the calcite in the water. You have to realize there's a whole biomass up on top of us. There's a hillside there covered in rotting plant material. And various times, animals which have died on the surface, their bodies start to break down. And over time, they start to release different humic and fulvic acids. And that's what's sort of staining the calcite, that butterscotch color. Where we have the red that's iron or iron oxide or rust coming in. So this is pretty much this cave tour, the rotunda room and the throne room. Don't know you're against timeline, but you want to see the other half.

- Christopher Conover 19:29 Yeah, sure, yeah,
- Zac Ziegler 19:31 we got time.

Christopher Conover 19:32

You are listening to The Buzz. After the break, we take you to the other half of Kartchner Caverns. Stay with us

NPR promo 19:41

No matter what happens in Washington, the NPR politics podcast is here for you. For the latest news, insights and analysis the election and beyond, listen to the NPR politics podcast.

Christopher Conover 19:55

Welcome back to The Buzz. I'm Christopher Conover, this week, we're taking a tour. Of Kartchner Caverns. We're starting the second tour that Kartchner Caverns offers. At this point, we walk through another set of sprinklers, pass through another large door and into a space that is notably darker than what we saw in the rotunda room and the big room. Our guide is assistant park manager Kyle Riesterer.

Kyle Riesterer 20:24

this is actually how the cave tour is supposed to look. We're having a bit of a lighting malfunction right now, so all the lights were on on that side. We don't love to do that. We're just waiting on some parts. The reason we like to keep the cave dark is because there are little invertebrates that live in the cave. They're evolved to live in total darkness. We don't want to be interrupting the foraging cycles. Also, it's not so much a big deal anymore because we've changed over to LED bulbs. But prior to 2017 all the bulbs in the cave were halogen bulbs, which could potentially raise the temperature. That'd get hot. Yeah,

Christopher Conover 21:01

as we move out of the tunnel and into the next room, we walk past some unique shapes embedded in the walls of the cave.

Kyle Riesterer 21:09

One of my favorite things right here is we are hundreds of miles from an ocean right now, but this is fossilized coral sticking out of the limestone probably lived at the bottom of an ancient ocean 330 to 350 million years ago, and yet we can see it on a cave tour every day here in Arizona.

Christopher Conover 21:26
Are there other fossils that you find through?

- Kyle Riesterer 21:28
 - Absolutely, Yeah, In fact, just down this pathway, the true behind the scenes tour, there's
- Christopher Conover 21:36

we go through the do not enter. We'll go through the Do Not Enter sign Kyle tells us this area is closed to the public because of a narrow spot ahead where walls on both sides have some delicate structures sticking out.

Kyle Riesterer 21:49

You can see these are not fossils. These are calcite formations called helictites. What seems strange about these?

Christopher Conover 21:55

Well, they stick out horizontally, one or parts of them,

Kyle Riesterer 21:59

right? You would think that gravity would not work that way. Well, there's a few different ways these could possibly be formed. Could be through what we call capillary action, kind of like how water will run up through a paper towel, possibly in the past, maybe not necessarily here, but in other places, wind action or bacterial action, or simply the way the calcite crystals are aligned, which can allow them to push water drops out at angles that seem to defy gravity. So these are very fragile. This is one of the reasons this area is closed. But also, if you look over here, sticking out of the wall, you have horned coral fossils, likely hundreds and hundreds of millions of years old, sticking out of the limestone hundreds of miles from the closest ocean today.

Christopher Conover 22:41

So how far below the surface are we here?

Kyle Riesterer 22:44

It varies. Plus place on the big room side, a rough average is about 100 feet down. So it's fairly shallow. The deepest we were was in front of that mud area. We were about 260 feet below the surface of the hill.

Christopher Conover 22:55

If you told me we were going to find coral 100 and some odd feet down, or coral fossils. I would have believed you, because you work here, but it wouldn't have been my first guess.

Kyle Riesterer 23:08

Well, it goes back to how limestone is formed in the first place. So hundreds of millions of years ago, this area would have been covered by an ancient ocean. What lives in the ocean? Hard shelled creatures like you go to the beach today, you find seashells. Those are made of calcium carbonate, same thing as limestone rock. So you have these bones, shells and teeth of these ancient marine creatures mixing with some natural lime precipitated out of sea water, with all the weight of that water on top and some of the heat of the earth and below, eventually, those are compacted into layers of limestone rock.

Christopher Conover 23:38

As we leave the restricted area, we hear a tour group ahead of us. I can imagine it's very tempting for people to reach out and try and take a souvenir or touch them. And you said, of course, you have to flag off every time somebody touches something, alright, not not to make the general public sound bad. But how much of a problem is that? I can see the temptation

Kyle Riesterer 24:08

the vast majority of our visitors, 99% don't touch anything, and the remaining 1% most of those touches are fairly innocuous. They accidentally lean on a rock, or they put their knee on a curbing system. Very infrequently do we have anybody even touching a cave formation, and even less so, do we have anybody intentionally breaking a formation, or even accidentally breaking a formation. Very much what you're seeing these are the formations that were here in 1974 when Gary Tennen and Randy Tufts first discovered the cave.

Christopher Conover 24:40

We get ahead of the tour group in the big room, we come to a spot where we see a hole in the cave wall.

Kyle Riesterer 24:47

This is the pathway where that little piece of flagging tape is that Gary and Randy crawled at November day of 1974 this is how everybody had to enter the cave until the 1990s and it is a lot of work to get into the cave.

Maggie Farmer 24:58
Is it still technically passable?

- Kyle Riesterer 25:00
 - It's gated, so bats can come in and out, but it would be very, very difficult for a person to do.
- Christopher Conover 25:05
 that's pretty amazing. That is not obviously they were crawling in here. They were not walking in as we are now.
- Kyle Riesterer 25:14

No, there were places where it was low, where they had to kind of duck walk, kind of crawl, some places where they could stand up. But it was here where it said that they made their way over to this area, which was plain mud and rock. They had a seat, and they were looking with their carbide headlamps across the room, and they didn't reach the back wall. It was then that they realized, hey, we've made a pretty significant cave discovery. And then from that weekend on, they would come back and map and explore the cave system.

Zac Ziegler 25:45

It was a moist day yesterday, does does the weather outside affect how much dripping you're getting inside?

Kyle Riesterer 25:53

Yeah, it definitely affects it. But it's not like you said. Yesterday was a wet, rainy day. We might not see that water coming in for several weeks or months. It's not necessarily the same water. You know, there's water already up there in the hill, in the limestone, new water falls, old water is pushed out, and it's highly variable as to when water will actually fall versus when it will end up in the cave.

Maggie Farmer 26:16

Does the pressure still do anything to the inside of the cave?

- Kyle Riesterer 26:20
 Like the changes in barometric pressure with weather system?
- Maggie Farmer 26:23

Kyle Riesterer 26:24

We're experiencing it right now. I mean, we've been moving through this. We might be a little sweaty, but most people on tour, when they get here say, Wait, feels cooler here. It's it's drier here, and that's because we're so close to the natural opening. Air is exchanging. We don't pump any air in or out of the cave system, just through slight variations in temperature and pressure, air is moving in or out of the cave system.

Christopher Conover 26:47

Is there ever enough that, for lack of a better term, there's a breeze, or is the pressure gradient very slight?

Kyle Riesterer 26:53

You can feel a slight breeze. It's not like a major breeze. Where, you know, if you go to Wind Cave in South Dakota, that's how they found that cave was they noticed the wind blowing out of it. The slight breeze is how Gary and Randy knew that there was a space here. And even where we're standing right now, on most days, you can feel a little bit of air movement through here.

Christopher Conover 27:12

To the other side of us is a spot where Kyle says some interesting artifacts were found during the building of the walkway.

Kyle Riesterer 27:19

When they were putting in this trail, they had to dig here. They had to excavate. And they started to find bones, pieces and parts, things, things like jack rabbits, rattlesnakes. But then they started to dig a little bit more and sort of define things like species of trees no longer found within hundreds of miles of this area, charcoal from forest fires. They found an extinct Road Runner, larger than modern Road Runners. And my favorite thing they found is right here in the mud, they found the skull of a North American Horse thought to have died about 37,000 years ago. Now, don't get the wrong idea. Don't think that there was ever a horse standing in the cave here. It probably died outside, and this area is close to the surface, and those remains washed in over time,

Christopher Conover 27:58

washed in with the mud. But still, it gives a great natural history of the area.

- Kyle Riesterer 28:03
 - And think how much mud we've walked by today, which hasn't been disturbed. What else could be out here under the mud, kind of waiting to be discovered here in the cave.
- Christopher Conover 28:12

 We head through another door, and it becomes apparent that our tour is coming to an end.
- Zac Ziegler 28:18
 Oh man, my eyes are adjusting
- Christopher Conover 28:21 all right. So, so we made it back. Thanks for the tour and the history lesson and all that.
- Kyle Riesterer 28:27

 Yeah. Well, thanks for coming. Really, always excited to show the cave to people, especially for the first time,
- Christopher Conover 28:31

 That was Kartchner Caverns Assistant Park Manager, Kyle Reisterer. And that's The Buzz for this week. You can find all our episodes online at azpm.org and subscribe to our show wherever you get your podcast, just search for The Buzz Arizona. We're also on the NPR app. Zac Ziegler is our producer, with production help from Maggie Farmer and Desarae Tucker. Our music is by

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Nicole Cox 29:13

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