

Three Sources of Light Episode #3: The Feared and Famous Bats of Carlsbad Caverns

[Introduction Music]

JAMES GUNN: Good day folks, this is the Three Sources of Light podcast from Carlsbad Caverns National Park. I am James Gunn, joined today by Michael Naumann, one of my fellow Park Guides and a co-worker here at Carlsbad Caverns National Park and he's going to talk to us today about bats. But before we get into that, Michael why don't you introduce yourself to us a little bit.

MICHAEL NAUMANN: Thanks for inviting me to participate James. I have a confession to make. I love working for the National Park Service. I love being outdoors, and more importantly I love educating those that want to learn, and I've done this since 2016. Over the years I've worked at many parks. From parks out east to parks west, I've traveled throughout the country and as fate would have it, I would come back to a park that I had visited before. I visited Carlsbad Caverns National Park over a decade ago with my dad.

JG: Very nice. I didn't know you'd been here that long ago, what do you remember from that trip?

MN: Well I remember a lot of things, but in regards to the park itself, I remember the Big Room, I remember the elevator, I remember being cold stepping out without a jacket. I remember going on a King's Palace tour and just wondering how Jim White managed to get into the King's Palace area and of course the solid blackness that I experienced on the tour when they turned out the lights.

JG: Did you experience the bats while you were here?

MN: Afraid not. My dad and I by that time were back in our campground at Guadalupe Mountains National Park.

JG: Oh, I see, so you abandoned us before the main event.

MN: I didn't anticipate even stopping here when I planned this vacation. I had grand aspirations. We had about a week and a half, two tops. We'd go all the way to Yellowstone, the Grand Tetons. But the one thing I didn't plan for was just how big Texas was. I mean I'm a Texan, I love Texas, maybe it's subjective but Texas is the greatest state in the union. I just didn't fathom how long it would take to drive through Texas. Half the day max, just not the full day?

JG: I think that's a pretty familiar story for any park ranger who has worked in the service for any length of time, the big grand trip that we maybe miscalculate a little bit of time on. Well then Michael if you didn't get to see the bats when you first came here as a visitor what was your first experience with bats at Carlsbad?

MN: My first experience with the bats was as the bat flight rove. When we give the program there's the person who is actually giving the program and then there's the person who's in back. Who is answering questions any visitors might have, giving the rules to those who come late, and ensuring the visitors are following the rules. When the bats come out, I have a front row seat to see them. The amphitheater is strategically placed to be right near the entrance and so when they come out, they come out in big numbers. And it was amazing for me because they're not that big.

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From wingtip to wingtip they're only 11 inches (28 centimeters) and they weigh 13 grams. And yet because they're so small, this cave can fit a large number of bats in it. Around half a million in a good year.

JG: While you were watching this big giant cloud of bats fly out what was it that you were thinking about?

MN: I was thinking about what I'd have to say for my program. I was remembering all the facts that I knew about our bats. About how much they ate, around a ton and a half each night. But facts alone don't make a program and it's not very interesting. So, I had to think about the bats and when I began to think about our bats I began to think about Halloween, because, well bats are an intrinsic part of Halloween. When you think of Halloween, we have ghosts, we have vampires, we have bats, and there's a bit of mystery, there's a bit of fear and that's what I sort of got hung up on, fear. Why do we fear the bats?

JG: So now I find this really interesting Michael because when you go to a typical park ranger program about an animal you hear things about how incredible the animal is. Look at how big the elk's rack is, look how amazing the badger in the park is. But you're taking this from a completely different perspective. So why is it that you chose fear as your approach to bats?

MN: It all goes down the rabbit hole that I descended. When I first started thinking of bats, I thought of Halloween. I thought of the mystery the fear and why bats are feared. I immediately looked to vampires, and vampire bats. The famed, or infamous depending on your perspective, vampire bats of Central and South America. No vampire bats at Carlsbad Caverns, not to worry. The vampire bat of Central and South America is the only bat species actually called a vampire bat in the common tongue. In any other species the term vampire comes up in its scientific name, its Latin name, but the vampire bats of Central and South America are called vampire bats. So, thinking about vampire bats immediately made me think of the world's most famous and infamous vampire, Dracula. Dracula was the creation of Bram Stoker, who in 1897 published the world's first horror novel *Dracula*. Bram Stoker got the idea from his novel from Vlad the Impaler. Vlad the Impaler ruled Transylvania. That region, which is in present-day Romania, has a cultural belief in strigoi. Strigoi are undead vampires, but how would you know a strigoi? Well follow the chaos. There would be belief that you might be haunted by strigoi if one of two things happened. First, after an individual has died, a rapid succession of more individuals dies from the same family. Or after an individual has died, another person in the family becomes terribly ill. But that isn't confirmation, just suspicion. Confirmation comes when the villagers disinter the individual who they believe is a strigoi and look for signs of life like blood around the mouth. Because knowledge of decomposition wasn't so advanced, so seeing this individual with blood around their mouth would be all the confirmation they need that this was indeed a strigoi. They had very clear procedures on how to deal with Strigoi. They carve out the heart from the chest cavity, burn it to ashes, take the ashes, dump them in water and make sure the ashes are completely dissolved, and then they have the individuals or individual who is being plagued by strigoi drink the water. That is how a strigoi is dealt with.

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JG: So, this is all very interesting Michael but what does any of it have to do with bats?

MN: It has to do with globalization. First contact with the New World came in 1492 with Christopher Columbus. As the Spanish and Portuguese explorers delved deeper into Central and South America, they encountered the vampire bat. Having never before seen a bat species that subsisted on blood alone, it must have terrified them. Because if there is this creature that subsists on blood alone what other creatures might exist? With the cultural diffusion you have ideas that are now coming from the New World and they are moving to the Old World, to Europe, and you begin to see ideas begin to shift. It takes time to reach. However, you begin to clearly see a shift in perspective about bats. Now they represent darkness and a bit of evil. Within the Bishop's Palace of Ville de Quimper, France there is a stained-glass window that depicts humans and demons. The demons are tempting the humans. The only sign that they are not human is that these giant bat wings attached to them. What's interesting to note, is that this palace dates back to around 1507, well after Christopher Columbus made contact with the New World. So, this is sort of the beginnings of diffusions. Then we have witchcraft. Bats are beginning to be associated with witchcraft as the centuries go by. A bat circles around a home. The woman inside must be a witch. We will drag her out the next morning and we will burn her as a witch.

JG: Well that seems like a little bit of a strong response. Hopefully things like this aren't still happening today.

MN: Thankfully we've left the witch burnings behind us. However, strigoi are still being found. Three gentlemen, same family, suspected that one of their deceased relatives was a strigoi. And so, they followed proper procedures, and believed that yes, this individual was a strigoi. They promptly did what you do when you have found a strigoi. The most immediate descendant of the individual who had just been desecrated reacted strongly to this, he wasn't happy.

JG: You can see that we're still doing these cultural practices of connecting bats with evil and negativity but, do they deserve this reputation? Are they these tiny little demons we should run for our lives from?

MN: Oh no James. They don't deserve the guano that we throw at them. Our bats, and the bats around the world do so much for us. What they do for us depends upon what they eat. Our bats are insect eating bats and they spread out in a 10-to-25-mile (16-to-40-kilometer) square radius around the park and they support the local farmers in the area by eating all the insects that would devastate their crops and in doing so they protect our food sources. Throughout the country, all the insect eating bats save American farmers four billion dollars a year. That is not an insignificant amount of money. That four billion dollars without those bats would have to be reinvested into pesticide use. Tequila! If you're a fan of tequila, you are a fan of bats. A key ingredient of tequila is agave. Agave plants depend upon bats for pollination and for seed dispersal. Without the bats the agave plant reproduction rate would drop to one three thousandth of a percent which as a consequence would mean tequila prices would increase. Moving to the tropical areas of the globe, in the event of a deforestation as a result of human causes or natural causes, bats are considered a keystone species. Both birds and bats reforest the land. However,

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birds will not fly over that newly cleared land for it represents a security risk for them. They don't want to become prey, food for a bird of prey, and so they will stick to the trees that are surviving. But bats have no fear. They will go right over that newly cleared land and as a result their droppings reseed that cleared area and the forest grow again. These are just a few of the things that bats do for us. So, no James, bats are not little demons.

JG: I guess in my mind this asks us one more question then. We've seen how long bats have been connected to darkness and evil. We've seen how even when we understand the benefits they give to us we don't always recognize them. Does this mean that bats are just doomed? Are they always going to be connected with darkness and evil? Or are there other views out there that we can approach them with?

MN: The same way that we connected them to darkness we can also bring them back into the light. Earlier I mentioned the transformation over time. Europeans all of a sudden see bats as Bram Stoker and Dracula. Well that is proof enough that cultural views can change. If our views changed then, they can change now. With the advent of globalization, we have more information at our fingertips than all the previous generations combined. With that wealth of information, we can draw upon the cultural views from around the globe both present and past. In ancient Babylon bats were seen as the souls of dead people. The Chinese consider bats to be symbols of long life and happiness. And the ancient Mayans saw bats as symbols of initiation and rebirth. There is nothing about those cultures that links bats to darkness and perhaps this is the biggest benefit bats can teach us. They can show us that at times we know enough to fear but not enough to dispel. Don't let fear control you, expand your knowledge, dispel it.

JG: Fantastic, thank you so much Michael. Thank you very much for coming and talking to us today about bats, it is clearly a topic you have a lot of passion for.

MN: My pleasure James. Thank you for inviting me.

JG: For those of you at home, if this episode has inspired you to learn a little more about bats or maybe try and find a bat outfight program, you are always welcome here at Carlsbad Caverns National Park, where the bats are flying between the months of April and October. Alternatively, if that trip is not in the cards for you, take a look online. You might be surprised at just how close you can find a bat outfight to your home. Until next time, whether it be pushing new leads in your own mind or exploring a karst landscape close to home, happy caving!

[Conclusion Music]

GABE MONTEMAYOR: Hello listeners. Thank you for listening to Three Sources of Light. This podcast is produced by the Interpretation and Education Division at Carlsbad Caverns National Park. Episodes are researched, developed, and hosted by Park Guides Anthony Mazzucco and James Gunn. Today you also heard the voice of Michael Naumann. All audio engineering, music, and sound effects are made in house by Park Guide Gabe Montemayor. This

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episode was recorded in January of 2021. For more information about Carlsbad Caverns National Park please visit our National Park Service website at www.nps.gov/cave. Thanks for listening.