

## Vampires We Love, and Why We're Batty Over Them! – S2E11

**Dr. Sandra Rideout-Hanzak** [00:00:08] Hi there. Welcome to a Talk on the Wild Side. Your biweekly tour of all things Wild in Texas. I'll be your host. I'm Sandra Rideout-Hanzak

**Andrew Lowery** [00:00:17] Howdy. Howdy. And I'm Andrew Lowery.

**Dr. Sandra Rideout-Hanzak** [00:00:19] Andrew. How are you doing today?

**Andrew Lowery** [00:00:21] I'm doing all right. I'm enjoying the cool weather. I love October in South Texas. Yes.

**Andrew Lowery** [00:00:26] It's finally like a human temperature outside. It seems like we always talk about the temperature there.

**Dr. Sandra Rideout-Hanzak** [00:00:31] I know.

**Dr. Sandra Rideout-Hanzak** [00:00:32] But it's important because we have to deal with it.

**Andrew Lowery** [00:00:34] Yes. Yeah, because we live here.

**Dr. Sandra Rideout-Hanzak** [00:00:36] Yeah, exactly.

**Dr. Sandra Rideout-Hanzak** [00:00:37] All right. Well, what do we have new going on right now?

**Andrew Lowery** [00:00:42] We have some actually some really awesome this episode. Okay. So did you know that next year, in 2023, it marks the 100 year anniversary of when Texas Governor Pat Neff thought up of the state park board, which would be the beginning of the Texas State Park system.

**Dr. Sandra Rideout-Hanzak** [00:00:56] Really? No, I did not. 100 years. That's pretty cool.

**Andrew Lowery** [00:00:59] 100 years. It's so cool. In fact, Texas is opening its first new state park in more than 20 years, scheduled to open in late 2023. Palo Pinto State Park is looking to be a very exciting prospective and I, for one, cannot wait to go visit.

**Dr. Sandra Rideout-Hanzak** [00:01:14] That's pretty neat. So late 2023 to coincide with the 100 year deal?

**Andrew Lowery** [00:01:20] Yes, ma'am.

**Dr. Sandra Rideout-Hanzak** [00:01:21] That's pretty cool.

**Andrew Lowery** [00:01:22] Yeah, that's the current plan. And our listeners should know that this 5000 acre park has a storied and somewhat scary past. So if you guys would like to hear the scary history of our new state park, stick around until after the credits where the bloopers would normally be.

**Dr. Sandra Rideout-Hanzak** [00:01:34] Oh, that's fun. I want to hear that. And yeah, speaking of scary, we are following along with our spooky theme for October. We earlier

talked to Ashley Walberg about spiders and today we're talking to Dr. Amanda Adams about bats. And it coincides with International Bat Week, which is a big celebration of bats. And it goes from October 24th to the 31st. So it's bat week! Celebrate!

**Andrew Lowery** [00:02:02] Celebrate the sky puppies!

**Dr. Sandra Rideout-Hanzak** [00:02:05] Yeah. So we're going to talk to Dr. Adams. She's had a career in research and conservation of bats, and it's just really interesting stuff. But before we do that, I want to let science teachers know that we're trying to record our interviews now on Zoom also. So there's a visual version of our interview with our guest speaker for each time, and you can find it on YouTube. What we've got there, we've got our Wildcats interview with Dr. Mike Tewes. We've got the Sea Turtle interview with Dr. Donna Shaver. We have our Spiders interview that we just did with Ashley Walberg, our interview with Ben Masters, where he talked about his Deep in the Heart film, the making of that film, and also the Mountain Lion Conservation Initiative that he's involved with. And this one with bats is also going to be on YouTube. And these would make great lessons for you to watch during class. If you're like I say, a science teacher, I think high school, even junior high, um, especially for the nerdy kids. Well.

**Andrew Lowery** [00:03:14] Especially if you have a substitute, you know, I say let's make us the new magic school bus.

**Dr. Sandra Rideout-Hanzak** [00:03:20] I like that. We're going to become the new magic school bus. I love it. So and also for our regular viewers, listeners, please keep reviewing us, writing us. If you haven't had a chance to do that, go ahead and do that. You can leave us a review and a rating both on Apple Podcasts, on Spotify. You can rate us with like aa5 star, of course. Of course, writing. And on Spotify, they don't really offer a place for you to review right now, I think. But you can go into certain episodes and leave a comment. So if there's an episode that you really enjoyed, go on Spotify and give us a comment about that and we'll know, you know, we'll know what you're enjoying, what you're really into. We appreciate those. So I guess without any further ado, let's talk to Dr. Adams about that.

**Dr. Sandra Rideout-Hanzak** [00:04:21] Well, hello, Dr. Adams. Welcome to our podcast. Why don't you introduce yourself to our guests, tell us what you do, what? Your work is.

**Dr. Amanda Adams** [00:04:30] Awesome. I'm so happy to be here. I'm Dr. Amanda Adams. I am the director of research coordination at Bat Conservation International, and I'm also an adjunct faculty member at Texas A&M in the Department of Biology. And I study bats. So I've been studying bats for about. Almost 20 years now. Really crazy to say.

**Dr. Sandra Rideout-Hanzak** [00:04:57] You don't look old enough to be studying anything for 20.

**Dr. Amanda Adams** [00:05:00] Thank you. Thank you. And I specialize in bioacoustics. I love studying their echolocation and behavior and ecology and then how to conserve them and save them.

**Dr. Sandra Rideout-Hanzak** [00:05:15] So bio acoustics, that's been your focus.

**Dr. Amanda Adams** [00:05:19] Yep. I have you're working on their acoustics for a long time.

**Dr. Sandra Rideout-Hanzak** [00:05:24] Yeah, that's neat. I bet you could spend an entire career on that because, I mean, is there a lot known about that or is it kind of.

**Dr. Amanda Adams** [00:05:31] It is. It is one of the kind of the main special roots within studying bats since their echolocation is so, so unique and powerful and there's so many questions. It's like an endless. My Ph.D. advisor used to say it's the gift that keeps on giving, really. And those questions and things that we can learn about their echolocation and how they do it and what how they see the world with echolocation. But then also in the ways that we can use their echolocation to study them and understand them and then use it for our own purposes and things like sonar. And yeah.

**Andrew Lowery** [00:06:13] I actually have like a little side question already, just like what you said there from an evolutionary standpoint, like comparing bat sonar to like the sonar that we see in some marine mammals, how similar is that? Like, did they evolve? Like did they all have a common ancestor that happened to have some sort of echolocation and then it diverged? Or is it something like convergent where it evolved separately multiple times?

**Dr. Amanda Adams** [00:06:37] Amazing question. Yeah, no, it's a wonderful example of convergent evolution. So they don't have they don't have common ancestors that were able to echo communicate. They evolved that they, both groups evolved that separately, which is just incredible.

**Andrew Lowery** [00:06:55] amazing.

**Dr. Amanda Adams** [00:06:56] That's called active sensing. So it's sending energy out into the environment and then it's sensing the environment with self-generated energy instead of all of our senses are passive sensing. So it's, it's pretty unique. Yeah.

**Andrew Lowery** [00:07:12] That's very cool. Great question. I'm glad you asked that that that is amazing that different lines of organisms would develop that on their own.

**Dr. Amanda Adams** [00:07:22] Super cool power of sounds.

**Dr. Sandra Rideout-Hanzak** [00:07:24] Yeah, right. So another thing that bats are good at is pollinating plants.

**Dr. Amanda Adams** [00:07:32] Yes.

**Dr. Sandra Rideout-Hanzak** [00:07:32] But I think they're maybe a little bit overlooked as far as pollinators are concerned. Can you tell us how important they are as pollinators?

**Dr. Amanda Adams** [00:07:39] Sure. So one of the really, really fun things about bats is how diverse they are. And within that diversity, there's over 1400 species of bats in the world. And in the United States, we have about 45, 47 species. And. Almost all of our bats in the U.S. are insectivores versus bats. So there are a couple or a few species that will come up into the southern tips of the country. So the southern bits of Texas will get a couple of pollinating species. The southwest and into southern California will get some pollinating species. And they are remarkable. They're like the Hummingbirds of the night. They'll specialize on particular plants. They're plants that we wouldn't have this that weren't for bat pollinator pollinators. So the most famous one in my book or the most important is tequila. We wouldn't have tequila if it weren't for bats, so. Wow. Now, what else is there to say?

Right. Right. So bats pollinate the tequila agave in the southwest area, and there's a whole bunch of other plants that are really economically important around the globe. So durian is the world's stickiest fruit, but also a very economically important fruit in Southeast Asia. And bats pollinate that plant. So we wouldn't have durian if it weren't for that. There's a whole cookbook that of plants, recipes with plants that are pollinated by bats one that's but they're really important.

**Dr. Sandra Rideout-Hanzak** [00:09:36] So agave and tequila, another bat gift that keeps on giving.

**Dr. Amanda Adams** [00:09:40] Right, exactly.

**Dr. Sandra Rideout-Hanzak** [00:09:43] This this seems like a little bit of a dumb question, but I'm going to ask it anyway. That's kind of my thing. Are all of those guys, are they all night blooming plants or do any bats, do any of them work during the day?

**Dr. Amanda Adams** [00:09:57] Pretty much no. There's there are some like if you go to Australia and you can see big flying foxes like these big fruit bats hanging out in the trees and these they like are kind of squawking at each other and they'll be very kind of active. At during the day. But that's just because they don't sleep well, like they they're out flying around doing their thing at night. So all bats are nocturnal. The plants that they're pollinating are our night blooming or staying open throughout.

**Dr. Sandra Rideout-Hanzak** [00:10:37] Well, I just wondered, but I love those flying foxes. I was a I was a zookeeper during grad school. And I got to take care of some of them and they're just so much fun. One of them was not fun. He was kind of neat. But whatever. The others were.

**Andrew Lowery** [00:10:50] The sky puppies.

**Andrew Lowery** [00:10:55] So I've kind of been reading that there's been a growing problem in the recent decades for the bats in the U.S. with an issue called White Nose Syndrome. Do you think you could tell us a little bit about white nose syndrome, please?

**Dr. Amanda Adams** [00:11:07] Yes, it's really depressing. So it is white nose syndrome is caused by a fungus, pseudo gymnostoma disturbance. We just call it PE because it's a mouthful. And this fungus arrived in the U.S. in about 2006 in a cave in New York. And by 2007, that colony was decimated, carpets of dead bats on the ground. And it took a really long time to even identify the fungus, name it, figure out the mechanism of why these bats were dead in this cave. And in that time, that fungus spread across the U.S.. And so today it is in almost every state from coast to coast and even out to California, and it's in particular killing and affecting hibernating bats. So it's this fungus is cold loving. So it's you know, it lives in caves. And when the bats go in to hibernate for the winter, they're getting infected by this fungus. It starts growing on them, kind of feeding on their skin. And so then they're getting itchy, they're losing water. And because of this the effect of this fungus, they're not they're waking up more during the winter and they're getting dehydrated and they're burning through their fat stores too fast to make to survive the winter. So for a long time, we thought that it was just going to stay in like the parts of the country that had like real winter. So, you know, like, what's our Texas like? Why would it come down to Texas where? We don't have real winters usually, and that's not the case. Like I said, it's spread from coast to coast. It's in Canada. And like in Texas, I wrote down, we have it's affecting it's in 37 counties in Texas now. So we first we Texas was really good at monitoring early

on so started monitoring in 2011 and got the first positive sample for the fungus in 2017. And now there's 37 counties that have the fungus. And the main bat here that's being affected by it is Cave. My artist is cute, cute little guy that lives in caves here and in the U.S. Broadly, there's two species that were just proposed for emergency endangered listings, the northern long eared bat and tri colored bats, where both were both proposed as endangered because of white nose syndrome. So like some of our most common bats are now endangered. It's really heartbreaking.

**Dr. Sandra Rideout-Hanzak** [00:14:16] So it came from another country, another continent.

**Dr. Amanda Adams** [00:14:20] Yep, yep. So it came from Eurasia. So it's really interesting that they're the same fungus after we found it in the U.S., was identified in caves in Europe and Asia. And but the idea is that that fungus is native there. So the bats have adapted to it, evolved with it over the thousands, hundreds of thousands of years. And so they've been able to they're able to survive with it now.

**Dr. Sandra Rideout-Hanzak** [00:14:55] Yeah. Is there any hope? I mean, for.

**Dr. Amanda Adams** [00:14:59] Uh, there's. There's one species in the U.S. that we think there is. There's a paper out that shows that there might be some signs of adapting to it. But kind of the issue with those species that were listed as endangered, like their colonies, have collapsed by over 90%. One of those species, the colonies, have declined by 99%, that they just don't have time to adapt, even if they physically were capable of it. Yeah.

**Andrew Lowery** [00:15:33] So I have another little side question. So I'm sure, you know, a majority of the populations we're talking about are wild populations of bats. Is this treatable in captive populations? Has there been any captive populations that, you know, we've been able to monitor the progress of this in a controlled environment?

**Dr. Amanda Adams** [00:15:50] Yeah, there's, and this is what's actually the most frustrating part is that there's been some really promising treatments for it in lab settings. So being able to kill the fungus in a petri dish, being able to treat bats in captivity and keep them alive through the winter and they'll go. But they weren't they're not scalable to this point. So there hasn't been anything that's come out that has been successful at being able to go and treat an entire colony. There's trials of things going on right now, but a lot of the research now that we're, you know, over a decade into this is really focusing on how do we support the survivors? You know, people are still working on how to get rid of the fungus, but it's more how do we help the bats survive the fungus and just accept that it's part of our environment now.

**Dr. Sandra Rideout-Hanzak** [00:16:55] So, yeah, so just continue to monitor and continue to work on things.

**Dr. Amanda Adams** [00:17:00] Yeah. So there's, there's still a lot of work going on and just knowing where it is, how populations are doing. So a lot of it is continuing to monitor that populations around the U.S. and Canada. And I mean, there's been some really good things have come out of it. So the North American Bat Monitoring Program is a project that basically was spurred because of white nose syndrome and needing to know the status and trends of bat populations around North America because of the impact of white nose syndrome and not knowing that when it first hit. And so now we have this amazing program that is has standardized methodology, and it's housed at USGS. And now we

have a much better idea of what is going on with our bat populations, those that are affected by white nose syndrome and others as well. Okay. Well. That's a good thing, right?

**Dr. Sandra Rideout-Hanzak** [00:18:09] Right. Let's change the subject a little bit. We love our spooky culture, scary movies, all of that stuff. And there's so many myths about vampire bats. I know I've been hearing that vampire bats are moving into Texas. I don't even know if that's true. So is that true? Are they here or are they moving here? What's going on?

**Dr. Amanda Adams** [00:18:33] Yeah. So vampire bats, the probably the world's most famous bat. Of the 1400 species of bats in the world, there are three species that drink blood. So there are three vampire bats. Two I've never seen. They're very kind of cryptic and rare. And then there's one that is aptly named the Common Vampire Bats (*Desmodus rotundus*); this common vampire bat is common. And its home range right now is limited to South and Central America and up into Mexico. So as of yet, it is not. Its range does not extend into Texas or into the US anywhere. So we do not have vampire bats.

**Dr. Sandra Rideout-Hanzak** [00:19:25] Okay. Good to know.

**Dr. Amanda Adams** [00:19:28] That being said, the vampire bat is doing very well in the world and its range is expanding north. So there are efforts to monitor. If when they extend into the southern tip of Texas. But it hasn't happened yet that I've heard of.

**Dr. Sandra Rideout-Hanzak** [00:19:51] How big a deal are vampire bats for? Like for you, livestock for pets for people, too. I mean, would they bite a human if they had the opportunity? And is it a big deal?

**Dr. Amanda Adams** [00:20:05] I think that's the key. If they had the opportunity. So they will feed on any mammal blood. But, you know, they're going to go for the easy stuff first, like a giant cow lazily standing in a fields is a much better resource than humans tucked under blankets in a house, in a room. Like so it's more like if the opportunity presents itself, like if you're sleeping out in the middle of a fields, not in the tent, then maybe. Yeah. Still even that you're less of a target than a big old cow or something. Sure. It's so. Yes, they technically would drink human blood, but it's pretty rare and. They are I mean, any sort of interaction between organisms with blood. There's a risk of disease transmission, though. And with all mammals, we are also susceptible to rabies. So just like a dog can have rabies, that can have rabies, a human can have rabies. So when they're feeding on blood, there is that increased chance of rabies transmission. But it's actually very rare, very uncommon in bats and especially like healthy bats that are out flying around doing their thing. Then there's also a lower chance that they're going to be sick. But obviously, you don't want anything messing with your blood. And the same thing for livestock and pets. So they that vampire bats typically will only drink about a tablespoon of blood a night. So they're not going to be draining. Anything, right? Like no organisms are dying of blood loss from. From vampire bodies unless they're already really sick, I guess.

**Dr. Sandra Rideout-Hanzak** [00:22:10] Sure.

**Dr. Amanda Adams** [00:22:12] Okay. Yeah. Well, I mean, it's, it's more like, like you said, like creepy factor. Like, I love bats, and I definitely wouldn't want a vampire bat degree. So it's more of a mental thing than than it actually being a true research. I think most farmers are going to. It's more of an annoyance.

**Dr. Sandra Rideout-Hanzak** [00:22:35] Yeah, yeah, yeah. That makes sense.

**Andrew Lowery** [00:22:38] So if I understand you correctly, we should all panic.

**Dr. Amanda Adams** [00:22:44] Yes, that's what I said. No, no, no. I was saying, if you go even. It's funny. Like, vampire bats are really cute. They have very sweet little faces. But then if you Google vampire badly, the pictures of them are like.

**Dr. Sandra Rideout-Hanzak** [00:23:01] Like blood, you know.

**Dr. Amanda Adams** [00:23:02] They try to make them scary, you know.

**Dr. Sandra Rideout-Hanzak** [00:23:04] Like. Yeah.

**Dr. Amanda Adams** [00:23:05] But they're, they're like this big. They're like, yeah, they're all like four inches long. Like, they're not big.

**Dr. Sandra Rideout-Hanzak** [00:23:13] Wasn't there like a couple of months ago? There was like a little a video on all over social media of a little guy... Was it capybara?

**Andrew Lowery** [00:23:23] The capybara! They were chasing capybara walking.

**Dr. Amanda Adams** [00:23:27] Gosh, I have not seen that.

**Dr. Sandra Rideout-Hanzak** [00:23:28] You got to check it out. Like it's the cutest little thing because it looks like a frog following along after.

**Dr. Amanda Adams** [00:23:34] Yeah, they're so cool. Like, they're most about, you know, like bats are meant to be in the air now on the ground. Right. But vampire bats have evolved, and they're like the best on the ground. They have bigger sums and the way they move, you got to look up the video of the vampire bat on a vampire bat sized treadmill. They can they can run its way up to 2.5 miles per hour.

**Dr. Sandra Rideout-Hanzak** [00:24:04] Yeah. You got to look for the video with the capybaras because at first I was like, that's a frog. That's a frog jumping along there. And then it was like, okay, it's a vampire bat.

**Dr. Amanda Adams** [00:24:14] That's cool. That's awesome. Yeah, they move unlike most bats.

**Dr. Sandra Rideout-Hanzak** [00:24:19] Yeah. So were you always interested in bats growing up? How'd you get into bats?

**Dr. Amanda Adams** [00:24:27] No, I wasn't, actually. I always was into animals and mammals. I thought I wanted to be a zookeeper. Is work with animals in some way? You know, I didn't really know what that looks like or meant as a kid. I used to think I wanted to be like Jane Goodall and like studying primates. And so then I studied abroad in Costa Rica when I was an undergrad, and it changed my life. We did a night of catching bats and then I was like, Oh, that was cool. I got to actually like see an animal up close. And then I did my independent research project on bats. And yeah, I just kind of quickly got obsessed. I fell in love, and now my life is that's. That's all the time. And I wouldn't have it

any other way. My dad thinks it's rebellion. He the only way I thought about bats, he hated bats like we would buy, like, rubber bats at Halloween, like. Make fun of him. And now I get given those every year and I love it.

**Dr. Sandra Rideout-Hanzak** [00:25:38] That's great. I love that.

**Andrew Lowery** [00:25:40] It's just a phase.

**Dr. Amanda Adams** [00:25:41] Yeah, that's right. She'll grow out of it. No, never.

**Dr. Sandra Rideout-Hanzak** [00:25:48] Working with bats that's probably has led to a couple of blunders. Do you have one that you'd like to share?

**Dr. Amanda Adams** [00:25:54] Yeah. Lots of things happen at night. I'd say I was I was trying to think, you know, what were the most entertaining? I think what really first comes to mind are the things that I catch in the nets that aren't supposed to be in there.

**Dr. Sandra Rideout-Hanzak** [00:26:12] Oh, really?

**Dr. Amanda Adams** [00:26:13] So we put a mist net to the same types of nets that are used to catch birds, but we use them at night, practically invisible. Even humans can't see them. So I've caught a man on a bike.

**Dr. Amanda Adams** [00:26:27] If you ever caught it. You know.

**Dr. Amanda Adams** [00:26:29] We've had a truck drive through. What? Not that long ago. That was disappointing. The worst. So was. I thought I was going to catch a horse, but luckily we did not catch the horse. It ran right through and just tore a hole. Oh, my gosh. By a hole in the nets. So those are definitely the worst. We're catching things that were not bats at all. One time we were netting over a river and this is up in Saskatchewan, Canada. And so it was the middle of the summer, but it got freezing and it was so cold. So I like bundled up outside of the river and are waiting to check the net and it's my turn to go check the net and I go and look and there's a great horned owl in the net. And I was like, Oh no, I am not taking that out. I do not have the training for owls. You know, 20 times the size of a bat. But luckily, as I was waiting for my coworker to come and help me, the owl managed to get itself out of the net, but it fell into the river. And then he got it out of the river really quickly and got up to the opposite bank of where I was. And I swear, he just kind of like puffed up and like shook off all the water. And then he turned his head around and glared at me and then, like, waddles into the grass on the other side of that whole bottom.

**Dr. Sandra Rideout-Hanzak** [00:28:01] Is that right?

**Dr. Amanda Adams** [00:28:03] Yeah. It's all those in the net things that shouldn't be in the nets that are really the biggest bat blunders. Lots of other stories with people but you know yeah.

**Dr. Sandra Rideout-Hanzak** [00:28:22] That owl was like, "how rude?" Funny. So the man on the bike, what was his reaction?



**Dr. Amanda Adams** [00:28:31] I think he was not sober, and this is all in Spanish and we're like apologizing and he's like grumbling and confused and we just like are taking really the bike out of the net.

**Dr. Sandra Rideout-Hanzak** [00:28:54] You got the same look that you got from the owl? That's funny. Oh, my gosh. I can't imagine, putting up a mist net at night, what kind of things you might catch.

**Andrew Lowery** [00:29:06] I mean, that had to be like a Men in Black type experience. Like, all of a sudden you're just riding, you know, yourself home from the bar, you get caught in a net, lab coats come out. I know you guys probably weren't in lab coats. But I'm picturing it in my mind.

**Dr. Amanda Adams** [00:29:24] Definitely a better image than it probably felt like, yeah, he probably tells the story very differently than we do.

**Dr. Sandra Rideout-Hanzak** [00:29:30] I would love to hear his version of the story, if he remembers that night. Well, that's great. Is there anything else that you'd like to share with our audience about bats or your career or anything?

**Dr. Amanda Adams** [00:29:44] I think really just the opportunity to spread the word of how important bats are and that they really need our protection and conservation. And that also involves protecting their habitats. And I guess keeping wildlife in their wild areas is best for their health and our health. So one of the big things that we are focusing on now is this concept of one health, in that human health relies on healthy environments, and animal health relies on healthy environments. And so it's kind of these three facets of animal health, human health and environmental health. And with all of that together, is one health, so we can't have one without the other.

**Dr. Sandra Rideout-Hanzak** [00:30:35] Oh, that's such an excellent point. I love that. And, you know, we really didn't talk about it. Alright. They're not so much doing pollinating here in Texas. What are they doing? What benefits do we get from that?

**Dr. Amanda Adams** [00:30:52] Insects. They are eating so many insects. Yeah. I mean, every farmer out there should be thinking bats in the Central Valley in California, farmers put up that houses for them and they eat so many agricultural pests, they're the number one predator of nocturnal insects. They eat corn, earworm moths, predators or insect pests for pecans. All these key crops in Texas they are all eating those pests. So there is huge, huge benefit environmentally and economically. They will eat insects, will eat mosquitoes. Some of the main research on it is came out of Australia. So it depends on the bat species is going to be a smaller bat this year. Want to eat that tiny, tiny, tiny mosquito? I mean, I guess if you offered a bat, a moth versus a mosquito, they would take the moth. It's like a steak versus a shrimp. Well, but part of it is, it's still a bit of an unknown, because how we used to do the diet analysis was to take bat guano and break it up under a light microscope and just look for fragments of insects. So you'd be like, Oh, here's this part of a foot that belongs to a grasshopper or something, you know, like looking for fragments and identifying that to what the bat. So even if they ate a mosquito, there wouldn't be a whole lot coming out to the other end to identify. That makes sense. So now with molecular techniques, they are seeing mosquitoes, other strains in bat diets. It's just the question of how much are they the going to be the solution to knocking down mosquito populations? Probably not spread them a little bit.

**Dr. Sandra Rideout-Hanzak** [00:33:02] Sure. Sure. But putting a really big dent in the agricultural pests. That's huge. Well, thank you so much for spending time with us today. I really enjoyed hearing your best stories and learning all about that.

**Dr. Amanda Adams** [00:33:17] Yeah, well, thank you for having me. Andrew, Sandra, so nice to meet you. And I guess there's always, there's tons of resources out there for those of you guys living in Texas. There's a lot of great sites to go out and watch bats.

**Dr. Sandra Rideout-Hanzak** [00:33:33] Yeah. Tell us about those.

**Dr. Amanda Adams** [00:33:35] Texas Parks and Wildlife Department has a website for the sites where you can go watch bats. And there's also a really cool site with a list of all of our bat species in Texas "batsoftexas.com" and there's also a lot of resources on bats for at "batcon.org".

**Dr. Sandra Rideout-Hanzak** [00:33:53] Got it. We'll check those out. Appreciate it. All right. Well, thank you so much and we'll talk to you later.

**Dr. Amanda Adams** [00:34:09] All right. Thanks, guys.

**Andrew Lowery** [00:34:12] And remember, don't feed the wildlife.

**Dr. Sandra Rideout-Hanzak** [00:34:16] A Talk on the Wild Side is a production of the Caesar Kleberg Wildlife Research Institute of Texas A&M University-Kingsville. Funding for this project is provided by the Harvey Weil Sportsman Conservationist Award by the Rotary Club of Corpus Christi. Podcast artwork is created by the talented Gaby Olivas. Tre' Kendall contributes with his creative talent as well. And editing is conducted by Andrew Lowery.

**Andrew Lowery** [00:34:41] Howdy, howdy, Superfans. Thanks for sticking it out. Here's the haunted history of our new state park. The events of the story are entirely based in reality, but some of the atmosphere qualities may have been exaggerated. This is somewhat of a dramatization. You have been warned the year 2008, the location, a small Texas bar almost empty. The night has been long and the bartender is serving drinks. Last call not far away. It's a stormy night outside and lightning strikes in the distance as a car slowly makes its way into the parking lot. A man exits the car and stares at the neon open sign next to the door as it flickers. Inside the bar, a man and his daughter share a memory over a cold beer. The father glances past his daughter to the bartender, a look of remorse in his eye. His daughter notices and frowns. But before she can say anything, a man stumbles to the doorway. Everyone in the bar turns to see an unfamiliar face, a not so common event in a town this small, the whole of the bar watches. No one can exactly hear what he says to the bartender, but she seems to be taken aback. But she still serves him a drink. The man takes a seat at the end of the bar and stares nervously at the jukebox in the corner of the room. The father, not one to know. A stranger, makes his way over to the man who, through strange sips of his beer, continues to stare at the jukebox so intently so he doesn't even notice. Father, sit down. Well, howdy, sir. How are you? This. But before he can finish, the man turns to face him. Fear pours down his face in a cold sweat. The man, almost shaking, drops his beer with the clanging, almost breaking the glass, grabbing father's hand. They are coming. They can hear. See. Touch us. The jukebox. It works for them. They are watching us. They know. Taken aback, Father wrenches his hand free and stands up. No one seems to have noticed in the bar. His father looks around as his gaze returns to the man. He has already turned his attention back to the jukebox, though father

returns to his table taken aback. His daughter looks at him with concern but unable to dissect what has just happened. He remains quiet. The night goes on and the bartender has gone through last call. But there still sits the man. The bartender asks. The man will wrap it up so she can close the bar. At this point, it's only the four of them left in the bar. Father, having had a few drinks, decides to ask the man again to leave, but has met with muttering about finishing his beer. Another 20 minutes go by and the man still has not moved. Angered by the refusal to leave and out of fear for the bartender safety. Father retrieves a shotgun from his truck and reenters the bar. Now what happens from here is debated. Some say that Father walked in and shot the man in the back of the head. But some say the man attempted to take the gun from father and ended up shooting himself. Whichever occurred, no one will know but the four of these people, as the police, were not called for some time after. Now, from these events, lawsuits sprang forward, and from those came the land that is now becoming our newest state park.