Update on CWD in Texas – S2E15

Dr. Sandra Rideout-Hanzak [00:00:08] Hello. 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 [00:00:15] And I'm your co-host, Andrew Lowery. Howdy. Howdy.

Dr. Sandra Rideout-Hanzak [00:00:18] Hi, Andrew. What's going on?

Andrew Lowery [00:00:20] Oh, not too much, Dr. Rideout. Just craziness as usual.

Dr. Sandra Rideout-Hanzak [00:00:25] Craziness of the season.

Andrew Lowery [00:00:27] I think we put the wild in wildlife around here, so.

Dr. Sandra Rideout-Hanzak [00:00:31] That's right. I like that. That should be our new catch phrase.

Dr. Sandra Rideout-Hanzak [00:00:37] Yeah, let's do it. We have a new tagline. So do you have a news story for us today?

Andrew Lowery [00:00:43] I do. You know of the wildlife underpass over on Highway 77. Right?

Dr. Sandra Rideout-Hanzak [00:00:49] You know, I don't really know much at all about it. I just know that there are underpasses there, so you might want to fill me in.

Andrew Lowery [00:00:55] Okay. Well, more or less, that's what it is. But about a year ago, several groups came together, most notably Texas Parks and Wildlife Department. But there were also groups such as our CKWRI and East Foundation that put information together that helped to make the decision to put these things in place. And a highway underpass was put north of Raymondville on Highway 77 in south Texas. The primary reason for the underpass was to help reduce vehicle related fatalities, wildlife, most notably of our beloved ocelots and ocelittles.

Dr. Sandra Rideout-Hanzak [00:01:27] Ocelittles? Is there a pun coming?

Andrew Lowery [00:01:29] You should trust your instincts, Dr. Rideout. Well, as we all know, ocelots are a whole lot of cat, but their kittens are just a little..

Dr. Sandra Rideout-Hanzak [00:01:38] That's bad. What am I paying you for?

Andrew Lowery [00:01:40] The puns. Clearly, it's the puns.

Dr. Sandra Rideout-Hanzak [00:01:44] And you know, I'm sorry, but I've seen ocelots. I have bigger house cats, so maybe we should... Let's petition to change all of their names.

Andrew Lowery [00:01:54] Yes, Ocelittles is much better

Dr. Sandra Rideout-Hanzak [00:01:54] From now on.

Andrew Lowery [00:01:55] Hashtag Ocelittle, guys.

Dr. Sandra Rideout-Hanzak [00:01:56] It's really not much of a cat at all. I mean, super cute and endangered and small, and I want to save them, but they're just tiny little guys. So back to the underpasses. Are these underpasses accomplishing their goals, or what?

Andrew Lowery [00:02:11] Yeah. So far there's been evidence that the underpass is accomplishing exactly their designated goal. So much so that there's actually plans for 23 more.

Dr. Sandra Rideout-Hanzak [00:02:19] 23 more. Wow. So how do they know this? Are there cameras there or what?

Andrew Lowery [00:02:23] The camera traps have been ongoing in it. They had a period of time, too, where they weren't really seeing animals utilizing it. It was kind of causing some concerns, but it just took them a while to figure out that it was there--that it gave you an A to B alternate course instead of going over the highway, which is always a bad decision for an animal.

Dr. Sandra Rideout-Hanzak [00:02:41] Right? Yeah. Well, there's got to be a learning curve to that sort of thing. Especially, I mean, there had been construction there for a while and most animals were probably trying to avoid that area for a little while. So, yeah, it's going to take a little while for them to find it, I guess.

Andrew Lowery [00:02:56] Yes, I would figure though it would then become generational knowledge.

Dr. Sandra Rideout-Hanzak [00:03:00] I would hope so; that would be cool if it did. I'm sure somebody down the hall from us is researching that.

Andrew Lowery [00:03:11] Someone's got a whole thesis they're writing and pulling their hair out about.

Dr. Sandra Rideout-Hanzak [00:03:17] That's cool. That's very cool. I'm thrilled to hear that because even though they aren't much of a cat, we like them and we hope that they stick around.

Andrew Lowery [00:03:27] And their largest natural predator, well, un-natural predator is a car.

Dr. Sandra Rideout-Hanzak [00:03:32] Yeah, yeah. Okay.

Andrew Lowery [00:03:35] Yeah. What lovely guest do we have for our audience today, Dr. Rideout?

Dr. Sandra Rideout-Hanzak [00:03:39] Well, today we're going to be talking to a veterinarian with the Texas Parks and Wildlife Department. His name is Dr. Hunter Reed, and he is going to give us an update on CWD; that's the chronic wasting disease. Last year we talked to Mitch Lockwood, who also works with our Texas Parks and Wildlife Department. We talked to him about chronic wasting disease. So if you all want to go back and look at last year's episode on CWD. But Hunter, Dr. Reed, is going to give us an update on what's new this year with CWD in Texas. So stick around.

Well, hi there, and welcome to our program. We are talking today to Dr. Hunter Reed of the Texas Parks and Wildlife Department. Dr. Reed is a wildlife veterinarian for them. So why don't you start, Dr. Reed, by telling us what you do for TPWD.

Dr. Hunter Reed [00:04:40] Well, thank you for having me on today. Like you said, I'm Dr. Reed, one of the wildlife veterinarians at Texas Parks and Wildlife. It's very fun job. I'm originally from central Florida. I went to school at Cornell University, then University of Minnesota for master's of public health and veterinary degrees, but came down here to become a field epidemiologist for Texas Animal Health Commission, and ultimately switched over to the Parks and Wildlife side, where I work with bunch of different species like bats, bighorn, sheep, horned lizards and waterfowl, and of course, deer. I do a lot of different things at the Parks and Wildlife Department. And much of my time, 70% of it spent on the road giving presentations, training staff and landowners doing diagnostic testing in these investigations, but also doing cooperative wildlife research with universities across the country.

Dr. Sandra Rideout-Hanzak [00:05:36] Very interesting. That does sound like a fun job. Really what we want to talk to you about today is CWD. We did about a year ago, a program, an episode, I should say, about CWD: that's chronic wasting disease. And we talked to Mitch Lockwood, and Mitch is the state's big game program director with Texas Parks and Wildlife Department. We were hoping that you could give us an update on CWD, the state of it now, because it has been a year since we talked to Mitch. And it's you know, I know it's developing probably daily you guys. Or things may be changing for you really quickly, but if you could, for folks who didn't hear our episode with Mitch and who might not be familiar, could you just start off with what CWD is and what causes it, etc.?

Dr. Hunter Reed [00:06:29] Yeah, absolutely. I work closely with Mitch, and it's certainly an evolving issue here in Texas. So, CWD is, it's always a fatal neurodegenerative disease. Susceptible species in Texas include white tailed deer, mule deer, elk, sika deer and red deer. So the agent of that disease is a prion, which is a misfolded protein. These well, actually, the prion protein in its normal shape serves a lot of different cellular functions. None has been particularly isolated as the individual function, but it has roles in cell signaling, ion transport, neuroprotection, including others. But when that, when that structure, 3D shape, that prion is changed into its abnormal or infectious shape, this can lead to a biological chain reaction resulting in the conversion of other normal prions to their abnormal or infectious state. Over time, that can accumulate into, accumulates and forms plaques of these abnormal prions, and it can lead to neurological damage, tissues and cause clinical signs such as in coordination, depression, loss of fear and eventually results in death.

Dr. Sandra Rideout-Hanzak [00:07:48] How quickly does the disease progress? Once, you know, once an animal gets it?

Dr. Hunter Reed [00:07:54] Yeah. So typically for white tailed deer, at least, it takes about 18 to 24 months after infection before the animal starts to show clinical signs or essentially “symptoms” of the disease. And then once they start to show clinical signs, it can be a rapid, they basically, they rapidly, what do you want to say?

Dr. Sandra Rideout-Hanzak [00:08:31] Deteriorate?

Dr. Hunter Reed Right. And then elsewhere. Yeah, for elk, other species like red deer, that can take on the order of a couple of years more. But still the end result is the same.

Andrew Lowery [00:08:32] Okay. So. So you mentioned elk and red deer. I have a question. Has there been confirmed cases of Peire David or Barasinga as well?

Dr. Hunter Reed [00:08:42] I don't actually know. I don't deal with those in Texas, but I do, I believe not.

Andrew Lowery [00:08:48] Okay. I just know that they're also cervids. So I would assume that they had some sort of susceptibility to it.

Dr. Hunter Reed [00:08:54] Yeah. That brings up an interesting point that not all cervids are actually susceptible to the disease. So as of right now, natural infections have not been documented, in say axis deer, which are another free ranging cervid within Texas. However, that may change with research that we're actually contributing to.

Andrew Lowery [00:09:17] That's very, very interesting. How widespread is CWD in Texas right now, and where has it been newly discovered over the past year?

Dr. Hunter Reed [00:09:26] Yeah, so still a bit like any other infectious agent can be spread through a variety of different routes. CWD is pretty easily transmitted through direct animal contact or life or movement that also can be spread through environmental contamination, through infected feces, urine, saliva into the surrounding environment. So the combination of two has led to a kind of expansion of the disease across the United States, but also international. Currently within Texas, though, we have 16 Texas counties affected or have had a detection of CWD, and of those animals detections are around 410 testing positives. 80% of those are from captive facilities and the remaining 20% have been found in kind of free range settings. And then right now in Texas, we actually have ten zones. Seven of those have free ranging deer, free ranging positive deer. Six of them have been created in response to detections in 15 different captive white-tailed deer breeding facilities. And then just in the past year, we've added on two new captive deer facilities that have been infected with CWD, and one of them was found in Lampassas. The other was found in Gillespie. And we detected those through just regular post-mortem surveillance, testing of lymph nodes and objects. But possibly as a result of changes that we underwent last year, and or breeder regulation or rules for their baseline surveillance, this year we changed that from 80% post-mortem testing requirement to 100% so that increased our ability to detect the disease in those facilities. And just in the last couple of weeks, we've had another recent detection at an animal at breeding site within the Hunt County, CWC zone, which is near the positive breeding facility there.

Dr. Sandra Rideout-Hanzak [00:11:34] Okay. So you mentioned breeding facilities, and this might seem weird to folks from other states, but in Texas we have a lot of deer breeding facilities and surely CWD is affecting them. How are they dealing with it? What steps are they taking to deal with the disease?

Dr. Hunter Reed [00:11:53] Yeah. Yeah. No. Texas certainly has a lot of captive deer breeding facilities. In fact, it's somewhere around 800 across the state. And so just because of the nature of those facilities in terms of having a substantial amount of movement and also interconnectedness between those breeding facilities here within Texas, there is an inherently greater risk of transmission just because of that high degree of movement. So that can ultimately mean that if that facility does become positive through

our epidemiological investigations, you can quickly get dozens or sometimes hundreds of facilities that become exposed to CWD positive animals.

Dr. Sandra Rideout-Hanzak [00:12:42] Okay. Well, you mentioned earlier that there's 100% testing now after an animal dies. I wasn't sure if you were talking about an animal that's harvested through hunting or just at a breeding facility. Can you give a little more detail about that? And also what other steps is Texas Parks and Wildlife doing to get it under control in the state?

Dr. Hunter Reed [00:13:09] Yeah. Yeah. So, yeah. So when I was talking about 100% post-mortem testing there that was restricted to the animals that die naturally within breeding facilities. Currently, the release sites don't have 100% testing requirements, just within those breeding facilities. But to kind of account for the greater risk of transmission and then also propagation of the disease, animals within breeding facilities have a higher density there. And part of that is they're over less area. So because you have a higher degree of animal contact and also a smaller area that you're spreading those prions over, if they are present, it can lead to a rapid increase in the prevalence of the disease within that facility. So to kind of account for all of that, we've made quite a few key changes to our rules in the last year, just last fall, actually. So part of that was 100% post-mortem testing requirement. We also instituted a minimum mortality rate of about 5% across that herd. If they don't meet the 5% additional testing, ante-mortem testing requirements of tonsil or rectal tissue for CWD have to be performed for five animals for each one mortality missed or needed. Also, we made our, we beefed up our submission requirement. So all samples have to be submitted within seven days so that we can respond to positive detections in more timely fashion. And then also we do we have added ante-mortem testing of 100% of the deer going to release sites. So all deer must have a “not detected” test result before they get transferred to a release site. That's just to assure that those animals have a lower risk of being infected. It certainly does not mean that that individual animal is free of CWD. So all of those are beneficial in increasing our overall detection probability and allows us to find CWD where it exists sooner so we can better contain and protect captive and free ranging deer populations.

Dr. Sandra Rideout-Hanzak [00:15:40] Okay. Can you can you give it an estimate or a rating or something about how easily spread this is? I think we might call that how contagious it is if we were talking about a pathogen, but we're talking about a prion here. So contagious probably isn't the word. I don't know what word to use, but how easily is it spread from one animal to another?

Dr. Hunter Reed [00:16:02] Yeah. So that can be a hard question to answer in certain parts of the United States where you can have higher deer densities, where you might have movement of animals over larger areas, and that can obviously vary on the species too. So white tailed deer tend to have smaller home ranges compared to elk, mule deer. So that can be a contributing factor influencing the overall ability of that disease to propagate. But also, genetics plays a role. We're finding out in Texas this year that at least within our free ranging populations, we tend to have more, less susceptible genotypes that make those deer relatively more resistant to infection of chronic wasting disease compared to more northern populations, which tend to show a little bit more susceptibility to it all. So the conglomerate of those factors can really influence how it develops or mushrooms. If you want to say within the population currently within Texas right now, some of those factors of lower densities out at least in the Trans-Pecos and Panhandle and then also some more, quote unquote, resistant genotypes that seem to really help us and kept the

prevalence relatively low and stable over time, at least in the past ten years since it's been detected.

Dr. Sandra Rideout-Hanzak [00:17:34] Okay. Interesting.

Andrew Lowery [00:17:36] So if CWD were to become even more widespread, like really widespread and common in Texas, what are the implications for our economy or wildlife and our natural resources?

Dr. Hunter Reed [00:17:47] Yeah, so there's quite a few effects. Obviously, the initial biological effects really are that you're going to have, you're going to end up with animals that are dying. So animals are somewhere on the order of around four times more likely to die than those that are not infected. And then also that increased mortality means that we can actually end up with shifts in age structure. So it tends to shift the age a little or the average or median age a little bit lower. So that means you'll actually end up with less trophy animals on that landscape. And this can all have a whole sort of downstream or indirect effects economically. Hunters have actually been shown to avoid areas infected with CWD, which can imperil certain rural economies and communities that depend on that for their more seasonal income. Obviously, there's associated costs of managing and surveilling the disease for Texas Parks and Wildlife. So we do have to respond to it. And that often means forming check stations, hiring seasonal staff and full time staff, and then also paying for the testing alone. And then also some people at least have suggested that land values may have been detrimentally impacted. However, this really hasn't been seen consistently across Texas, but is a kind of an anecdotal report. And then you also have kind of like the human related effects. CWD-positive animals are more likely to actually be hit by vehicles. So that can present more of a public health risk. You can also have positive animals, especially as it relates to El Paso in the Franklin Mountains, where we do have higher prevalence of the disease, animals are not afraid of humans. They'll be wandering through yards. That can obviously, obviously be a little bit distressing if those animals have to be subsequently removed. And then also it could be dangerous for any people that come in close proximity of those animals. And then also the the, what do you want to say, that the jury is out on whether or not CWD is actually zoonotic from recent research? Actually out of Texas, it appears that these North American strains actually show some of the greatest capacity for interspecies transmission. And then also some reports within non-human primates have suggested that CWD can actually be transmitted through the oral route. So as of right now, the public health authorities really still say to have caution and avoid eating the meat out of positive animals.

Dr. Sandra Rideout-Hanzak [00:20:49] Okay. Yeah, that's kind of scary. Every time I talk to a friend who or, you know, every time this comes up with a friend who's not a wildlifer, they ask me about this. And of course, I'm not an expert, but they always ask that question, “can people get it?” And I’m not really sure what to respond, but so I guess the answer is the jury's still out on that, huh?

Dr. Hunter Reed [00:21:15] Yeah. Yeah. No, hopefully we start to learn a little bit more because I know that the disease is starting to spread across the United States. It's starting to reach higher prevalence within the states that are infected. So it's going to be a growing and ever more present issue in everyone's day-to-day lives, especially hunters.

Dr. Sandra Rideout-Hanzak [00:21:36] Yeah. And, you know, I hadn't even thought about animals being infected being more likely to be hit by a car. I guess that's just because they

wouldn't have as fast reflexes, and be as strong and fast enough to get out of the way. Is that it?

Dr. Hunter Reed [00:21:53] Yea. It obviously affects just the basic motor functions of that animal. But also there's been evidence to suggest that it just actually impacts the overall immune state. So some of these animals actually have concurrent pathologies. A lot of times that can be associated with pneumonia, which just inherently makes them less healthy, more vulnerable, not just with car collisions, but also to being actually harvested and then also being predated on whether that's mountain lions or coyotes or what.

Dr. Sandra Rideout-Hanzak [00:22:32] Wow, there are so many cascading effects that you just don't think about.

Dr. Hunter Reed [00:22:38] Yeah. Yeah, no, it's one of the more complex issues. And because of the Texas being almost 95 plus percent private land, because it impacts so many people, a lot of people have varying perspectives as the importance of it. But we really try and work with everyone, private and the public land that we do have, to try and manage this disease as proactively as we can.

Dr. Sandra Rideout-Hanzak [00:23:10] Yeah, that's it's got to make it a little more complicated that there are so many private landowners throughout Texas with all, like you say, varying perspectives. Well, a little job security for you, I guess, though.

Dr. Hunter Reed [00:23:31] Definitely. And I mean, we've got, we have a multi-pronged approach to kind of managing CWD, obviously. Cooperation, whether it's captive breeding facilities or low-fenced ranches, certainly assists with that. We've adopted the real changes that I'd mentioned earlier, but we assist with Texas Animal Health Commission in tracing those animals, creating disease management plans and containing infected, exposed properties. We also try in terms of free ranging deer. I certainly have job security and big game department managers too, in terms of establishing these containment zones, surveillance zones, because we want to create mandatory testing and carcass movement restrictions. And the mandatory testing allows us to monitor the distribution and prevalence of the disease. While the carcass movement restrictions really are a preventative measure in terms of trying to keep the riskiest carcass parts left within the zone so they don't expose new areas. And then, of course, part of that, what I do a lot of--I'm actually going to do this weekend--in the Franklin Mountains is research and outreach. So we collaborate with several universities, in terms of we've actually translocated some bighorn sheep in areas out there in West Texas. But also we give trainings and hold public meetings in areas that we create new zones for. And part of that training that I'll be doing in the Franklin Mountains is just training staff internally about how to collect samples. But also to speak to landowners and researchers within the area and give them an update as well about chronic wasting disease, and where research has come, and what our future directions are. So yeah, plenty to do.

Dr. Sandra Rideout-Hanzak [00:25:28] Right. Well, you touched on this a little bit, but I want a little more detail. What are the most important things, I guess that land managers who are managing for deer and hunters also, what are the most important things that they can do to protect deer from getting CWD.

Dr. Hunter Reed [00:25:47] Yeah. Yeah. Now, some of the most important things--I like to break down it. So testing for CWD or at least reporting clinical animals so that they can be tested eventually is really, really important. As I said, it helps us determine distribution, the

prevalence of the disease within that area. It also serves to gain a peace of mind, as we had talked about the potential zoonotic potential that may be demonstrated a few years from now or later on down the road, for hunters that are looking to eat the carcasses that have that come out of zones, or whether they don't come out of zones at all. But that test allows us to better inform our management actions, and more efficiently mitigate the disease over time. And it also allows us to get some insight on the individual property, just in case landowners want to manage that. And that's something that our biologists and Mitch and I can assist with. So certainly testing, reporting clinical animals. Another one is responsibly disposing of carcasses, and parts, so leaving the most infectious parts behind at the site of harvest, or dispose of in a Type 1 landfill, or burying on your own property, or some ways that we can reduce the risk of scavengers in other species. Prions have been discovered in scavenging and predator species, so reducing access of those infectious materials can help reduce the spread. And then also for taxidermists, responsible disposal of carcass parts and contaminated waste products at landfills and certainly disinfection of tools and surfaces between each taxidermy product can also help stop the spread of CWD.

And then lastly, I think that education is a huge role and a huge thing that people can, not only do to educate themselves, but also educate people that can have the power to influence CWD management. CWD, I know has gotten this reputation for being a more divisive topic. It's resulted in a lot of misinformation about the disease and how it can be managed. But for individuals, they can visit the USGS National Wildlife Health Center to explain the health conditions, and Parks and Wildlife Sites to learn more about the biology of the disease. But they can also look up research from Texas Tech, Texas A&M and other universities about the biological effects of CWD, the next generation, diagnostics, genetics, whatever. And then, I mean, reach out to representatives, letting them know about the importance of CWD management and, and the repercussions of that news. So there's a lot of things that people can do. But testing, proper responsible disposal, and education, are really kind of the three most important.

Dr. Sandra Rideout-Hanzak [00:28:57] Okay, that's great. Yeah, I can imagine with something that's as scary and potentially impactful topic that there are, that it could be a divisive topic. So I'm glad that you listed some places where people can go to get some facts because we want people to learn the facts and the science, and to have the right information, rather than listening to opinion on this.

Dr. Hunter Reed [00:29:22] Yeah, yeah. No. And a lot of times it's not out of malice or anything like that. But certain stories can certainly catch social media and take it by storm. And we're just here to try and provide some more reliable sources. Yeah.

Andrew Lowery [00:29:43] So with so many people researching CWD currently, is there any new, exciting or hopeful research that's been coming forward?

Dr. Hunter Reed [00:29:52] Yeah, yeah, no. So kind of like what I mentioned earlier. We collaborate with a lot of universities, not just here in Texas, but also across the United States, cutting edge research on a variety of different topics. And we submitted around 60,000 biological samples just in the last couple of years in support of those. But there's some exciting areas that we're interested in. One of them is the genetic susceptibility, as I was talking about earlier, of animals to CWD infection. We're working with Dr. Chris Seabury at Texas A&M, as well as with the support of USDA on kind of refining that technology, and then also pursuing breeding strategies that can maybe make captive herds less susceptible in general to CWD infection. Then also maybe using this approach

to clean up currently infected herds. Another one that we're actually working with, Dr. Rodrigo Morales' Lab at the University of Texas, has to do with strain typing and amplification. So it's these amplification assays actually, they're highly sensitive. They're called RT-Quic and PMK. It's going to offer us a whole array of being able to detect disease earlier within individual animals, but also possibly do pretty efficient environmental sampling to see if there are prions on a certain property or not. And this is, we are also looking to try and use those same technologies to better characterize the different alpha physiology and clinical sign or how basically how clinical signs develop across different strains within Texas. And another one is actually copper and zinc. We're working with Texas A&M Kingsville as well as Vidpro or Minnesota Prion Research and Outreach, investigating the role of copper and zinc supplementation in feed and how it impacts propagation. There's evidence to suggest that deficiencies in both those ions, or those metals, can actually lead to neurodegenerative diseases in humans. So seeing how if supplementation and higher levels of both of these both of these metals can actually maybe slow the progression or prevent infection. Many brands in the fire.

Dr. Sandra Rideout-Hanzak [00:32:26] Yeah, well, that's great. I'm sure that's how you get at something like this--just try to figure it out from all different angles. And surely somebody will hit on something that works.

Dr. Hunter Reed [00:32:38] Yeah. Yeah, no. And we're really, really optimistic trying to use this research to create basically more effective and more efficient management options. And if it provides means of being able to keep free-ranging and captive populations healthy in the future, I think it's well worth it.

Dr. Sandra Rideout-Hanzak [00:33:00] Yeah, definitely. Okay. Well, that's interesting. So we've been talking about a lot of not-so-fun stuff, things with serious implications. But we have a fun question that we always ask everybody. We ask for what we call a Biology Blunder, where just something went awry in the field and you end up with something really funny in the end. Do you have a Biology Blunder that you could share with us?

Dr. Hunter Reed [00:33:25] Well, I don't know too much about Blunder, but I do spend a lot of time in the field. But I guess one of the situations I always run into here, this is my office here at one of our state natural areas. Especially as we get into the hunting season. I'll be doing these Zoom calls, and I always have to kind of look over my shoulder because we have our public hunts going on. And we actually have hunters quartering deer behind me right outside the window, and we test for CWD on these properties. So for others that don't necessarily see animals getting processed on the daily can be a little bit shocking. So I have to kind of watch out for that.

Dr. Sandra Rideout-Hanzak [00:34:07] Yeah, that could be an interesting backdrop. Well, is there anything else you'd like to talk to us about? Anything about CWD or deer or your work in general?

Dr. Hunter Reed [00:34:22] Yeah. No, I mean, I'm just happy to be on today and really, really excited to see that there's an interest in managing chronic wasting disease. And people really are engaged in the conversation here in Texas, and really getting people to report these clinical deer tests or CWD, do proper carcass disposal and really educate themselves, are kind of the main messages I really want to get across today. And also if there's any questions that remain or if anyone wants to get in contact with me or the Texas Wildlife Department contacting their local parks and wildlife biologist on our web page is really one of the best means by which to get access to that information. And if there's any

questions as to how individuals can better manage for that disease, I'm more than happy to help in that cause.

Dr. Sandra Rideout-Hanzak [00:35:17] That's great. You know, I have a question that I didn't warn you about, but we should we should ask you, because I think you have a really interesting job with sort of a specialized niche. A lot of people want to be veterinarians. And I've heard folks talk about they want to be a zoo veterinarian. But can you give us an idea how many wildlife veterinarians are there out there or what percent of veterinarians become a wildlife veterinarian? And how would you get into this line of work if this is what you really wanted to do, for young people out there?

Dr. Hunter Reed [00:35:52] Yeah. Yeah. No. Frankly, there's not a lot of us out there. I think most actually go into the regular route. This free-ranging wildlife medicine maybe accounts for a percent or two of an entire graduating class of veterinary students. Or at least those are the stats when I graduated some years ago, but I stumbled into this profession. So actually a lot of my experiences were with dairy cattle, large animal production species, more of the food animal set. But I really got engaged in population medicine and took a lot of advantage of these regulatory opportunities when I worked with the USDA up in Minnesota, also worked with the Food and Agriculture Organization in the United Nations. So some less, what do you want to say? Cookie Cutter routes of veterinary medicine. But I really enjoyed my time, especially over at Texas Animal Health Commission getting some experience in South Texas. But yeah, wildlife, I mean, I've been a conservation-minded person from the beginning and big hunter and outdoorsman, fisherman, love bird hunting with my dogs. And that's how I guess I naturally found my way over to this side of the equation. But yeah, it's a harder route, but we certainly offer a lot of opportunities for veterinarians, veterinary students actually to internship with us. So we always keep that opportunity open because I know it's not an easy route to get into. So helping those that are actually interested in it is one of the biggest priorities for Dr. Sarah White and I as we go forward with our wildlife health program here at Texas Parks and Wildlife.

Dr. Sandra Rideout-Hanzak [00:37:50] Great. I was just going to ask you if there are internships or anything, because obviously you've got to get the DVM. You have to become the doctor of veterinary medicine. But I'm still not sure like how you would get into wildlife. Would you look for interesting internships along the way? Or as an undergraduate like before you went to vet school, what would you suggest?

Dr. Hunter Reed [00:38:17] Yeah. It's certainly easier to get on the front end before you get bogged down in classes and trying to figure it out through their learning. But obviously, if anyone keeps their mind open, they can make the pivot just as much as I did. But as far as experience, I mean, working with any state agency or wildlife health program is one of the primary opportunities I think to really get the basic skills to really pursue this type of profession. But obviously the clinical mindset as well comes in handy, especially as we translocate animals throughout the state, just engaging with a bunch of different species that we have here in Texas. So certainly internships with zoo wildlife medicine can certainly help with this in pursuing this route as well.

Dr. Sandra Rideout-Hanzak [00:39:14] Well, thank you so much for spending time with us today. I enjoyed learning about the state of CWD in Texas, but also learning about your career and your job. And it sounds like a really exciting thing. I'm sure there's never a dull moment. Do you even have a typical day?

Dr. Hunter Reed [00:39:37] Yeah, yeah, yeah. I think this week I'll be an up to Austin. We have some meetings that we have to do with hiring panels, and then I have to drive all the way out to El Paso. And we were doing some bighorn sheep surveys at Elephant Mountain Wildlife Management area, and then getting some trainings there at the mountain. So and I get to make, I think it's around 550 miles back to San Antonio where I live. So certainly a busy, busy career. But I love every minute of it.

Dr. Sandra Rideout-Hanzak [00:40:12] That's great. Well, you're sure not going to get bored with schedules like that?

Dr. Hunter Reed [00:40:18] If I'm bored, there's something's terribly, terribly wrong.

Dr. Sandra Rideout-Hanzak [00:40:21] That's right. That's right. Well, thank you so much. I think this is this has been a fun conversation and I learned a lot. So I appreciate it.

Dr. Hunter Reed [00:40:30] Thank you for having me on. And however I can help in the future. Please drop the line.

Dr. Sandra Rideout-Hanzak [00:40:36] Thanks, Hunter. Have a great day. And remember, don't feed the wildlife. 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 talents as well, and editing is conducted by Andrew Lowery.