

## Season 1 Episode 3 Dr. Henke.mp3

**Dr. Sandra Rideout-Hanzak** [00:00:21] Hello, welcome to a Talk on the Wild Side, your biweekly tour of All Things Wild in Texas. I'm your host, Dr. Sandra Rideout-Hanzak.

**Rebecca Zerlin** [00:00:30] And I am your co-host, not a doctor, Rebecca Zerlin.

**Dr. Sandra Rideout-Hanzak** [00:00:35] We have a really entertaining guest today. And we're going to be talking about Texas horned lizards, coyotes and roadrunners (Beep-Beep!). It's so fun because you might be reminded of your Saturday morning cartoon days if you're my age, and some of you won't get that reference.

**Rebecca Zerlin** [00:00:54] But, oh, I do. I watched a lot of cartoons in preparation for this interview. I don't know about you, Andrew? (Laughter).

**Andrew Lowery** [00:01:02] Yeah, I currently have them streaming on my phone as we speak. (Laughter).

**Rebecca Zerlin** [00:01:06] What do we pay you for? (Laughter).

**Dr. Sandra Rideout-Hanzak** [00:01:07] Yeah, we had no idea we were going to go down the cartoon route, but we did. OK. But first we have our What's Wild and New segment, where we talk about just newsworthy events in conservation that are very recent. And Andrew Lowery, our technician, has What's Wild and New for us.

**Andrew Lowery** [00:01:27] OK, guys. So this week, researchers in France's North Sea Fishery Research Unit have determined that coelacanths can actually live nearly a century. Previously, we thought them only to live about 20 years or so. So the researchers, what they did was, they examined 27 museum specimens, and they were able to determine that these animals might actually live for upwards of 100 years. They also found out they don't mature until about 55 years old, and the embryos that they studied were up to five years old. Now, what that means to you and I is coelacanth mothers may be carrying these babies for five years.

**Rebecca Zerlin** [00:02:08] That's insane!

**Andrew Lowery** [00:02:09] That is insane!

**Dr. Sandra Rideout-Hanzak** [00:02:10] It is insane! Yes. And and I don't even want to think about that. (Laughter).

**Dr. Sandra Rideout-Hanzak** [00:02:16] No, no, that's just sounds wrong. But the fact that they have to be fifty five years old before they can mature and reproduce, that's I think even crazier. Well, I don't know, maybe not crazier than gestation period of five years.

**Andrew Lowery** [00:02:31] I mean, it's crazy, though. I mean, you know, you look at some of the struggles, alligator gar and Sturgeon and have had with their breeding programs and research, you find that you really need these big fish in the ecosystem, big old fish in the ecosystem to be able to keep it functional.

**Dr. Sandra Rideout-Hanzak** [00:02:45] Well, now we're going to move on to our next segment, which is called Becca's Breakdown, where Rebecca breaks it down for us and she likes to have breakdowns. She is a graduate student. So here's Becca's breakdown.

**Rebecca Zerlin** [00:02:59] because what is grad school without a breakdown? Today, one of the species we'll be discussing is listed as a threatened species in Texas but is not listed as threatened federally. What the BLEEP does that mean? First of all, we need to define what a threatened or endangered species is. Definition time, a threatened species. It's a species that is considered likely to become endangered in the foreseeable future, as opposed to an endangered species, which is one that is considered likely to become extinct or locally extirpated in the near future definition. Within the definition time, extirpation just means a local extinction. That is, a species still exist in the wild, but has gone from a particular area such as plains bison in north-central Texas, or wolves from many states in the United States. There is a list of federally endangered species, and a separate list of state endangered species, for most states. But these lists don't always match. And it's not just because state and federal agencies don't always see eye to eye on things. It might just mean that a species is struggling in one state within its range, but not others. To be specific, a species that was listed by the state of Texas, but not listed federally, would be protected under state law. While a federally protected species would be protected under the Federal Endangered Species Act. OK, so we have the state saying one thing, but the federal government saying another. This sounds confusing. How do we know what's what? Counselors, approach the bench. A federal listing protects an animal throughout its entire range within the United States, and includes all states where that species is found. A species that is listed in a particular state, but not federally, is only protected within the state that it's listed. Let's learn about some laws, shall we? Federally, the Endangered Species Act defines the term "take," as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect or to attempt to engage in any such conduct. Remember, this applies to any state, not a federally listed species is found. A Texas state listing prohibits the intentional take, possession, transportation or sale of any animal species listed as threatened or endangered within the state. Texas might list a species as threatened to be able to prioritize, and protect, it in an attempt to keep it from either becoming endangered within the state or needing federal listing. Now that you're a regular Erin Brockovich, go forth and protect all the listed species. And by protect, I mean, don't touch them.

**Dr. Sandra Rideout-Hanzak** [00:05:42] Well, today we're talking with Dr. Scott Henke. Dr. Henke is a regents professor. He's the chair of the Department of Rangeland and Wildlife Sciences. He's a research scientist in the Caesar Kleberg Wildlife Research Institute at Texas A&M-Kingsville. Dr. Henke, welcome to our podcast. We really appreciate you being here.

**Dr. Scott Henke** [00:06:01] Well, thank you for inviting me. I greatly appreciate it.

**Dr. Sandra Rideout-Hanzak** [00:06:03] Well, first, let's start with just tell us what you do as a research scientist.

**Dr. Scott Henke** [00:06:07] My specialty is wildlife disease, especially zoonotic diseases, things that go from wildlife to animal species to humans and also do some nuisance species work. And lately, not by any kind of design, but I've been doing a lot more reptile type research.

**Dr. Sandra Rideout-Hanzak** [00:06:27] OK, yeah, that's that's super interesting. You mentioned nuisance. What kind of wildlife do we consider nuisances?

**Dr. Scott Henke** [00:06:37] Anything that might cause problems for humans. The disease aspect is considered to be a nuisance for humans. When it...any type of disease work that can go from wildlife to humans is considered a nuisance type of thing. Raccoons potentially have been considered a nuisance, where they might get into a residential area trash cans and things and cause issues. We've had some alligator projects, where alligators, when they're especially the young males are roaming, or when they're looking for their own territory, they'll go to various parks in neighborhoods and such. And as they're wandering around, they might take a rest in somebody's backyard or garage. We've had a number of calls where people were trying to go to work and there is an alligator in their garage. And so we pick those up to remove those for some folks.

**Rebecca Zerlin** [00:07:29] I'm going to use that as my next excuse.

**Dr. Sandra Rideout-Hanzak** [00:07:31] Some folks are just you know, they're just unwilling to share their garage.

**Dr. Scott Henke** [00:07:36] Well, there's other doors. You know, if it's by the front door of your car, you can use a side door. You know. (Laughter).

**Rebecca Zerlin** [00:07:41] OK. So we want to hear about some of your research today. And we're going to start with an iconic Texas species, the Texas horned lizard. First, can you tell our listeners what a horn lizard is, where they live? What do they eat? Tell us all about them.

**Dr. Scott Henke** [00:07:57] Oh, OK. Well, Texas horned lizards, people probably more commonly known, know them as horny toads. I think that's more common to call them that in Texas. But they actually are lizards, you know, not a real toad. They're not an amphibian, like a frog or a toad would be. There are actually a lizard, a reptile. And we actually have three different species in Texas. We have the Texas horned lizard, the round tailed lizard and the mountain shorthorn lizard that occur in Texas. Now, you can tell the difference between those the three species by just looking at the little fringe scales that they have on the side. They have like little scales that kind of protrude off their sides. If you have two rows of fringed scales on the side, that's a Texas horned lizard. If you have one row of fringed scales, that's the mountain shorthorn lizard. And if it has no fringe scales at all, that's the round tailed lizard. And so basically, the round tails are really common in the western half of the state, in west Texas. Starting in the panhandle all the way down to Alpine and El Paso and such. The mountain shorthorn lizard only occur in a couple of small pockets in Texas around the Alpine area, as well as the Guadalupe National Park area. You can find those. The Texas horned lizards used to be considered being found throughout the whole state of Texas except in the very far eastern portion of the state. But their populations have really dwindled down and have become more patchy. They're not as commonly found across the entire state as they had been in the past. And so that's been the emphasis for the research, is why their numbers have declined so greatly, why they occur in some areas in fairly good numbers and an area, other areas they do seem to be doing really poorly.

**Rebecca Zerlin** [00:09:48] So what do these guys eat? Where...what kind of habitats do you like...if I was to just go outside what I see a horn, a horn lizard?

**Dr. Scott Henke** [00:09:59] They typically occur in more like sandy and loamy type of soils. And so more semiarid/arid type of areas of they like areas that don't have a lot of ground litter and such; so, they can actually be on the dirt. They there are typically known to eat ants, but one of the things we have found is that the juveniles actually have a greater diversity of diet. The juvenile lizards will eat a variety of things from beetles, ants, termites, small insects that they'll find on the ground, dwelling insects. Where the adult horned lizards, will specialize more on the ant species.

**Dr. Sandra Rideout-Hanzak** [00:10:39] Oh, yeah. Why would a species do that? Why would it go from more of a generalist, to a specialist as it matures?

**Dr. Scott Henke** [00:10:47] Well, our belief is that when the horn lizards, they lived to be about five, six years old, at best in the wild, and, you know, if they mature and don't have run into any major predators or such. But if you're young and you have a greater variety of diet, we think that you can actually grow faster. You have more things to eat and such that are available to you, and it really helps them out to grow as fast as possible, because when they're born, they're about the size of a dime. And they really don't have the spikes on the back of their head. They don't have much defenses. And literally everything can come by and eat these things. And we have found that nearly everything does come by, and eat these things, unfortunately. (Laughter). So I've got a friend, guy named Wyman Meinzer, who's a wildlife photographer, and he has a book on Texas Horned Lizards as well as roadrunners. And I had to comment to him at one time. It's like, my gosh, can you find a roadrunner that doesn't have a horn lizard in its mouth? (Laughter) Because almost all his photographs are the same thing. A horned lizard either attacking horned lizard, running with a horn lizard in its mouth, eating a horn lizard... and it's like, wow, these things are just just terrible on horned lizards that they don't have much of a chance to survive.

**Dr. Sandra Rideout-Hanzak** [00:12:04] Their purpose in life, is to feed roadrunners. (Laughter).

**Dr. Scott Henke** [00:12:06] Yeah, I think that can be part of it. Yeah, it's it seems to me at least if you look at his books, but yeah I think it's the idea is just if they can grow as fast as they can to get to be in more of an adult size, they have more then defense mechanisms to help ward off predators because they as they get larger, the spikes on the back of their head become larger. And that way they can use those to try to twist their head, to keep themselves from being less, being able to be swallowed by a number of different bird species. They can air up their bodies and blow themselves up to make them much bigger. So it's harder to swallow. But when they're tiny and only like the size of a dime, it doesn't matter how much they want to suck up air and blow up. I mean, they're so easy to swallow.

**Rebecca Zerlin** [00:12:48] They're very edible at that size. (Laughter).

**Dr. Scott Henke** [00:12:50] Yeah. They just don't have much.

**Dr. Sandra Rideout-Hanzak** [00:12:52] Yeah. So they just want to grow as fast as possible?

**Dr. Scott Henke** [00:12:54] I think that's going to be part of it because it just will help them out. And then it seems to be that once they get to be a certain size, they can start breeding. Like most reptiles, they don't necessarily breed by a certain age, they breed at a certain size. And the quicker they can obtain that size, the faster then they can breed.

**Rebecca Zerlin** [00:13:15] So let's talk about what they seem to be most famous for, which is another defense mechanism, squirting blood out of their eyes. Is that really blood, or what is going on with that?

**Dr. Scott Henke** [00:13:28] Actually, that is. That actually is blood. They have muscles around their eyes that they can constrict. And as the blood flowing from their body into their head, they can constrict those muscles. So it's kind of wells up into their orbits, around their eyes, and they have a pore on each side of their eye, where once that pressure builds up so great, it'll have to get released and it literally will squirt out, and they can actually see that pore can be moved. And they so they can actually aim it and it can squirt. Now, one of the things that we've found is that they're more likely to do that with canid predators than anything else. They don't do it that often with other types of predators. They'll do it on humans. A couple of times. I've had a couple of students that it's happened to. I've never had that happen to myself yet in handling horned lizards. But so it does seem to be when when you have a dog around, or a fox or so, it's been pretty common with those types of things.

**Rebecca Zerlin** [00:14:29] I want that super power. Yeah. Get people away from me quick. (Laughter) So why is it important to study these guys? Why do we should we care about them?

**Dr. Scott Henke** [00:14:40] Oh, I think it's a lot to do with. More common for more of the older people, the elderly, they grew up with horned lizards, and it was their really good childhood memories. I think when I talked with a lot of folks that grew up in this state or in the West, they always have horned lizard stories that they seem to have when when they were growing up, when they were young. And I think a lot of folks just look at that as if horned lizards die out as a species. It's kind of like watching your childhood die. And so they really hate to see that; so, they really want to see what they can do to try to help out the species. And it's also I think every species has a function in ecosystems, you know, much like, you know, in a human body, you have every organ has a function and keeps the body alive. Some function of somebody's organs may be more critical than others, you know, that you can't just live without and others aren't quite as important to for survival. And so I know a lot of times when it comes to some species, people think, well, why are they important? Well, I do have a function in the ecosystem. And just just because we may not know what that function, is or so, doesn't negate that it's important to have around. And so I think it's really a good idea to maintain all the species that evolved in an area. There's a famous saying by Aldo Leopold. Wildlife management professor, who had said, I'm going to paraphrase, because I don't remember the exact quote, but it's like, it's wise to keep every cog and wheel with intelligent tinkering. So basically, if you ever like a little kid and you took your bike apart and you put it back together and you end up having extra parts, you don't know, remember where they went. You know, your bike may not function as well, as it did before you decided to take it apart, but it's one of those types of things. If you're going to play around and change ecosystems, it's a really good idea to know what all the functions are before you start playing around and changing it, because you may change it and find out that, wow, we should have kept that one species because it really had an important function.

**Rebecca Zerlin** [00:16:45] Well, we know their function...feeding roadrunners. (Laughter).

**Dr. Scott Henke** [00:16:49] And that's true, because roadrunners are important. I mean, what would you know, what would coyotes do if you don't have roadrunners? You know? (Laughter).

**Rebecca Zerlin** [00:16:54] What would they chase? (Laughter).

**Dr. Scott Henke** [00:16:56] The whole Acme Company would just go out of business if you don't have coyotes chasing roadrunners. (Laughter).

**Dr. Sandra Rideout-Hanzak** [00:17:02] No more anvils.

**Rebecca Zerlin** [00:17:03] Yeah. That they go out of business.

**Dr. Sandra Rideout-Hanzak** [00:17:06] No dynamite. Yes. (Laughter).

**Rebecca Zerlin** [00:17:08] So many catastrophic effects of that. So what have you and your students discovered about Texas horned lizards?

**Dr. Scott Henke** [00:17:14] Well, one of the things that we're looking at, we found that if you look at old literature, it and all literature, I mean things back...they really weren't really studied a whole lot prior to 1950. But if you look at those types of things, they're clutch sizes apparently were much greater than they are today. So when they were laying eggs, the reports are they lay up to 30 or 40 eggs at a time and then have a large number of young being born. Lately, we're not finding clutch sizes, anything beyond about a dozen. And so it's about a third of what they had been doing. And also we found that in the past, in the old literature, they were reaching an adult size of about 60 millimeters from snout to vent-length by the time they were two years old. We're finding that horned lizards today aren't reaching that size until they're about four years old. And so if their breeding is being delayed, they if they used to breed by the end of their second year, and now they're not obtaining that size until the end of the third or fourth year, then they're not breeding until much later in life. And if their longevity remains the same at five or six years, instead of having three or four years of breeding time before they're done, they're only getting potentially only one breeding season. And I think that may have a lot to do with the reason why the numbers are declining so badly.

**Rebecca Zerlin** [00:18:41] Any ideas of what might be causing this?

**Dr. Scott Henke** [00:18:44] You know, it's kind of funny. Early on, I didn't think the fire ant issue was that big, because you don't have fire ants occurring throughout the state. There was a number of different things that were always brought up of why horned lizards seem to be declining. Things like pesticide use, over-collection, especially back in the 50s and 60s. There's lots of stories about gas stations would give you a free horned lizard with every fill up and they would actually have kids go out. Yeah, that's actually kind of a true story where especially in West Texas, that if you filled up your gas tank, you would get a free horned lizard. And so they would actually pay kids to go out and collect horned lizards. In fact, I met a older gentleman, said he did that as a kid, that his friends and he would go to the movies every Saturday afternoon. And if they they would go out and collect the number of horned lizards so they could get enough money from the gas stations to be able to go to the movies. And if they had a really good collection day, they not only got entrance into the movies, but they could buy popcorn. Wow.

**Dr. Sandra Rideout-Hanzak** [00:19:52] Now, I've heard, too, that...I don't want to bash anybody here, but the Boy Scouts...didn't the Boy Scouts take them to the jamboree. Texas Boy Scouts would take them to the jamboree to trade them with Boy Scouts from other states. Is that true?

**Dr. Scott Henke** [00:20:06] Yeah, that's apparently was also occurring back in the day. So now it's been legal for some time. So they stopped that. But back in the day, that would be really common because that was considered a very Texas iconic type of thing. So you would only find them, you know, there. But unfortunately, horned lizards make really terrible pets. They don't do well in captivity. And it's really, really hard to feed them because as adults, they do prefer a harvester ants and you can't inundate them with a whole bunch of harvest range at once. You basically need to feed them one by one by one and let them eat the ant and then give them another one, eat them and give them another one. So it's real time consuming to keep them as a pet. And I don't think most people put in that kind of time. So, they end up not doing as well and just start losing weight and eventually just die in captivity.

**Rebecca Zerlin** [00:21:02] If you were to get a lizard, I would recommend a bearded dragon. They look similar and they're they're a little bit easier to take care of than horny toads.

**Dr. Sandra Rideout-Hanzak** [00:21:09] Not as high maintenance.

**Rebecca Zerlin** [00:21:10] Right.

**Dr. Scott Henke** [00:21:12] Except you have to shave them their beard.

**Rebecca Zerlin** [00:21:13] Yeah, you do have to shave them once a week. (Laughter).

**Dr. Sandra Rideout-Hanzak** [00:21:16] Texas horned lizards are listed as threatened in the state, right?

**Dr. Scott Henke** [00:21:20] Yes.

**Dr. Sandra Rideout-Hanzak** [00:21:20] But am I correct? They're just "least concern" federally.

**Dr. Scott Henke** [00:21:26] And that's their entire range is...well, it used to be Louisiana, and Oklahoma, Texas, New Mexico, parts of Colorado, Arizona. They are protected, they're threatened in Texas, they're protected in Oklahoma and, I believe Arizona, the corner of Arizona that they still occur in, but they're free for all in Kansas, and Nebraska and New Mexico. And because they're considered doing well in those states, it's not federally listed. But in Texas, we're finding that their numbers, instead of being found throughout the whole two thirds, western two thirds of Texas, it's really becoming very patchy. And so, it's good numbers in some spots, really poor numbers in others. Hard to find, if not impossible to find, in certain parts. And their total range seems to be declining and getting smaller and smaller. So, they're considered to be threatened now in Texas. But I said New Mexico has said that they're doing very well. But we asked the reptile specialist with each state agency just where they felt their horned lizards, Texas or lizards were occurring. And if they felt that their numbers were stable, most states came back saying that they're either mildly stable to mostly declining is what they felt, except for Kansas and New Mexico; where they felt their populations were doing quite well. But it's hard to say, because I don't know if you don't have a lot of research and surveys and things going, it's hard really to say just how well a species is doing.

**Dr. Sandra Rideout-Hanzak** [00:23:23] Without the numbers, you just don't know. So, we were talking about threats, and I just want to make sure we hit them all: pesticides, fire ants, collecting them, anything else?

**Dr. Scott Henke** [00:23:35] They also had conversion of lands to suburban/urban type of centers that will definitely fragment a population because, you know, if you're developing the land, they're typically not going to be found in urban areas. Kenedy, Texas, is a really interesting place because, there you do find horned lizards in neighborhoods and within the downtown area. Really, it's one of the few places that I've heard of or seen that horned lizards can be found fairly regularly. But that town now has adopted horned lizards as kind of, I don't know if it's kind of like an official city species or so, but they seem to embrace it and do what they can to keep numbers alive and keep the population going there.

**Rebecca Zerlin** [00:24:26] It's a conspiracy. The lizards own the town.

**Dr. Scott Henke** [00:24:29] Exactly. It's theirs. (Laughter).

**Dr. Sandra Rideout-Hanzak** [00:24:32] So what are they doing? You say they're embracing them, and what can other people do?

**Dr. Scott Henke** [00:24:38] For the people that I know that have really been trying to keep horned lizards going when they have harvester ants occurring, they don't use any type of pesticides to get rid of the ants. I know a lot of times when you have, like, ants coming into your yard, harvester ants will make a big barren spot, you know, about three feet around or so. And, you know, when people are trying to make a yard, they might try to poison the ants to stop that from occurring and replant and reseed the area. But they're they're not doing anything to hurt harvester ants just to keep horn lizards going. And I know a number of neighborhoods have done what they can to keep feral cats from roaming around; so, the cats don't take out horned lizards. And so they're actively trying to reduce the number of potential predators and promote ant species.

**Rebecca Zerlin** [00:25:30] We're all nodding our head at the cat comment. (Laughter). Most wildlife people...

**Dr. Sandra Rideout-Hanzak** [00:25:35] Love cats, but they need to be in the house.

**Rebecca Zerlin** [00:25:38] Yeah. Yes. Stay inside!

**Rebecca Zerlin** [00:25:40] Well, let's change the subject now. (Laughter). Besides horny toads, do you have a favorite animal to study or work with?

**Dr. Scott Henke** [00:25:50] I do like coyotes. I actually started my research with coyotes and always had a soft spot in my heart for them, because any time you get an animal running around with rockets on its feet, or anvils, it is just a cool species to work with. (Laughter).

**Rebecca Zerlin** [00:26:06] Yeah, they are pretty, pretty entertaining. Watched a lot of documentaries about them. A lot...

**Dr. Sandra Rideout-Hanzak** [00:26:14] Documentaries... (Laughter).

**Rebecca Zerlin** [00:26:15] Documentaries. Yeah. Wink. (Laughter).

**Dr. Sandra Rideout-Hanzak** [00:26:17] So, tell us about the coyotes. I mean, what did you learn in your work with coyotes?

**Dr. Scott Henke** [00:26:22] It's fun talking with people, especially a lot of people in Texas. When I asked them about coyotes, they think there's so much larger than what they actually are. I've had some people tell me they're as large as like 60, 70 pounds, because honestly, in Texas, the average size of a coyote in Texas is about twenty five pounds. South Texas, they're about twenty two pounds for the typical coyote. They're a little bit smaller in south Texas than they are then when you get into west Texas, the largest coyote...and I've actually captured and got over about 1500 coyotes. And so the largest one I ever got was thirty six pounds. And that thing was fat. But I mean, when people talk about having these 50, 60 pound animals, they just don't get that large down here. Yeah. You know, perhaps maybe in the East Coast or up north where they actually have a true winter where it becomes snowing and such. The other thing we've learned is that they're really not the pack animal. You hear a lot of people talk about coyotes running around in packs. They actually...if you see them in a group, it's usually a family unit. It's a mated male and female and then their offspring for the year. But then, their offspring typically in October, will kick out from the natal territory and go establish their own little spot to go to, or become a little transient and just wander around so they don't hang out with mom and dad. They usually are born in July and come October they kick out. And so you might see, you know, groups of four, perhaps five coyotes together in that short time frame. But it's a family unit and it's short-lived, and it falls apart very quickly.

**Rebecca Zerlin** [00:28:07] I feel like most coyotes I've seen in the field have just been smaller dogs by themselves.

**Dr. Scott Henke** [00:28:13] So, yeah, they're about the size of I guess if you could compare them to a dog, it'd be like a border collie. Yeah. You know, that kind of size, that's about as big as they'll get here. They're really not that tall. They're not they look bigger because they have a lot of fur. But, you know, as long as they're not mangy, you know, they'll be kind of bushier looking. And people think there are a lot bigger than what they are. We have the same kind of thing, when it came to feral hogs. We actually caught feral hogs, a baby, juvenile, and an adult. And we had them in cages. We took them to a sportsman's group up in Corpus Christi. And we had the people there guess their weight, and they could walk up to the animal in the cage. It was live animal in cages. And we had the prize for whoever guesses the three weights the closest, is going to win the various prizes. And it was fun because for the baby, people were guessing anywhere from 30 to 40 pounds. When it was the juvenile, they were saying that was about 80 to 90 pounds on average. And the adult male that we had, most people guessed upwards of 200. When actually, the actual weights of the animals, the the little baby was twelve pounds, the juvenile was twenty two pounds, and the adult male that we had was actually ninety pounds. And so everybody, basically nearly everyone overestimated their actual size. Even though they could walk up to them and do compared to all three were side by side. So you can do a comparison and you can walk up to them and look at try to guess their weight. And so I guess there were no old time carnival workers back then where they would come and be able to your weight. So that was in that group. But we kind of looked at it as, yeah, everything is bigger in Texas, at least perceived by folks here, down here, because, well, I think we found the same thing with the coyotes, that people just think they're much bigger than what they actually are. The other thing we did, this was kind of fun that I...called a number of different coyotes, and we had them in a captive facility and

they would react to train whistles, so I would record the coyotes when it was just one coyote. I recorded one coyote just howling. Then they had two coyotes and recorded the two howling, then three, then four. And I played those tapes to people. We were we actually set up a table at Wal-Mart, and just had people listen to a recording of a Coyote and to have them tell us how many coyotes they heard. We didn't tell them that the actual answers were anywhere from one to four. We just told them, hey, these are coyotes howling. How many do you think you hear? And we got upwards of anywhere to 2 to about 12. Yeah. And so that's a lot of people are thinking, even when it was a single coyote, we had things where people thought it was three or four. And that's because Coyote can change their voice midstream in their howl, and make it sound like a howl than a yip, and then kind of a bark, then a howl, and a bark. And by changing it up, people think, well, there's multiple; and, there's actually just the one, only the two or so. And so a lot of folks just think there's a way more out there than what there really are because of that misperception about what they're hearing.

**Dr. Sandra Rideout-Hanzak** [00:31:24] Yeah, OK. Now you've probably caught and studied more coyotes maybe than anybody else in the state. I want to talk about...something that people disagree about. What's your take on Coyote culling and coyote control? Let's go there. I want to go there.

**Dr. Scott Henke** [00:31:43] I...probably...this is the most controversial thing when I talk with various ranchers. It's one of those things were the things that I have found it...at best, it's a break-even point for a rancher. They spend a lot of money trying to get rid of coyotes, and at best, in my opinion, you'll break even financially. Usually, they'll spend more money to get rid of a few and then what they actually lose. I looked at it from the standpoint, for economics, that if you lose a calf...down here in south Texas, we mainly have cattle operations. Now, this may change if you're into like a sheep goat area, but at least with a calf operation, if you lose a calf to a coyote, I would recommend getting rid of momma cow, rather than go after the coyotes. Because I have found that really good mothers will not allow a coyote anywhere near her baby, and that I have seen cows chase off coyotes. I have seen whitetail deer doe's beat the heck out of a coyote trying to get a fawn. And so if you have a good, attentive female, you don't have those type of issues. If you have, a coyote that can take out a calf mama wasn't nearby well enough or paying attention. And found that usually within the first two weeks, are when the calves are most vulnerable. Once they get beyond about two or three weeks old, they are enough size...you have to consider, because I know a lot of folks were saying that, oh, you get coyotes taking out my cows or my attacking my bull or whatever, and it's like it's a 22-pound animal attacking a five 600 pound animal or larger. It's a wart on its neck. A 22-pound animal is not going to be able to bring down something that large. And so... And, like we said earlier about being a pack animal, they don't, at least in south Texas, don't run in packs. And when they are in their family unit group, it's inexperienced juveniles learning how to hunt from mom and dad. And so, yes, there may be four coyotes together, but you don't know what they're doing at all. So they're really not going to be helpful. And so you're just not going to have the problems, OK? From what I found in Texas, black vultures are more of a problem when it comes to calf operations, because on newborns, they will come in and peck the eyes of calves. And once the calf is blinded, then, yes, it's vulnerable to nearly anything and everything and it does not do well.

**Rebecca Zerlin** [00:34:33] And I could be just spitballing here. But wolves have a bad wrap from people over many, many years. Do you think maybe that's kind of rubbed off on coyotes, since they're also a dog species?

**Dr. Scott Henke** [00:34:43] I think so. I think back in the day from the Little Red Riding Hood and the three little pig stories and things that, yeah, if you look like look at that, then, you know, it's like wolves were run out and now coyotes are the next largest canid coming in.

**Dr. Sandra Rideout-Hanzak** [00:35:00] We've got a fun question that we ask everybody. Working with wildlife, a lot of times, things just don't go as planned. Do you have a biology blunder, or two, that you would share with our listeners?

**Dr. Scott Henke** [00:35:11] I thought, like, yeah, yeah, unfortunately, I mean, it's a laundry list. Usually when I open my mouth, it's just to change feet. (Laughter) But yeah, I remember one time there was a reporter, and this kinda and goes back to how we started with horned lizards. It was a reporter asking about a horn lizard project. And we were talking about we were putting radio telemetry transmitters on horned lizards, but we didn't want to glue the transmitters on them because as they shed their skin, horned lizards don't shed skin like snakes where the whole thing comes off. It comes off in little bits and pieces here and there. But we didn't want the transmitter to fall off too early. So, if we were to glue it on directly to their skin on their back, we were afraid it might fall off within a month or so. So, we actually made little backpacks. And basically, it was like a little cloth pouch with the transmitter to fit in. And because the cloth was white, we didn't want predators to hone in and kind of key in on that white part of their back with the backpack. So we would wait till we caught the horned lizard, and then we had a variety of different types of dyes so we could dye the backpack, pretty much the same kind of color as the horned lizard, because some were more reddish, some were more greenish. And so we wanted to make it have the same appearance so it would camouflage onto the horned lizard and not make it more vulnerable to predation. And so we would also have sharpy markers that if you have ever looked at the back of a horned lizard, they have those little black spots. And so we would put in little black spots on the backpack as well once it was dyed. So it would have the same kind of pattern that the horned lizard had. So it would just come a kind of camouflage back on and not open it up to predation more. And this reporter, when I explained that, just seemed to be confused. And he goes, I don't get it. I don't see what would it look like. And so the only thing I could equate to at the time, this was kind of off the top of my head. It's as, well, do you know, like the outfit that Fred Flintstone would wear, that kind of like reddish-orange type of color with the black spots on it? It kind of looked like that. Well, when the article came out in the newspaper, he literally wrote it up as Researcher putting Fred Flintstone outfits on Horned Lizards. (Laughter) And it's like, oh, my gosh, people are going to think I'm a total idiot, that I'm getting money to make little Fred Flintstone outfits for horned lizards. (Laughter) So, yeah, I kind of learned to be careful what you tell press or how they do it, or make sure you at least get to review the article before they put it into press. That's fun because, yeah, it's kind of scary.

**Rebecca Zerlin** [00:37:40] That's the best image I have in my head today.

**Dr. Sandra Rideout-Hanzak** [00:37:42] Yeah.

**Dr. Scott Henke** [00:37:43] And there are little tiny Fred Flintstone's everywhere.

**Rebecca Zerlin** [00:37:46] The blue collar. Yeah.

**Dr. Sandra Rideout-Hanzak** [00:37:47] It's great. And we are running the gamut today of the cartoons and fairy tales. I mean Saturday morning and...

**Dr. Sandra Rideout-Hanzak** [00:37:55] Anything else?

**Dr. Scott Henke** [00:37:56] And I have children, so... One that wasn't a blunder, but I had a lot of people make fun of me... When we were doing the coyote rabies baiting, one of the concepts was I used Rhodamine as a substitute for the rabies vaccine.

**Dr. Sandra Rideout-Hanzak** [00:38:14] What's Rhodamine?

**Dr. Scott Henke** [00:38:14] Rhodamine is like a red dye, but it is a fluorescent orange. And so the concept was that we wanted to assess how many coyotes would pick up the rabies baits. And so instead of having the vaccine in there, I put a little blister packet, which is like a little ketchup packet that you would get from a fast food place and have protamine dye in there. So if you looked at the dye, it would look kind of a purplish red and under a black light, it would glow orange. And then it would actually go into the growing hairs and cause the tip of the hairs then to have this orange glow under a black light. So that way you can tell if coyotes picked up the baits. And so when I first went down, people were just like, oh, this is just the dumbest idea. This is never going to work. And so I thought, well, I was getting nervous, because all these trappers and things that were going to help collect coyotes to see how well they we dropped the baits a couple of weeks earlier and then they were going to go collect a whole large quantity of coyotes to see just how well they picked up these baits. And the night before the starting of the collecting the coyotes, all the trappers were kind of gathering around in Laredo and were betting odds on how well this was going to work. And I think the nicest person said maybe like five percent of the coyotes were going to be picking up baits.

**Dr. Sandra Rideout-Hanzak** [00:39:36] They put money on this?

**Dr. Scott Henke** [00:39:38] I don't think they actually bet money. Yeah, but they were just kind of more teasing me that this was just a concept that was going to be the biggest bust. Everybody's going to prioritize and nothing was going to be there. And it was making me real nervous thinking, jeez, I hope this does work. And I mean, not only I mean, we probably had oh, there's probably a group of about 50 people. And it was like 49 people against me on this one. And I'm thinking all of this is if this is a bust, this is just going to be so embarrassing having this to work out. Well, it was so cool. The first out of the twenty-five coyotes that came in, twenty-four were purple.

**Dr. Sandra Rideout-Hanzak** [00:40:17] Wow!

**Dr. Scott Henke** [00:40:17] And so, yes, it worked! It was like, "got y'all!" (Laughter).

**Dr. Scott Henke** [00:40:22] And then actually they were all surprised. But yeah, it actually did work. I had so many people doubting that that was ever going to work very well and they actually picked up a lot of the baits.

**Rebecca Zerlin** [00:40:32] And you were a hero and now well-respected.

**Dr. Scott Henke** [00:40:34] Oh, yeah.

**Dr. Sandra Rideout-Hanzak** [00:40:36] Well, we should probably close now, We have talked about everything from Fred Flintstone, to Roadrunners and everything in between, and I've learned so much today.

**Rebecca Zerlin** [00:40:46] Yes, definitely.

**Dr. Sandra Rideout-Hanzak** [00:40:48] Been an eye-opener for me. Thank you so much.

**Dr. Scott Henke** [00:40:52] Well, thank you for having me.

**Dr. Sandra Rideout-Hanzak** [00:40:53] It's been a pleasure to talk to you, as always.

**Dr. Scott Henke** [00:40:56] Any time you'd like me back.

**Dr. Sandra Rideout-Hanzak** [00:40:58] We appreciate it. Oh, wow. That was interesting. I didn't know we were going to talk about cartoons, but we did. (Laughter). That was fun. But I really did learn a whole lot about Texas horned lizards and coyotes, too, and roadrunners.

**Rebecca Zerlin** [00:41:16] He is a great storyteller.

**Dr. Sandra Rideout-Hanzak** [00:41:18] He is.

**Dr. Sandra Rideout-Hanzak** [00:41:19] Yeah, he is. Well, that's a wrap, I think, then for this episode.

**Rebecca Zerlin** [00:41:23] I think so.

**Dr. Sandra Rideout-Hanzak** [00:41:24] And we'll see you guys next time, or you'll hear from us next time. You won't see us. We won't see you. You'll hear from us next time.

**Rebecca Zerlin** [00:41:31] Yeah. And remember, don't feed the wildlife.

**Dr. Sandra Rideout-Hanzak** [00:41:34] 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 Sportsmen and Conservationists Award, by the Rotary Club of Corpus Christi. Editing was completed by the talented Gabby Olivas, Andrew Lowery and Tre' Kendall. We thank the TAMUK Distance Learning Lab for all their help and cooperation.