Dear me! No, Deer U! S2E12

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'm Sandra Rideout-Hanzak, and I'll be your host. We have a special treat for you today. We're doing a joint episode with Dear U, where we're going to talk to my colleague Mike Cherry. But I want to throw it over to Bronson Strickland at Deer U to do a little introduction himself.

Bronson Strickland [00:00:27] Yeah, well, thank you for having me. And I look forward to this. Hopefully, again, it's going to be a good opportunity for both of us. So the Dear University listeners, to get exposed to your podcast and a talk on the Wild Side, The Saint for Deer University. So thank you for the opportunity. And Mike, I've been looking forward to having a conversation with you. You're one of those deer nuts and always fun to talk to a deer or not. But I think what is really interesting with you is that you have a unique perspective and you've done your, of course, now in Texas. And if I remember correctly, you're from Texas originally, but you did a lot of work in the Southeast, in Georgia and Florida and then in Virginia. So you've really seen a lot of different management situations and limiting factors for deer herd. So I think this is going to be interesting as we kind of compare and contrast. And Mike, I don't want to oversimplify your title, I'm probably going to butcher it here, but you're the Stuart Stedman chair for Deer Research. I get that, right?

Dr. Mike Cherry [00:01:42] That is correct.

Bronson Strickland [00:01:43] All right. Well, how are things going in South Texas?

Dr. Mike Cherry [00:01:49] Things are good. We finally got a little rain and so things are looking better. The deer season is upon us, so we have a lot of excited people down here in South Texas and things are good.

Bronson Strickland [00:01:59] Excellent. I know people in Texas would laugh at what I'm about to say, but we're going through a little drought over here. It's the south eastern context of the drought, not a south Texas drought, but yeah, October has been really, really dry for us. And so, like, you know, what everybody's doing over here, we're concerned about food plots and things like that and getting ready for deer season. So that that's one of our big management issues right now is overcoming lack of rainfall. But I'm sure when November rolls around, the rains will return and all will be well. So, Mike, I guess the theme of this I would love to have a conversation with you is under the umbrella of comparing and contrasting deer management in South Texas versus deer management in the southeast. And as I said earlier, you have a really qualified and unique perspective because you've worked in both environments. So I thought I would start with something that may not make a lot of sense to people unless you've been in that environment. And that is what my former mentor and still a mentor of mine, Charlie DeYoung, is in that environment. He says that the deer herds really aren't density dependent. And I'm wondering if you could maybe explain that a little bit better for our listeners. But what does Charlie mean by that?

Dr. Mike Cherry [00:03:37] Sure. Yeah. So density dependence is something we think about in any kind of population ecology where we see the number of individuals within a population. As that increases, the per capita resource availability decreases. And then there's mechanisms such as reproductive output or survival that feed back into the population and can cause some slowing of the population growth rate. That's the typical density dependent response that we think about across populations in South Texas. We

don't think they're necessarily operating that way or we think that density dependence is weak. And the reason we think that is, is because there are factors that drive those reproductive processes that are totally independent of the deer density. And so we have these situations where it doesn't really matter how many there are in the landscape. If it doesn't rain, the fawn crop is all but lost. If there are a lot of deer on the landscape in a good year, then there's still plenty of forage for all of them. And the variation in that per capita resource availability is moving around in a margin that really doesn't matter for population growth rates. And so we have populations down here that that boom and bust with rainfall patterns. And really it's not the only place that operates like that. I've worked in a lot of different systems, as you've mentioned, and in Texas, this is an extreme example of this. But I often have described the places I've worked as a dynamic system. And so and I really moving down here, as you're mentioning, the drought in the southeast, it kind of made me think about my changing perspective, about what a dynamic system is. As you get down here, you realize there's a real boom and bust that happens in this last year. This summer was really bad. We had very little rainfall until very late in the summer. But there are places in the southeast that operate where density dependence is weak or absent. And so other examples where weather can be a major driver that is independent of how many deer are on the landscape. But weather can drive that resource availability so much that the number of deer responding to it is pretty inconsequential. And so we've seen that in South Florida where we're rainfall again, but it's the opposite. And years that are too wet, they have a failure in their fallen crop. Another system where we've seen that is in north Florida where there's just an abundance of bad forage. And it really doesn't matter if you have twice as many deer or half as many deer. They're all still eating really poor forage and there's plenty of it. And so the density really doesn't affect that population growth rate. And not in the third place in the southeast or at least the mid-Atlantic, where we've seen a similar responses in the Appalachian Mountains. And so I used to work up there quite a bit and really it's all dependent upon acorn mass crops. And so and you have really good acorn crops. All the phones survive and things are really good. And if you don't, then there's very low farm survival rates. And so it's really a phenomenon whereby weather or some factor, such as acorns, some important resource is weakly linked to the deer density. And so, of course, mathematically, there's always a division by the number of individuals in a population and those resources. So you can always calculate a change in a per capita resource availability. But if that change is inconsequential, that's where you see this density independence that we have down here in South Texas.

Bronson Strickland [00:07:05] So maybe a very simplified way to express this would be in your typical south eastern scenario, there are very reliable responses to many animals. In other words, too many animals equals not enough food relative to the number of animals available. But in some of these other systems, you're seeing phenomenon, environmental phenomenon that may supersede the number of animals. They're essentially more important than the number of animals on the landscape. And those are working in concert, of course.

Dr. Mike Cherry [00:07:46] Absolutely. Very well put. So, yeah, that's really what it is that there's some external force, whether it's weather or one individual resource that supersedes that deer density and driving that per capita resource availability that ultimately drives reproduction and survival.

Bronson Strickland [00:08:02] Gotcha. Gotcha. So the big management question then, Mike, that's probably going to drive the rest of your career is what do you do? What do you do about that? And, you know, as a buddy and y'all's buddy, Donnie Draeger always says, is, man, on all those years that you have rainfall, you look like a heck of a good deer

manager. And all the drought years, not so much but so maybe we could talk about supplemental feeding is that you know, the genesis of that I would say is in South Texas, that's really where it took hold and gained popularity. Was mainly that an attempt to smooth out the lack of food resources available? You could add a constant to the system.

Dr. Mike Cherry [00:08:52] Yeah, absolutely. I think that's really what drives it is trying to raise the floor for those really bad years. And so you don't have that catastrophic loss cohort that you can have in a drought year. So you can you can't replace the rain, but you can absolutely make it less important by maintaining a more consistent resource like supplemental feed. So I think really to lift that floor but also to raise the ceiling of what you can achieve in really good years, is the other big motivator that people have for supplemental feeding. And it has been shown by Charlie DeYoung and others to greatly benefit a lot of the population metrics and morphometric metrics that we use to identify population health. And so that those are probably the two main drivers for motivating people to use supplemental feed.

Bronson Strickland [00:09:40] Gotcha. So what role does habitat play and water? What are proactive things that managers can do in that country? And you know, the responses are very different. The tools are different. The responses are different. I'm no Tim Fulbright, of course. But I would speculate that the return time on managing the habitat there is a much longer or wider window in the Southeast because rainfall is fairly reliable, except for right now, you know, within one or two years, you are you were guaranteed a vegetative response. Do you ever have people undertake habitat management activities and then you've got a three year drought and they've holding their hands up and saying, Professor, what's going on here? There's no response.

Dr. Mike Cherry [00:10:34] Absolutely. So we've seen those kind of scenarios play out all the time. And, you know, one of the things that we always talk about in the southeast is that first growing season following a fire, the improved forage availability that the more palatable forage near replacing a lot of hard and off wood woody vegetation with succulent new growth. And that's very predictable because rainfall is predictable here in south Texas. If you burn and it doesn't rain, you don't get that response. And it could be a whole year before you get that response or sometimes more. And so people do undertake habitat management all the time, and it's still an essential part of any deer management program here in South Texas. But the responses are much more unpredictable based on weather patterns.

Dr. Sandra Rideout-Hanzak [00:11:15] I, I can concur with that because it's kind of like Donnie's saying. I always tell people, if you get rain after fire, you look like some kind of fire god, or goddess, as the case may be. And if it doesn't rain after you burn, they're cussing you, they're wanting their money back, you know, the whole thing. And you just have to, you know, be patient, be patient. The rain will come and you will get the benefit. But you got to be really patient sometimes in south Texas. So I'm glad you brought. Up fire, Mike, because I want to ask you about more specifically about fire. I learned about fire in the piney woods. And of course, you know just how important it is for a deer in like the east Texas piney woods and throughout the south, the coastal plain. And having come here, I want to I want to ask you. It might be hard, but in the same vein of comparing and contrasting, is fire as important in the brush country for deer management as it is, say, in the coastal plain in the piney woods?

Dr. Mike Cherry [00:12:20] I think it can be. I think it can be. I think it's just a lot more unpredictable in the responses. So people rely upon it less. And you also you have

circumstances here in brush country where you can lose your brush if you burn at the wrong time and then you lose your cover and. And brush diversity is incredibly important. And of course, there's variation in how susceptible to being top killed different brush species are from fire. And so it's trickier. It's a lot more readily deployed in the piney woods where you know what's going to happen in nine years. Out of ten, you get the right rain and that sort of thing. So I think it should be I think it can be, but I don't think it is necessarily always as readily utilized down here as it could be. Okay. It's just so tricky. We need that fire goddess to come in and be able to put the right fire in the landscape and get the rain.

Dr. Sandra Rideout-Hanzak [00:13:10] Right. Well, you know, there's a lot of research that shows that where rainfall is more predictable, the outcome of fire, the result of fire is going to be more predictable. And yeah, it's a hard sell when you can't predict the rain, so you can't always predict the outcome, the immediate outcome. Like I say, if you can wait, you will get that out, you will get that benefit. But it might not be this year or even next year if we're in a long term drought.

Bronson Strickland [00:13:37] I've got a question for you, Sandra. What is what's the typical scale, spatial scale of fire? So southeastern context is always a stand. Which is 50 acres, up to 500. What's the typical scenario for the rangelands there?

Dr. Sandra Rideout-Hanzak [00:13:55] You know, it really varies, but we are kind of lucky, I guess, in that a lot of our landowners have larger areas of land, just have larger ownerships than, say, a small NIPF, you know, land and, you know, privately owned forests in the southeast. So they might, you know, if they own 10,000 acres, they might be able to burn 2000 acres a year without it, you know, being a big deal. And that might really bring them some benefit. So again, it does depend on the landowner, but I always say that we should just burn as big a piece as we can because it almost takes me as much planning and as much effort and as much energy to burn 40 acres as it does to burn a thousand acres. So let's burn a thousand acres. If you got a thousand acres that you can spare and that you can manage and burn this year, let's do it. Let's not waste our time on 40 acres, you know. So that would be my advice to people who have large land holdings and are able to do that. I just remembered what I was going to say while ago was you brought up the brush and the response of brush. One of the really tricky things in South Texas is that the brush doesn't burn under prescribed fire conditions. So a lot of times folks will call me and they'll say, you know, come on out, I've got a place I want you to look at. We want to burn it, whatever, you know. And I'm looking at it and we really need grass. And in South Texas, grass is the fuel. That is the fine fuel that's going to carry your fire. And so where you've got brush encroachment that's sort of filled in and we don't have a lot of grass there, your fire is just going to break apart and it's just going to piddle around in there. And, you know, I always tell people, I warn them, I'm like, you're not going to be happy. You're not going to be happy with the result because it's going to just like I said, just going to piddle around in there. It's going to break apart. We're going to have to keep lighting and, honest to goodness, a lot of folks just don't believe me until they see me try it. And then they're like, “Oh, okay. Well, we thought that whole thing would burn.” Under wildfire conditions, yeah, those trees, all that brush, is fuel under wildfire conditions. But once we've had brush encroachment that super thick, we can't even use fire, prescribed fire, you know, to manage. And that's really frustrating for landowners. And it's also frustrating for me too, because, honest to goodness, sometimes they just don't believe it.

Dr. Mike Cherry [00:16:40] Right? Yeah. Those, those two things. The scale of fire and that mixed. Severity. That heterogeneity and severity are both really important aspects.

When we think about deer management, because there have relatively small home ranges and you don't want the entire place to look the same. And so they want to have some intact cover, maybe some variation in time since fire. And so having a fire that burns through and just, you know, fingers go through and burn the grass where you have you'll have new herbaceous vegetation coming in the next year, but there's still untouched brush for thermal cover and concealment cover that could be really good for deer. Of course, every fire manager wants to see that nice black carpet across the landscape, but that heterogeneity is really important. And one thing I think the Southeast has over our rangelands in terms of fire is that they do often burn in these 50 acre patches and these 200 acre patches is these stand level fires. And that really that small scale fire is really beneficial for a deer's home range because it's just one portion of it. So they may still have really good hiding cover in the next stand that's, you know, thick and rank and brushy. But then they have this really nice area to go and feed in that recently burned patch. And so having the mixed severity or just heterogeneity in the time since fire on the landscape based on the small patch sizes of burns that you see in the southeast, piney woods are both really important for deer management.

Dr. Sandra Rideout-Hanzak [00:18:07] Yeah, you know, I think that's a good point because for deer anyway, you're right. As a burn manager, I want to drive away and leave a black just a black square on the ground or whatever shape your pastor was. But because and I'll tell you why. It's not because I just want to burn up the whole world. It's easier for me that way. I don't have to babysit if everything was burned. My job here is done. And I, you know, I'm going to check on it tomorrow, but I don't have to babysit for a few weeks. Okay, so that makes my life easier. But you're right. There's this sweet spot where, you know, you have to have some brush or some woody moths or something like that. And some people are really good at this. One of our board directors, good friend of mine, Gus Canales. Gus is so good at this. He calls it a dirty burn and he burns enough that he grows a lot of good grass in between his brush. But he also leaves a lot of brush then for his deer. And so there's this sweet spot where you've got enough brush that the deer have brows and that they have cover. But once it's, you know, like I'm talking about, once it's just encroached and it's all closed in, I can't do anything for you with fire at that point. You've got to do something else first, you know.

Dr. Mike Cherry [00:19:22] So how do you reintroduce fire into those systems to you? You know, in the Southeast, a lot of times when you have a system like that where it's so overgrown, you go in and a moist condition, do like a few skimming burns to get it back under control. But you need really hot fire to get in there. So how do you reintroduce fire once you've got those kind of situations?

Dr. Sandra Rideout-Hanzak [00:19:43] You know, what you really have to do is you have to do something mechanical first or maybe chemical, but then mechanical is the best way to get at it. Go in and, you know, chain or root plow or aerate, roller chop, something some areas and maybe follow up in those areas with some chemical, you know, to keep that brush from coming back. And then as soon as you've got your grass growth in there where you can carry a fire, then burn those areas and do leave yourself that brush so that you have that cover and browse for your deer. But yeah, you've got to do something drastic first. Unfortunately.

Bronson Strickland [00:20:29] It's really interesting hearing you. I was going to ask that same question. I was assuming and I think what's fascinating here is the ecology of this. We have a different plant community, but the ecology is similar. So like in the southeast, Mike, it would be akin to having a closed canopy pine stand. And just because of needle

accumulation, you could get a fire through there. But you're going to be very disappointed with the response because what is limited in that context is sunlight. And so you've got to go in mechanically with a thinning and get some of those trees out, get sunlight penetrating the stand. Now, when you add fire to that system, you're getting exactly what you want in terms of the return of vegetative community. So they're very different, but they're very similar. And it's going to require a mechanical intervention there to get rid of some of the brush or in our case, some of the canopy trees to get sunlight back in the system.

Dr. Sandra Rideout-Hanzak [00:21:32] Mm hmm. That's true. And sometimes landowners have to come at it, you know, a little chunk at a time, because that's really expensive. So once you've, you know, you've done that mechanical treatment in an area, then. Now you use fire and you keep maintaining that part with fire. And when you've got the resources, then you treat with mechanics, you treat with roller chopping or whatever, another area and then keep maintaining it with fire. Because like I say, there's just this sweet spot where, you know, there's not enough grass or there's not enough brush. And you want to. You want something in between, I suppose.

Dr. Mike Cherry [00:22:08] Absolutely. A third example of that that's really interested me over the years is this interaction between other disturbance regimes in South Florida, flooding and fire interact and some really interesting ways. And so thinking about needing to go in with mechanical treatments before you can burn this this scenario really stuck out to me when I started working in South Florida. So they they've changed the hydrology there such that the sheet flow, the seasonal flooding doesn't happen like it used to happen. And so some species like cabbage, palm, native species, have become invasive and just erupted underneath their pine savannas. And so you have a thick midstory of cabbage palm that if you go in and light that stand, the cabbage palm will basically burn so hot, you'll lose your pines, you'll lose your fine fuel inputs from the needle load. And you basically end up with a palm forest, which is not anybody's management objective. So they have to go in and do all this mechanical removal and clean up the cabbage palm first and then get it to burn again like a pine savanna should.

Bronson Strickland [00:23:08] How does you, Sandra, you keep mentioning grass and I totally get that from a fuel perspective. Of course, on the on the deer side in the southeast, we really don't care about grass that much. And it's a constant here. We're always going to have it and get it. Yeah, but I do think about grass for the country you all are in relative to livestock. And I was wondering what are the compatibility of fire and your objectives for deer and then for livestock? Is there a trade off there? Do they synergize together or how do you handle that?

Dr. Sandra Rideout-Hanzak [00:23:51] You know, I want to hear from Mike on that, too, but I think that I think that they can go really well together. You know, we've had this history in South Texas of overgrazing. And if you over, you know, in the past, if you overgrazed, you don't have any grass, so you don't have any fire and then you get a bunch of brush encroachment and whatever. But if you're grazing at a moderate, you know, stocking rate at a healthy stocking rate, light to moderate, I think that you can use fire, you can have your deer. You know, you can have your cake and eat it, too. Really. We've got a project down on the East Foundation whose foundation is really good at this. And, you know, they figured out how to do this. And on one of their probably their southernmost property down at El Sauz near Port Mansfield, Texas, we've got a big burning project where we burn. We've got they range from 500, 1200 acre plots and there are some control plots and it's a patch burning project. So there aren't fences anywhere and the

cattle just come and go as they please. And so we burn the cattle will hit that really hard and they'll, you know, I mean, they'll be in there when the grass is only, you know, an inch or two tall and they'll give it a second disturbance. That also helps keep it young and lush as it grows. They've got woody mottes and our prescribed fire goes right around those woody mats. And so I think that's probably important for the deer. And then also the fire brings back. Forbes The cows really aren't interested so much in the forbs when they've got good grass. And so now we've got Forbes for the deer. But what do you think about that?

Dr. Mike Cherry [00:25:36] Yeah, you really hit on that. What I was thinking about there at the end is good grass management with fire and grazing is going to create the forms that deer really require. And so I think I think you absolutely can have all of that and cattle can work synergistically with deer to create that with fire, I should say, to create that secondary disturbance following the fire and literally reduce some of the competition for forms by the grass. And so certainly it can help release Forbes in a sense, but I think they're compatible. Land use is the problem is finding that sweet spot that varies by ranch and by year and by everything else to try to maintain stocking densities that are just right. Because it is a it's a really thin line you're trying to balance there, because at some point the cattle aren't as interested in the Forbes, that there's plenty of good grass. But they'll eat it too. And they will browse. And there is really a lot of potential for competition, which is some of the work that we're doing with the East Foundation and the In the Deer Program is trying to understand where are those levels and how much does cattle stocking rate influence deer population performance?

Dr. Sandra Rideout-Hanzak [00:26:42] That's the. Yeah. I think it's really, um, one thing that you mentioned is just so important. Every piece of land is different. Every landowner has his or her own unique challenges, his or her own unique property and climate. And so it's really hard to make a prescription. Like, people will ask, How often should I burn it? And that's like one of the most common questions and they hate to hear. It depends, but.

Bronson Strickland [00:27:14] Oh Yeah!

Dr. Sandra Rideout-Hanzak [00:27:15] Lot of things, you know. But yeah, that's, that's really so. So you're working on cattle competition and deer, are you. What have you found so far.

Dr. Mike Cherry [00:27:26] Yeah. So we are trying to understand how cattle and deer come compete and what are the outcomes of competition. And so there's an experiment that's ongoing in the northern portion of the San Antonio Viejo ranch, where they have experimentally stock cattle at different of different rotations and different densities. And so we've got deer with GPS collars that were spread across these ten pastures that got these different treatments. And we investigated the behavioral response of that stocking event. So these were pastures that had been vacated for a few years and there were no cattle out there. And then the deer were out there. And we what we man, we basically were able to monitor that change in their niche space, more or less. So how did their behavior change? How did the resource selection change? And what we expect to be able to disentangle is there's really two forms of competition that could be influencing this. There's the deer herd. One is exploitative competition where cattle eat resources that deer would have otherwise had. And the other is interference, competition where there's antagonistic interactions between deer and cattle. So let's, for example, like cattle are congregating around a water source that deer no longer have access to. And so it's through these antagonistic interactions. And so we looked at their behavior immediately following this

stalking event where they the cattle didn't have time at these relatively low stocking densities to influence forage availability in a meaningful way. And we measured that with a few different techniques, but we did see immediately this response in behavior. So they shifted their habitat selection and they started to move differently across the landscape. And so that was really a very short study where we looked at the immediate response following the stocking event, but then we scaled out and we have several years of data where we do these annual captures every year. We catch around 500 deer year across four or five of their properties.

Dr. Sandra Rideout-Hanzak [00:29:21] It's so impressive what you guys do.

Dr. Mike Cherry [00:29:23] It's amazing. We're actually right in the midst of it right now. And so the whole team is extremely…

Dr. Sandra Rideout-Hanzak [00:29:28] Tired?

Dr. Mike Cherry [00:29:29] Worn out and just neck deep in good data. But we've been monitoring these deer populations and we collect a lot of measurements like lactation rate and antler size and body mass, and we measure rump fat deposition with an ultrasound. And so we get all these different measures of nutritional condition and population performance and we link those back to soil, you know, sandy ness of the soil, rainfall patterns, amount of brush on the landscape and then stocking rates. And so we're just now starting to uncover some of the effects of stocking rates on these their population indices.

Dr. Sandra Rideout-Hanzak [00:30:04] Cool. So you mentioned I have a dumb question for you. That's kind of my thing. I asked the dumb questions. You mentioned lactation rate. How do you measure lactation rate? Is that just lactating or not lactating?

Dr. Mike Cherry [00:30:17] It is. So that's a really coarse measurement of reproductive activity and it's not related to litter size, it's not related to fawn survival ultimately. But it gives us some sense of reproductive activity in adult deer and the at some early weaning. So they at least had fawns long enough that that we can still see obviously lactation when we are when we're handling those animals and. Okay.

Dr. Sandra Rideout-Hanzak [00:30:41] Interesting. Yeah.

Bronson Strickland [00:30:43] It's pretty insensitive. So when lactation rates are normal, things are probably okay. But when lactation rates off things are really, really bad. No, you know, you have a problem. Really. Yeah. Yeah. But yeah, the whole litter size. Yeah, the doe have one fawn or two fawns so you can have a big swing and variation in recruitment with little change in the lactation index. But it's so popular because hunters can collect that data. Okay. And so that's kind of why it's entrenched at the skinning shed, is that we can hunters can see it and mark it down and we have a pretty good index. Yeah.

Dr. Mike Cherry [00:31:24] And what are the places I see the most value with it is looking at your early age classes. So if you're looking at yearling lactation rates, that means that animals are able to breed as often, which is indicating a really good habitat quality. And so that metric can move around a little bit more than you would see, like your five year old dose. So it has it has a lot of utility, but it's. Really course. And you need to catch like 500 deer a year, harvest a lot of deer to try to get that index to really reveal anything about the system.

Bronson Strickland [00:31:52] Okay. What do you typically see, Mike, for that yearling doe lactation rate? What is the common.

Dr. Mike Cherry [00:31:57] Yeah, down here, very, very rarely do we see it. And so, you know, when I worked at the Jones Center, which is, you know, in south southwest Georgia, exceptional country, it's got, you know, 10 to 15% of the landscape in food plots and 50% of it's burned every year on a two year cycle. Just really perfect deer country. And they have, you know, 40% in their yearly lactation rate. So that's really, really good. That means most that, like a good number of their fawns are actually breeding at their first year oftentimes are breeding late so they don't ovulate with the main rut, but they ovulate in subsequent breaths.

Dr. Sandra Rideout-Hanzak [00:32:35] Interesting. So following along this ovulation and lactation line, I think some of your work has been on fawn recruitment, maximizing fawn recruitment. Can you again, can we compare and contrast fawn recruitment and how we maximize it in the South Texas brush country as opposed to the piney woods?

Dr. Mike Cherry [00:32:55] Yeah. So I think there's a few things to think about that are the same no matter where you are. Okay, so really the easiest thing to manipulate to affect how many funds are going to recruit into the population is how many doses do you have on the landscape? And so Doe Harvest is the number one thing. It's the easiest thing to manipulate and it's the biggest driver ultimately is how many does do you have in the population who are reproductively active this year? That's where you should always start. Harvest is is the easiest place. Then you start thinking about, okay, given the fawns that we produce this year, how do we maximize their survival? And their people usually think about things like predator control or habitat manipulations. I think creating adequate funding cover in close proximity to good feeding grounds for the dogs is the real secret solution. I think that's really what drives everything is trying to make it easy for does. So, you know, really healthy individuals, they don't take nearly as many risks. They're much more successful moms. And those are the ones that are going to provide you your fawn crop. And so but make maintaining high levels of nutrition for your females throughout all of gestation. So they're in the winter and going into the finding season. And then during that, that first month of lactation, which is really the peak energetic investment across mammals, but particularly for deer maintaining adequate nutrition there. So they don't have to make these risky decisions to try to meet their energetic needs. That's the key to it. So habitat management that maximizes a Doe's nutritional state and provides the fund adequate funding cover would be the recommendations, whether you're in South Texas or in the southeastern United States. Here in South Texas, that gets really complicated because we often have droughts and we often have just a lack of forage available for deer for those because of a drought. And so that's where people start to think about things like supplemental feed so that those females have the energy that they need, the dietary requirements that they need during that final trimester where like 80% of the ponds development is occurring. And that early life lactation period where really predation risk is at the peak energetic demands are at the peak. Maintaining those nutritional condition at that time is incredibly important. And so the techniques to doing that are different in different places like here we rely more on growing our plants somewhere else, politicizing them and bring them to South Texas, where in Bronson's country they just grow the plants right there in the forest that they're trying to manage. Okay. So the but the mechanisms are the same. It's just the tools are slightly different.

Dr. Sandra Rideout-Hanzak [00:35:39] I got you. Okay. So instead of the food plot, it's supplemental feed?

Dr. Mike Cherry [00:35:44] And then and when you think about food plots, you know, a lot of people have interest in food plots that are based on providing harvest opportunities, you know, growing something that's going to be available late in the year. And that's really not that beneficial to maximizing your fawn crop. It's not you want to have something in the early growing season and throughout the summer and making maintaining that to season food plot would be really important. Maintaining your harvest plots is very important too for a whole other host of reasons. But these nutrition plots in the summer is absolutely the key. And there are people, you know, down in the valley who are utilizing food plots in that in that capacity as well. And in sort of the eastern edges of south Texas, you see more of that.

Dr. Sandra Rideout-Hanzak [00:36:27] Okay. So this two season food plot, is that something you have to plant twice or is there a plant you can use that that will get you through those two seasons?

Dr. Mike Cherry [00:36:38] No, it's typically two different two different crops. Okay. Yeah. So you'll have something that's nutrition based. The antler cycle and the fighting season in the summertime, and then you'll have something like a green patch of we try something like that that allows you to maximize your harvest opportunity in the winter.

Dr. Sandra Rideout-Hanzak [00:36:54] Okay, that makes sense.

Bronson Strickland [00:36:58] So that was a good question. Mike, I wanted to follow up on that is what do you see as the properties you visit? You visit? You obviously have some properties that are very, very successful with trophy bought production. What do you see as the biggest mistakes? So if like you could reach of the most people with, you know, here's number one, number two, number three, what's kind of your advice for what are some things that they can do that they would see a benefit from?

Dr. Mike Cherry [00:37:34] Well, that's a great question for us that I've I thought a lot about that. And I've gone to a lot of these premier deer ranches in the last few years. And you ride around and you talk to their managers and then they ask you what we should be doing. And it's, you know, you guys are already pretty well got this figured out. So a lot of times I don't have a lot to offer. It's more really about optimization of their program. So what can they stop doing that may not really be that big of a benefit? And what should they maybe increase a little bit. But there's still a lot we have a lot of questions about the timing of resources and how important that is. So a lot of a lot of people will supplement, only feed throughout the year. And then like I was just talking about over the summer, it's really important maintaining your antler development, maintaining your fawn development, but then they'll switch to corn in the in the fall. And so and that's really just a function of trying to maximize your harvest ability, and that's really effective for that. But I have a lot of questions about the timing of resources and how important it is. And so from the livestock world, we know that the condition of a female at ovulation is incredibly important to the offspring's outcome. And so we take away this more balanced food that we give them throughout the year and replace it with a high energy food, which is probably what's lacking most in our environment down here is energy. And so they get that from the corn, but we've removed a lot of the protein and so their condition at ambulation is not maximized necessarily. So we pulled the rug out from under them and switched them over. And so while we don't have a lot of data on this from the Deer World, I do wonder how the

timing of resources influences that outcome for offspring. And if we're getting all that we could, if we really want to maximize the quality of our mature box for harvest potential later maximizing DOE condition and ovulation at maximizing the funds that are coming into their first winter. There's so much information from the livestock world about fetal programing and the importance of those first few weeks of gestation. And we just don't have that information in the Deer World, the things that we're chasing in our research program now. But that's one thing that I think about a lot is just the timing of resources. When do the bucks need it for antler growth. When do the fawns need it to maximize their growth patterns and when did the does need it to be in the best possible condition at ovulation?

Bronson Strickland [00:40:02] Yeah, we've had a, you know, perfect world with unlimited money and time and all that. We would love to replicate this and run the studies a lot longer. But, you know, we found a lot of evidence for what you're describing, Mike, with that fetal programing or an epigenetic effect. And the thing that I thought was most interesting is that it's an intergenerational relationship. And it's so it's not what you eat. What you eat is important, but you're also influenced by what your mother ate and what her mother eight And so that's those stress and hormonal cues that are passed to that developing fetus. And at least what we think is that is affecting the expression. So you're not changing the genes, of course, but you're affecting what genes are expressed. And that's all accomplished with nutrition and the timing of nutrition, as you expressed. And I often like you'll hear people say that, you know what supplemental feed did for the deer herd. Mm hmm. And I try to always not correct, but change the conversation. It's not what supplemental feed did, it's what nutrition did. And you offered it in the form of supplemental feed. But you could accomplish that same effect with a whole bunch of different forms of nutrition. It could be through habitat management, it could be through agriculture and food plus and in some circumstances, supplemental feed. But it's all nutrition.

Dr. Mike Cherry [00:41:38] Absolutely. That's something that we've been thinking a lot about, too. Following up on some of your work. And trying to understand how DMP's produce the way that they do. And so for folks across the country who don't know about this DMP program in Texas, it's legal to put 15 or 20 does in a five acre pen with a desirable sire and allow them to pull or to breed all of those females. And then you release them the subsequent year. And we do see responses there. There's certainly growing large deer through this program. And we have the question, how much of this is genetics? You know, obviously we're selecting sires, but we have no control over selecting the females, at least in that first generation. And how much of it is this condition where you're putting them on an ad Lib Dem die in a small environment with no predators and limiting their energetic expenditures. So we're trying to figure out how much of that is the actual genetics versus the environmental cues, the epigenetics, if you will, from that from those processes and trying to understand which is well, really what they're both contributing. How much are they both contributing?

Bronson Strickland [00:42:49] You can grow big deer and deer happens when those bugs don't have to worry about anything else. That's true. They even have a veterinarian at disposal if they get sick. So it's a lot different when you're out there in the brush country or the piney woods and you have to think for yourself.

Dr. Sandra Rideout-Hanzak [00:43:04] I was just going to say it amazes me that these epigenetics are multigenerational. And we've heard this before. We interviewed a shark guy who had found the same thing. I guess folks need to understand that their investment, they might not see the payoff of their investment this year or even next year, right?

Dr. Mike Cherry [00:43:24] Absolutely. Yeah. So it could take some time to change that programing. And so what epigenetics really seeks to do is match the phenotype, the phenotypic expression, the trait, the variation in traits to the environment. And so it's trying to match that and it takes a while to change that. And so some of these traits that are not optimal for our desires are they may be optimal for survival. In other words, it may not always be good to be big with large antlers. That's what we want. But that may not be what the environment is calling for. And so if you are from an environment that is demonstrated that you have higher reproductive output or survival with a different body design, it can take a generation or two to see that response where it says, okay, this is a more consistent environment. I can invest in these secondary luxury traits, these antlers and that can allow, that can actually require, I should say, a couple of generations to actually see that effect.

Bronson Strickland [00:44:22] Interesting ecologies. Interesting, right? Evolution's interesting. Yeah, that's right. Yeah. It's just y you can't, you can't fix these problems. And Mike's familiar with the Southeast. And, you know, generations before us were, you know, we'll just populate these areas with Wisconsin deer or Minnesota deer. And, you know, lo and behold, after a generation, you don't have Wisconsin deer in Georgia, Alabama or Mississippi because they have to match their phenotype, has to match the environment that they're in. So now they have to deal with this pesky Ph.D. So a lot of them die from that. And then you look at it's probably from a heat dissipation standpoint, like not advantageous to be in South Florida and weigh 300. But you know, there's some serious physics and ecology going on there and that's why we see this regional variation so much is the context, the environmental context that that deer has to live in. And, you know, food is one of those, but also heat conservation and dissipation could be another one.

Dr. Mike Cherry [00:45:33] One thing that we're doing in our DMP studies that's probably of interest is, you know, we understand that they do grow larger antlers and that's by design. We're selecting sires based on that. But we're trying to understand the tradeoffs there. And so thinking about the mismatch in your environment, all that fetal programing taking place in a five acre pen, what does that mean for your survival over the when you are released into the wild, are you going to have as high of a survival probability as a pasture born fawn? And we know from reintroduction software these reintroduction programs that typically pen raise quail don't have the same survival as wild birds. And so we're trying to ask that question. Are there trade offs for growing these larger antler individuals? Do they have the same survival probability because they have been programed for a totally different environment that they're ultimately going to grow up in?

Bronson Strickland [00:46:29] There will be some fascinating results. That is that'll be very, very interesting. And Mike, I remember years ago, Stuart Steadman, who you know quite well, he did studies on the faith ranch. He released he wrote a document and I don't remember the title, but it was like my rules for supplemental feeding or what to expect when you start a supplemental feeding program. And something that that really stuck with me because I think it's the culmination of all the things we're talking about is the constant good nutrition and time and epigenetic response. But I know he mentioned that you need to give it a decade that, you know, two generations in a decade is really what it takes. And not so much in Texas, but in the southeast. I think people don't understand the investment and the long term investment that's required with this type of program, because what you literally have to do is you have to have a significant change in diet quality for the population of deer that you're managing. And it's not just a feed or two here and there. You're raising the diet quality of the entire population. And then the response time may be a decade before you see it. But we spoke Mike with Harry Jacobsen on the podcast a month or so ago and it was really interesting because he was recounting all of these

experiences where people did that and waited a decade and he was just like it really does work, but it really does take a long time. And so I'll try to just always remind our listeners not to have any misgivings of this. This is not a Band-Aid or an instant response. It's going to take a long time, but it does work.

Dr. Mike Cherry [00:48:27] Absolutely. And I think that that's really the key is is nutrition and epigenetics. And people are really quick to go to how do we improve our genetics of our herd? And can we can we bring in deer with better genetics or can we call our way to better genetics? And I think you're a lot better off thinking about nutrition and epigenetic triggers than you are manipulating genetics to harvest.

Bronson Strickland [00:48:51] Could not agree more. And I think the Comanche Ranch study is going to have to show that there will be the proof right there. Well, Mike, here's something I say quite often. And please feel free to disagree with me because I'm a lifelong learner and I'm always open to being to being educated. I have always said to two people in the Southeast that, you know, they watch a. Hunting program reading a, you know, hunting magazine. And of course, you're going to have a lot of really big deer from south Texas. And people always gravitate typically gravitate towards man those genetics in Texas. It's just amazing those genetics in south Texas. And my response and some people will nod their head and some people just don't believe what I'm saying is that there's nothing special about the genetics in South Texas. It is the way the land is managed. And really, really large land holdings allow the age structure to get to an extent to where you are only harvesting the right hand side of the bell shaped curve. That 5%, 3%, 1%. These are very, very rare books that even in South Texas, standards are being produced, but they're allowed to get to six, seven or eight years of age and they're harvested. If you go back and look at the average mature South Texas book and the average Georgia or Mississippi book, they're pretty much the same. It's just that you can manage for and harvest the outliers in South Texas. Now. Do you agree with that?

Dr. Mike Cherry [00:50:43] I would love a spirited debate with you, Bronson, but I think I think that's exactly right. And I think the evidence is in not only the averages that you mentioned, but South Texas deer have been used to restock a lot of the southeastern United States. And so they do not look like South Texas bucks after a few generations. And so I absolutely agree. It's age structure and it's the scale of the landscape. It's just allowing more of the animals to meet their genetic potential. And that's absolutely why so many great bucks come out of South Texas.

Dr. Sandra Rideout-Hanzak [00:51:18] Yeah, I love this message, you guys. So could we say, you know, to a landowner who can't afford a $50,000 book that, you know, he or she can really manage well with fire, with grazing, with these other tools at their ready that they could, you know, in a decade or so, like Stewart says, get there without that $50,000 buck or something. I mean, is that what we're saying?

Dr. Mike Cherry [00:51:47] Absolutely.

Bronson Strickland [00:51:49] Okay. I would add, Sandra, with sufficient time.

Dr. Sandra Rideout-Hanzak [00:51:53] Okay.

Bronson Strickland [00:51:54] And so one way I like to you know, we've all had stats classes, so the normal distribution and bell curve, all that makes sense to us. But another way to look at it from a management perspective is to get one of those five percenter

books, which wherever you're at, they may be 170 inches or 180 inches that. That means you need to produce, you know, a hundred mature bucks. And of those 100 mature bucks, two or three of them are going to be these really big these big giants. And so you just have to think about your context, your deer population, the number of does you have, as Mike said earlier, how many book fawns you producing? And you can kind of get more of a spreadsheet approach to it if you have enough time. So good things will happen. Good nutrition, age, structure and a number of generations. For the number of book fawns and the number of generations, you have to allow the stats to work in your favor.

Dr. Sandra Rideout-Hanzak [00:52:56] Yeah. Yeah. And it's still going to take a lot of input of money, of course, and energy. Absolutely. And spread it out more over time than just this one. This one really big investment.

Dr. Mike Cherry [00:53:09] Absolutely. And I think that's definitely the way to go. It would be thinking about spreading it out over time. And Bronson's spot on, if you're thinking about shooting one of those top one or 2% bucks. That's why a lot of people carry so many deer in their properties here. So they want to, you know, instead of that scenario being 100, make it 300 and now we have 6 of these.

Dr. Sandra Rideout-Hanzak [00:53:27] . Okay.

Dr. Mike Cherry [00:53:28] And that affects you in terms of your feed bill. Sure. Things like that. But it absolutely is. The driver is making sure that you have the time and the conditions. Right. And part of it is it's not just the conditions of that of this year. And so antlers are a really true reflection of nutritional condition for this growing cycle and how they came out of winter last year. But it's also affected by that early life condition, that programing we were talking about. And so when you can have a buck that is seven years old and it's a wet year and seven years ago was also a wet year, that's going to maximize their potential. And so really, it takes time. It takes time. And you want to try to link up and allow those funds that are coming out of that really nice cohort to reach maturity.

Bronson Strickland [00:54:15] Yeah. Allow your investment to mature. Yeah. Yeah.

Dr. Sandra Rideout-Hanzak [00:54:19] Like you would any investment there.

Bronson Strickland [00:54:21] Exactly. Yeah. Yeah.

Dr. Sandra Rideout-Hanzak [00:54:23] So you guys, I know there are young people who are listening to the two of you talk about your careers in deer who are just who would just give their left hand probably to have your career. Do you have advice for young folks who would like to have a career like yours?

Dr. Mike Cherry [00:54:39] Sure. Yeah. I think about how I got to this position and I'm really fortunate. I had really great mentors that showed me along. And my advisors in graduate school were Bob Warren and Mike Connor. And Bob was a professor at the University of Georgia and Mike Connors, a scientist at the Jones Center. And they gave me a ton of good advice. And one of the pieces of advice that they gave me, and this isn't specific to the Deer World, was, you know, going after a Ph.D., trying to become a research scientist is it's hard no matter what you do, but chase something that you're really curious and passionate about. So then when you're really plugging away in those late hours and working hard at it, it's not as bad. It's not as hard. You're still motivated by the work. And so really following your passion is important. I think I had one other piece of

advice that came from a colleague that not nearly as close as my advisors, but a guy named Joel Brown, who's an evolutionary ecologist. And you know, we had him down to the Jones Center and we were doing some field work together. And he told me, he said, you know, science is a social phenomenon among humankind. And I thought a lot about that. And this is a an interesting, interesting thing to think about, because we're always obsessed with the bell shaped curve and the numbers and the right study design and controls. But a lot of it is the social side of the networking building, the teams that you're excited to get on the conference call with, avoiding the people who you dread, getting on the conference call with. And so really thinking about the social side of it is really important. Be a good colleague, come through on time, do your part, be a good friend in the way that you work, help elevate people. And so I've thought a lot about that, that piece of advice, which was really just an offhand comment as we were walking through the Longleaf Pine one day. But it really stuck with me. And I think it's something I've said to a lot of people is, is, as you know, nurture your network and be a good colleague. And I think it'll pay dividends.

Dr. Sandra Rideout-Hanzak [00:56:44] Oh, I love that. I mean.

Bronson Strickland [00:56:46] I do too

Dr. Sandra Rideout-Hanzak [00:56:46] We hear a lot about networking. Of course, that's good advice. But being a good colleague, you know, I don't hear a lot of people say that. And it is so important. What about you ?

Bronson Strickland [00:56:58] Well, I think what Mike said is perfect, and I completely agree. And Bob Warren, you know, when I was an undergraduate, gosh, it's hard to think of anyone better than Bob Warren in terms of giving advice and being a mentor. He was such a professional. Well, one thing I remember that helped me, I mean, it literally changed the trajectory of my life and my career was my advisor was Larry Marshall Hinton, and he twisted my arm to get out of my comfort zone and go work on this internship on the Faith Ranch in South Texas. And, you know, at that point in my life, I thought I was always going to be in the southeast. And, you know, I guess I am to some degree, but that was so important for me because I started building Mike that that network of people. And then I got out of my comfort zone, went and worked on a ranch, and I met this fellow named Charlie DeLong. And later in life, a project came open at Texas A&M Kingsville. And so I was able to become a student of Charlie DeYoung. And I look back on those days of how such a different system, ecologically of what I was used to. And it just, you know, changed the way I think and understood deer management. And then I still have colleagues today that I still work with because of that network, Mike at A&M Kingsville. And so I couldn't agree more. I guess I'm just agreeing with Mike and that those things are important. You know, go after something you love to do. If you love doing it, it's not so much work. And then surround yourself by people that are your friends and that you trust and they're going to build you up and complement you. And that's kind of the keys to a good career.

Dr. Sandra Rideout-Hanzak [00:58:56] Yeah. Great advice. Great advice for both. I love the advice to get out of your comfort zone and not just not just like emotionally and mentally your comfort zone, but go new places even if it is just temporary, I think. Right. I for me personally, I learned fire in the piney woods and then I went up to the high plains and now I'm down here in South Texas and it's a very different animal all three places. And I am just so grateful for the for those experiences that I have, because I know it makes me a better fire manager and a better fire ecologist. And I just understand fire better because of, you know, being able to work in those different ecosystems. So I think that's great

advice. And, you know, you don't have to stay somewhere forever, but, you know, go someplace new and learn what you can learn there.

Dr. Mike Cherry [00:59:47] I had an 'aha' moment that's related to fire and deer and going to new systems. So I was trained in fire ecology and deer ecology in the longleaf pine systems, in the upper coastal plain of Georgia. And everything was about small patch size, mosaic burns and making sure deer in their home range has two or three different ages time since fire that they can pick from sure and maintaining that diversity everything's about diversity never let that that you know the table go empty so to speak for a deer is food. And I moved to Virginia and I started working there and I was working with the Forest Service and they were putting these enormous burns in the landscape. And I was just like, you can't you can't burn 5000 acres side of a mountain. This isn't going to be any good for deer. They're not going to have any luck finding cover for a year, and you're going to lose a cohort. And I went out and saw these burns and started walking through them and I was like, Oh! There's this whole other element that's driving this heterogeneity that creates different time since fire—topography. Which I had no experience with fire and topography, but you'd have aspect and topography that would totally change the way the fire behaves, such that ideas home range still had three or four different time since fires within it and just go into that new system changed my thinking entirely about scale of fire.

Dr. Sandra Rideout-Hanzak [01:01:05] Uh huh. Yeah. Yeah. That's a great example. Great example. Yeah. So I have a question for you. This is our favorite question we love to ask our guests for a biology blunder. And I can imagine with, you know, working with deer, capturing 500 at a time or whatever things go wrong, do you have any time when something went wrong that that was kind of funny?

Dr. Mike Cherry [01:01:32] Well, this is a very competitive list. As I reflect on the career. There's no shortage of blunders. There's a shortage of blunders that resulted in fun stories. But sticking with the theme of Deer and Fire today, I thought about one, and I was working on the Florida Panther National Wildlife Refuge in South Florida, trying to understand how Florida Panther recovery was influencing deer population dynamics. And it was this long term study we were doing and we were catching deer in all kinds of ways. We caught deer with helicopters primarily, but our sample was very biased towards the open places, the big open prairies and marshes where we could use the helicopters. And so we were supplementing that capture effort with darting and rocket netting that we could tuck into smaller openings or deep in the forest. And I had a whole new crew of people come down that I was training on how to how to restrain deer in the in the rocket nets and get them untangled and process the deer. And we pick a couple people to sit in the blind and tell them, okay, when the deer get on under the bait, you're going to pull this trigger. The nets going to go over the deer, and then you bust out of the blind and go jump on whatever deer is closest to the edge that you think is closest to getting out. If there's a big group of deer, hold the one that's closest, but everybody go restrain a deer and we'll be there. We'll hear the rockets go off and we'll be there 30 seconds later and a truckload of people come and help, And everything goes as planned. Right? Right before dark on Friday afternoon, the rockets go off and I'm excited. So I can maybe go home this week and get these people trained and leave the study site for once. And I go flying up in the truck and I get to the group of people who are supposed to be laying on the deer and they're all just running through the prairie. And I'm thinking, What are you doing, get back on the deer. And I had it noticed that the rockets had had landed in the dry grass and started a fire that was spreading away from the deer, thankfully, but it was spreading relatively quickly considering it was 5:00 and the whole fire crew had left for the week and

there was nobody left on the refuge to call. And this is a system that is pretty famous for wildfires.

Dr. Sandra Rideout-Hanzak Pretty flammable.

Dr. Mike Cherry Yes, very flammable. And so we had a really quick dance where we were all stomping out the fire by hand. And some of us were trying to hold deer down and make sure that they were, you know, not susceptible to the fire. And ultimately, everything worked out. No deer were harmed in the making of the story. And we were able to put out the fire. And no, no one was the wiser. But that that's a that's what I thought of that was somewhat on theme for this for this episode.

Dr. Sandra Rideout-Hanzak [01:04:09] Oh, definitely. That's a great story. I've done that dance myself. I didn't have to hold deer down at the same time, though. So, yeah.

Bronson Strickland [01:04:16] I don't have one as good as Mike. In fact, Sandra, I was thinking one of my biggest blunders and there's really no lesson here. It's that bad.

Dr. Sandra Rideout-Hanzak [01:04:30] There's got to be a lot.

Bronson Strickland [01:04:32] Not at all. Maybe. Maybe the lesson is stuff is always going to happen. And forgive yourself, but think back professionally. One of the biggest goofs I made was I would call it not a biology blunder but an outreach mistake. And I was in charge of a big outreach event of a seminar series. And typically, as you know, you'll get sponsors for those to help defray the costs of the meal and printing and all that sort of stuff. And so I'm up on stage and getting ready to kick off the seminar series. And not only did I get the name of the sponsor wrong in my mind as I'm running through of who it is, I recommended the competitor of the people that were sponsoring. And while it's coming out of my mouth, and so you can just imagine the emotions and hormones--I'm on stage in front of all 100 or so people--and I see the sponsor in the back of the room, get up and walk out and slam the door. And all this is running through my head and I'm like, Oh, my God. I got that wrong. And so I got the seminar going and went and apologized. And then at lunchtime, I revealed by mistake and basically just fessed up and said, “I'm a human. I got it wrong. My apologies. Here's the sponsor…” And I guess the good part was by the end of the day, because of everyone laughing at me as they should, it ended up drawing more attention to the sponsor. And more people went up and talked to the sponsor afterwards about that Stricklin guy. What an idiot, you know. But yeah, yeah, it generated a lot of conversation, so it ended up working out okay, but that was a blunder.

Dr. Sandra Rideout-Hanzak [01:06:27] That would be mortifying. I mean just truly mortifying.

Bronson Strickland [01:06:31] It was. Oh, but it all worked out. It all worked out.

Dr. Sandra Rideout-Hanzak [01:06:37] Oh, that's good. That's good. I'm glad they were forgiving. And I'm glad you're able to fix it. Make it make it work for them. That's great. But that is actually a pretty funny story, Bronson, I'm sorry.

Bronson Strickland [01:06:48] Yeah, and I was the butt of the joke. Yeah, sure. No, no more questions. Just a comment. Appreciate what y'all are doing there with this podcast. And Mike, of course, enjoy your work and all the work out at the institute down there and just great to talk to you. Great to have this conversation. And I really enjoyed that.

Dr. Sandra Rideout-Hanzak [01:07:15] This was a fun conversation and I learned a lot about there. And I want to say I want to thank Bronson publicly. Bronson when we were writing this grant to the Harvey Weil Sportsman Conservationist Award of the Corpus Christi Rotary Club, which is who funded us.

Bronson Strickland [01:07:32] Make sure you get your sponsor right there.

Dr. Sandra Rideout-Hanzak [01:07:34] I got it right. I got it right. And it's kind of a mouthful. Bronson wrote a letter for us. I also have to say, in addition to the letter, Bronson, you were just an inspiration. You know, it's like, okay, if another academic can do this, I can do this too. I can figure it out too. So we've enjoyed the Dear U podcast over the years, and it's a great podcast and thank you for the inspiration and the letter.

Bronson Strickland [01:07:59] Absolutely. Always happy to help.

Dr. Sandra Rideout-Hanzak [01:08:03] It was a big help. Well, thank you so much, both of you. Hope you have a great afternoon.

Bronson Strickland [01:08:09] And remember, don't feed the wildlife.

Dr. Sandra Rideout-Hanzak [01:08:12] 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.