

Oh, Quail Yes! – S2E5

Sandra Rideout-Hanzak [00:00:08] Hello. Welcome to a Talk on the Wild Side, your bi-weekly tour, of All Things Wild in Texas. I'll be your host. I'm Sandra Rideout-Hanzak.

Georgi Eccles [00:00:15] Hello, everyone. I'm Georgi Eccles, your current co host.

Andrew Lowery [00:00:20] Howdy Howdy everyone I'm Andrew Lowery.

Sandra Rideout-Hanzak [00:00:23] Hi, everybody.

Georgi Eccles [00:00:24] Hello.

Sandra Rideout-Hanzak [00:00:26] Everything going okay?

Andrew Lowery [00:00:27] Oh, I'm good. How are you guys?

Sandra Rideout-Hanzak [00:00:34] We haven't melted yet. At least we're still here.

Andrew Lowery [00:00:36] Gosh, it is so hot outside.

Sandra Rideout-Hanzak [00:00:38] Yeah, it's August and we're still alive, so.

Georgi Eccles [00:00:42] Okay, for now.

Andrew Lowery [00:00:46] Your Texas accent is setting in perfect Georgi.

Sandra Rideout-Hanzak [00:00:50] For sure.

Georgi Eccles [00:00:50] They will never know it's me.

Andrew Lowery [00:00:55] Oh, gosh. So.

Sandra Rideout-Hanzak [00:00:56] So do we have any wild and new news?

Andrew Lowery [00:00:59] We do, but sadly it's more bad news.

Sandra Rideout-Hanzak [00:01:02] Why the bad news?

Georgi Eccles [00:01:04] More bad news, just what we want.

Andrew Lowery [00:01:08] You know. Look, I'm sorry, guys, okay? If I was the one who got to write these articles and create the news, it would be all smiles and sunshine. Right? Okay. Maybe not sunshine. I think we have enough sun.

Sandra Rideout-Hanzak [00:01:20] Ah, we could do with a little less sunshine right now. So what have you got for us?

Andrew Lowery [00:01:24] Okay, well, I know I already sound like a broken record, but there's more news from Space X. So in the last two weeks, Space X has had two little anomalies.

Sandra Rideout-Hanzak [00:01:33] I've heard about liquid nitrogen.

Andrew Lowery [00:01:35] Oh, okay. Please go ahead. Tell us about it.

Sandra Rideout-Hanzak [00:01:38] I just heard that, eh, there was a little accident where an undisclosed amount of liquid nitrogen was, and I did see photos. So this is not rumor. So where this liquid nitrogen was, it actually looked like snow on the ground in July. Okay, it was July, folks, and there was snow on the ground in South Texas. And the ground is a very special biological crust. It is a wetland. Impacts of a flash freeze like that from liquid nitrogen are just unknown. So yeah, I mean, it's who knows what the impacts are, but I don't think that we can just shrug it off.

Andrew Lowery [00:02:15] You guys know about the super heavies, right? We've talked about it a couple of times, the largest rockets that the planet's ever seen. And so one of them lit up a.

Sandra Rideout-Hanzak [00:02:26] Another anomaly, is that what we're calling it.

Andrew Lowery [00:02:31] It is .

Sandra Rideout-Hanzak [00:02:31] I truly do think that is the official name there.

Andrew Lowery [00:02:35] I saw it being used on multiple articles.

Sandra Rideout-Hanzak [00:02:37] Yes.

Georgi Eccles [00:02:38] Interesting term to use. So what is this anomaly? We're talking about.

Andrew Lowery [00:02:42] How would you put it, Dr. Rideout?

Sandra Rideout-Hanzak [00:02:45] We could call it a big boom. You call it. It was a big fire. Yeah. Yeah. We call lots of things.

Georgi Eccles [00:02:54] Unscheduled disassembly you could call it.

Andrew Lowery [00:02:56] That's another word for it. So just for everyone's info, the super heavy testing has not currently been approved. Actually, something of the opposite has happened. As of last month there were 70 some odd requirements that Space X has been given that they have to meet before their testing will be allowed to continue.

Sandra Rideout-Hanzak [00:03:14] Those requirements are intended. You know, they're not intended to slow down anybody's business or anybody's progress getting to Mars, but they're designed to make us safer and protect the environment as well. So I'm not sure I know the details about this anomaly, what happened.

Andrew Lowery [00:03:33] So they were going through what's known as a wet dress rehearsal, which for our listeners who may be thinking, that sounds a little strange, it does sound weird. It is basically a rocket launch without the launch. So they put all the rocket fuel inside of the rocket. They stage everything up and they go through a mock launch without actually taking off. And this is basically to ensure the integrity of the fuel systems and fuel distribution. I'm not I'm not a rocket scientist, guys, so I'm not going to go into too

great a detail. But so essentially what happened was you had, again, an undisclosed amount of methane which escaped from where it was supposed to be got to where it was not supposed to be and found an the ignition source and that's what caused the not good situation.

Sandra Rideout-Hanzak [00:04:23] Just information wise. The super heavies are going to require 30 engines, as my understanding, to take off, which is going to be the most that have ever been used to get a rocket off the ground anywhere in the world. So we need to just keep our eye on that. I guess we'll see how that goes.

Speaker 4 [00:04:45] Yeah.

Georgi Eccles [00:04:47] Okay. Well, let's not get lost in the clouds here. We have a guest to introduce today, don't we?

Sandra Rideout-Hanzak [00:04:53] We do. We have a guest who's going to be talking about quail, some quail research that he's done. I just want to talk. For a few minutes about surveys and censuses, because when we study wildlife, we mostly do a survey and it's different from a census. And so I want to back up for a second. Just tell you about that. A census is when you're able to account for absolutely every single individual, when you can count every individual in the entire population. And a good example of this is the U.S. Census, where, you know, the government tries to count for every single person living in every single household in the United States. And this helps the federal and state and local governments determine what resources are needed and where they're needed. Well, wildlife studies, we can rarely, if ever, do that for several reasons. Sometimes there's a whole bunch of something to count birds, insects, whatever. And also they move around and they don't always cooperate. When we're trying to count them, we generally do what's called a survey or a sample. And when we do this, we get a known we try to get a known portion of the population and then we interpolate the size of the population of the whole population by using that. Those samples that we gathered and we like to get several samples, you know, the more the merrier kind of thing. Well, how do we know, though, when we're just estimating when we're estimating from samples, how do we know that our estimates are going to be correct? We use statistical tests and the statistical tests work by using the average and the variability about that average, they take those things into account and do some special magic too behind the scenes, and that helps us estimate how close we are. So in our interview today, we're going to hear about confidence intervals and that's what all of this has been leading up to. So I could talk to you about what confidence intervals are. Confidence intervals are just a tool that help us determine how accurate our estimated mean might be. And so the confidence interval is the mean of your estimate, plus or minus some variation in that estimate. So it's a range of values from below your mean and above your mean, that it's a range of values that you expect will include your estimated mean. If you redid this test, it could be considered another way to describe how confident you are in your estimated mean when you aren't able to conduct a complete census of the population. So when you hear about confidence intervals today, I hope you'll have a little bit of an understanding of what they're talking about. So we have Dr. Abe Woodard here with us today. Dr. Woodard is a range and wildlife scientist at the East Foundation. So welcome to our podcast. Thanks for being here.

Dr. Abe Woodard [00:07:51] Thank you. Thank you.

Sandra Rideout-Hanzak [00:07:52] I'm really glad to hear what you're going to tell us about today. And let's first just start with a little bit about yourself and what you do there at these foundation.

Dr. Abe Woodard [00:08:03] Okay. So I guess I'll start off with myself. I'm originally from Northeast Ohio. I grew up there then I did my undergrad there in southern Ohio. And then I, I had this weird adventure kind of mindset and goal to come work in Texas on a hunting ranch. And so I came down and I worked on King Ranch, bounced around. I went to Virginia for a year, then back to King Ranch, did my master's while I was there, and then ended up working in Florida with Deseret Ranches. So it's a acquisition company, and I had an opportunity to come back and get my Ph.D. and my wife's from kind of this South Texas area and I was all about it excited working with Dr. Brennan and Caesar Kleberg. So I jumped all over it and moved back down in 2018 and started working with these foundation and on my project and have moved into a full time role with these foundation as of last April.

Sandra Rideout-Hanzak [00:09:13] Okay.

Dr. Abe Woodard [00:09:13] So anyway, and the focus was really quail research and, and kind of the harvest effect. So we looked at both this temporal and spatial kind of influence of harvest on bobwhite populations and population trends.

Sandra Rideout-Hanzak [00:09:30] We're huge fans of the East Foundation here, but there might be a lot of folks here. Yeah. Yeah, we really are. So there might be a lot of folks who aren't real familiar with these foundations. So, yeah, why don't you tell us what their mission is and how they carry out that mission?

Dr. Abe Woodard [00:09:47] Yep. So the East Foundation was created from the will of Robert East. He was a local rancher down here in South Texas. He had property and assets, other assets. And with his will, he created this foundation. And the mission of the foundation is really within that will. It kind of was built from the will. Then it is to promote land stewardship through science research and outreach. And so those are our big components. You know, he wanted cattle and ranching to go on forever on his property and he felt like this was the best way to kind of use his what he owned for the future and to promote that. And so we I personally kind of fill in in our own science team, which is which is part of our mission. And then we have an outreach program who are in some schools in South Texas where they teach conservation and land stewardship. And then again, that kind of education outreach kind of go hand in hand as far as our mission goes. And what we're doing from a scientific standpoint is also just, you know, promoted through different universities, through the different chapters of the Ranch Society and Texas chapter of Wildlife Society, the whole nine yards. So there's that outreach component. It's kind of blended together to serve those missions of land stewardship and promoting that.

Sandra Rideout-Hanzak [00:11:17] Sure. So what a terrific legacy that Mr. East left behind.

Dr. Abe Woodard [00:11:22] You had some you know you think about, you know, different businesses and even these ranches. And first of all, not having any descendants is kind of unique where it's not passed down from one to the other. But his vision of, you know, promoting this thing and outreach, investing all this into that it's one of a kind it's really rare for someone to have of that desires right from.

Sandra Rideout-Hanzak [00:11:52] Yeah, that's pretty special.

Dr. Abe Woodard [00:11:53] Yeah. Yeah. And it's benefited me, you know, personally with just not my employment but my education and, and there's, there's this attachment to the property and kind of this appreciation for what he's done and just the area, the landscapes, you know, the ability for us to go and do the things that we're studying or just work in the land. It's pretty special.

Georgi Eccles [00:12:18] Yeah, right. There's many, many grad students from this institute alone that have various projects on the East Foundation. Anything from Nilgai to ocelots to quail, all sorts of cool projects going on. And I'm sure we wouldn't have as many awesome, exciting and very talented students down here doing these projects. Without having the land and the opportunity and availability to do that. It's really quite special.

Sandra Rideout-Hanzak [00:12:48] Yeah, definitely.

Georgi Eccles [00:12:49] Yeah. Your PhD was on Quail. Right. You know, so I'd like to talk to you a little bit about that and what it was about. So you were investigating the effects of harvest on Northern Bobwhite and harvest recommendations for South Texas. Can you elaborate a little bit about that, what you did and just tell us a little bit about your findings and so on?

Dr. Abe Woodard [00:13:12] Yeah. Yeah. So we when we started the project, we were looking at, you know, something, what's something big? What's something that can't be done anywhere else? What's too hard to do or hasn't been done on such a large scale? Granted, we have access to all these acres, so we have ability to go to a much larger scale than what most studies, you know, in other parts of the world can handle. There are now there's some big studies and in south Texas. But granted, we wanted to shoot for something big. Mm hmm. And one of those things was really it came out Caesar Kleberg has a management publication that came out, an internal publication that came out in 2010 that kind of promoted this harvest rate recommendation. And they went through these guidelines of managing for quail. And for those who aren't familiar with quail or the area, Northern Bobwhites are really a big species from a hunting standpoint just for the simple fact is they're really good at a sporting kind of chance they hold for dogs. They flourish there. It's really, really hard to hunt. So there's kind of this whole culture around quail hunting and across the United States. They're heavily studied and they've been declining for a long time now. And there's just several states that have drastic declines. But South Texas, Texas kind of overall in south Texas, South Texas specifically has done really well. You know, we have annual fluctuations based off rainfall. But what we've really been able to maintain these, honeybee populations with very little kind of added management effort as far as, you know, having to do a bunch of landscape changes or, you know, planting certain stuff. It's kind of this natural thing that goes well with our current land use, which is cattle and, you know, obviously a little bit of oil field. So with that being said, South Texas over the last 20 to 50 years has really concentrated. All of these quail hunting enthusiasts have really kind of focused in on this last frontier, which is which is really this area, and specifically this south Texas sand sheet, the wild horse desert, where these quail just seem to thrive when we get the rainfall. So in this in the 2010 publication that I mentioned, they did this big analysis. Okay, how do you go about, you know, applying a harvest recommendation? So if I was a land manager and I have leases or quail camps or if I was a quail manager for one of these camps, how would I go about prescribing a harvest recommendation where I don't hurt the population, where I'm not, you know, pushing it farther into decline, reducing my spring populations. And this was really built off of the

Ph.D. work of Joey Saenz. So and Dr. Saenz had taken all sorts of different findings from local well, from studies here at Cesar Kleberg on, you know, nesting success and broods and over overwinter survival and over summers of all and put all these kind of things in and created this integrated population model. And what he found when he when he put that population model to 100 years and did you know simulation after simulation after simulation at different harvest levels, what he found was that 20% harvest level was the least likelihood of extinction and also had the highest yield over time. So over the 100 year time frame. And so this was kind of built into the recommendation. And part of that, which I haven't mentioned, is also a way of estimating density. So this is I correct myself here, this 2014, the 2010 publication was on basically how do you get a population estimate of Northern BioBlitz. Right. And this 14 took those harvest recommendations from Joey Sands research Dr. Sands research and applied it to those helicopter density estimates. And so this was kind of the, you know, nothing's really been posted since then. It's all been just kind of we're basing it off this 20% recommendation, but it was never field tested. It's all based off of population simulations and that integrated population model. So the thought was to go ahead, let's test this 20%. Let's see if we can fly the surveys and let's see if we can. What happens when we actually. Okay, let's go out. We'll have hunting cooperators and we will harvest 20% of those birds. You know, is it feasible? Can we do it with those methods? Is it you know, what happens? You know, where's hunting occurring on the landscape? You know, are we hunting? If we should just send guys out there, they hunting the same spots over and over again. And are we causing quail to decline on kind of a regional like a specific locations? Are we are we changing distributions across those landscapes? And so that's kind of how we approached it. So we measured we estimated densities using helicopter, and we did it several times throughout the hunting season. So we have some kind of trend. And then we documented all the hunts. We had GPS locations for each dog and the hunting vehicle. And we know exactly, you know, where hunting occurred on the landscape, where these interactions with quail actually occurred. So where we actually harvested birds and how many and how many shots and all this stuff. And so we were able to really kind of kind of key in on some of those big questions. And it was really it was really fun. I was, of course, the way I'm talking about I was bought into it and super excited about the project. And it has a lot of implications for those you know this is this is apply this is for those ranch managers and quote managers that that have questions about this that are concerned you know that none of these guys will shoot the last quail out there. The quail hunters and quail enthusiasts overall are super conservative. And so, it they are really interested in making sure that they still have, you know, Northern Bobwhite 20, 30, 40 years from now. And so whether or not they, you know, hunt one year or hunt less or hunt more, you know, they they're completely bought in. And they want a good solution for, you know, being a conservative hunter. But still taken value of when we do have the numbers to do harvest. Right.

Georgi Eccles [00:19:58] Yeah. And that's a really good ethical approach to take for sure, like being concerned about bird numbers and so on. So did you did you find the 20% was a good estimate in the model that was suggested, this population model.

Dr. Abe Woodard [00:20:18] So one of the things and as we approached the whole project, one of the things we knew that that, you know, the length of the Ph.D. research is pretty short, right? So we had hunted, and non-hunted population and then we got a subsample of some a longer trend that will have what we found in those in those three years of harvest that we published on. And since then we've added more property to kind of get in on that. But when we found that first of all, you got to remember that, that our Bobwhite density estimate so this November estimate that we're going in and shooting 20% of it's an estimate. So it has a variation, it has confidence intervals as well. So if we're

applying a 20% harvest to that, it has variation to that is an estimate of harvest. So it's you know, it's not just well, this is 20%, it's actually an estimate with variation. So as we look forward to that, you got to keep that in mind as we start getting these density estimates and applying the 20%, you got to be pretty cautious. Okay, this varies. It may be 24 or maybe actually 16%. It has some variation within there. And if we look to the results and we specifically say, okay, what happened with our trends from November to March on our hunted and non-hunted sites, what happened out there when we removed what we estimated was 20% and two of the three years it our resulting density if I say spring densities were similar and we look at that over winter trend on our hunted versus not hunted there was no difference statistically. Now, there was if you look at actual annual harvest, there's years and most people don't realize this is there's this there's overwinter mortality on non-hunted sites like you're not saving birds just because you're not harvesting them. There's high level harvest or high level mortality on our non-hunted on one year, specifically 2019, we actually had higher overwinter mortality on my non-hunted site than we did with harvest in natural mortality on my hunted site. So there's some variation within that as well. But yeah. On average, we were about 46% overweight and mortality on my non-holiday site and about 55% mortality on my holiday side. So there's a little bit it's a little bit higher, if you could look at means, I guess, in this situation. But generally speaking, it's very similar which really goes back to if you look, you know, early conservation work, especially with quail, there was this theory, they called it the doom surplus. And so there was a certain amount of birds that they felt over a certain threshold just weren't going to make it. And these were, you know, basically available for harvest. And so, you know, as time has gone on and studies have advanced, it's not truly a doom surplus. But there is this relationship that's kind of about a gradient between harvest being additive to mortality and harvest being completely compensatory. Yeah. So somewhere in there and it kind of varies from year to year, but we had to have strong evidence for that, that kind of that compensatory nature of some of this harvest.

Georgi Eccles [00:23:41] Yeah. Do you know what other factors are causing the declines in these birds? Is it predation or. What is it?

Dr. Abe Woodard [00:23:52] I mean, so if we look at, if I say just decline across the, the range of the Bob weights, but most people point towards land use. So and we look at favorable land uses which just basically aren't impacting, you know, the habitat in general population. And then you can look at more. So if you just say land use practices, a good example like when we convert everything to like planted pine, you know, stands where there were there are a timber industries going in plain and pines. Now there's stages in there, especially when it gets to maturity that that's just not quail habitat. And so it's same thing with like modern agriculture is very clean farming. And these instead of having, you know, 20, 30, 40 acre pastures, they've moved to these four or five. You know, you drive along the coast, you see those big landscapes of nothing but cotton and it's very clean. You know, there's no weeds, there's no you. That is has an impact on kind of where habitat occurs throughout this this region or regions across the range. So yeah, and that's land use and that has an effect on, you know, just about any wildlife species. So it's.

Georgi Eccles [00:25:13] Great.

Sandra Rideout-Hanzak [00:25:14] Yeah, yeah, definitely. So come back to this this project that you did. I have a couple of questions about like how you did it. Um, you mentioned dogs. How did you work with dogs? How do dogs for the, for non-quail hunters? How do dogs work with, you know, quail hunting? How does that work?

Dr. Abe Woodard [00:25:37] Yeah. So, yeah, we will what I will call if I look at quail hunting in general and just across the board and even upland game bird. So a lot of grouse species and pheasant and different stuff. Usually these dogs are highly trained and bred in in kind of different specific breed, especially if you look at like German short hairs, English pointers, different things like that that are really trained to kind of stop and hold when they do come across the scent cone that's coming from upland game. Birds are really used heavily now. There's some retriever breeds that that we use as well, but they're not really finding the quail on the landscape. They're more of a flushing breed and retrieving breed. Now, if we look at quail hunting, you know, across from the Southeast to the Midwest, all the way down to here, and there's even some Western states that do some quail hunting. Most of the time, you're you have one or two dogs and you're walking just kind of walk in. And the hunters kind of looking for what he feels like is good habitat. And he'll bring the dogs that way and that dog will smell and hold. And then the hunter goes up and flushes the birds and shoots and look for retriever cripples. But what's really unique about South Texas is, is we have kind of our own style of quail hunting. And for anyone that's been down here, you'll see these they call them quail rigs, but you'll see these rigs driving down the highway and they're these huge trucks with these giant boxes. And there'll be rows and rows of seats on tops. And what it is specifically for these areas generally quail are kind of randomly distributed in these large ranches. Right. And so walking through some of this brush in across this ground, in this heat and this rattlesnake is not very practical. So what they do is they'll use these rigs and. They're you know, they may see 4 to 10 people kind of up on top of these modified, you know, truck beds. Basically, it's almost a good example would be like a tour bus.

Sandra Rideout-Hanzak [00:27:52] Yeah, I was going to say it kind of looks like a bus with seats on top, too.

Dr. Abe Woodard [00:27:56] Yeah. If you picture going on a safari in Africa, that's kind of what they've built on top of some boxes for dogs. Right. So generally what we do is, you know, down here, they will they will they'll have a guide. So normally they'll contract a guy who trains his own dogs and has a kennel in the rig himself and he'll show up to the ranch and your hunting party will kind of just ride up on top and socialize. And they'll usually bring breakfast in too and have coffee and.

Sandra Rideout-Hanzak [00:28:28] Sounds like.

Dr. Abe Woodard [00:28:29] Fun. Yeah, it's. It's a social. It's a social sport. It definitely yeah. So but yeah. So we, we ride up on the rigs and the dogs kind of run in front of the truck. And so normally it's two dogs at a time. It just depends on, you know, different conditions. So yeah, we make our way through the pastures on our study site. We have roads out there and but they weren't necessarily like have to travel on the roads. A lot of these trucks they, you know, they have diesels to try to keep fires at a minimum and they'll have all sorts of water in case something happens. But other guys will hunt on the road, pass through the pasture. But it just depends on the ranch and what they prefer. Yeah. And so we're basically just driving through, looking for, for good places to find birds. And it's kind of a judgment call that guide on where they go. It usually they'll go in a direction with the wind and just kind of, you know, keep the wind in the dog's face just and go. And once the covey is found, the dog stops and points, obviously. And it's a pretty sight if no one's if you haven't done it and you haven't seen it in person, a, you know, a pointing dog that's, you know, running as fast as he can, you know, and just slam on the brakes with his tail straight up and lock like a statue. You got to see it. I highly recommend it. You know, it just it's something very, very impressive. And just, you know, it's a passion of mine. So I

could go on all day, but it's something to see. It really is. Yeah. So. And without going too much more. Yeah. We recorded in the first three years of the project, we recorded every dog, what breed it was and what age it was. And over the years we ran several dogs multiple times, right? Because the same guys would come back and they'd have the same few dogs. And so we had 153 individual dogs over those first three years, and then and that was 2011. So it was it was quite a few. There's a lot of data on, you know, how fast each dog went, how many coveys each dog found. So they're pretty cool.

Georgi Eccles [00:30:52] Yeah, that's really cool.

Dr. Abe Woodard [00:30:54] Pretty cool stuff. And then again, we, we didn't record any of the retrievers. Each one of these hunting rigs will have, you know, several labs or several that they use a lot of English, Cocker's cocker spaniels to go out and like once you shoot one and it goes into the mass of grass or brush, you know, they go out there and find it so cool.

Sandra Rideout-Hanzak [00:31:14] So I have a question about the 20%. 20% is pretty intuitive. You know, grade school kid can do it, but you can't, you know, you can't flush a covey and go, okay, ten, I can take two. How did you account for that.

Dr. Abe Woodard [00:31:30] So, what we did and this is your one, you touched on something there. So most camps, there's kind of these traditional rules, right? And they don't want to shoot a cub down kind of thing. And there's some nuances there. But really what we focused in on was total harvest loss. So I you know, it wasn't a matter of how many per covey it was from the November population or a November abundance estimate to our March estimate. And that's what we looked at. So but it was 20%. If I estimated that we had, you know, a thousand birds, we were going to take 200. And I don't care if you did it all in one day or if you did it over the course of a lot of time. Or I will say so. And this is another thing we get at because you're right, it's usually two it's the standard in South Texas on most of these places. Just shoot two birds out of a covey. Okay. And most people really don't like doing more than that. But when we lifted this off, the my hunting cooperators was like, oh, this is dumb. You know, you shouldn't be doing this. You shouldn't be. Got it. And I told them, I said, Listen, guys, we're not studying whether two birds per covey is sustainable. We're studying whether 20% is. And so we've been able to look back and say, okay, if we add of all the times that we found Covey, if we would have only shot two, what would the difference be in looking at some of that data? Right now, it's right there around 15 to 20% reduction in total harvest. So not to get all these proportions confused, but it does have a significant effect. But the other thing is, if you if we were only shooting two birds out of a covey, the amount of hunts we would have to do at our current, you know, I say harvest efficiency, but how many we actually shoot is only one bird out of a covey on average, like we might kill four at a one and two at a one. But one is the average. There is a lot of covey is that they don't shoot nothing. So it would take forever. You know, we did, you know, 78 hunts on that third year and that was averaging, you know, a harvested bird per covey found. And there was probably, I don't know, 100 encounters or so that they actually shot more than two. You know, if you took that out, you know, that's a lot of Covey encounters and that's a lot of hours of hunting added to that. So again and this 20% and I have to you know what we were testing in this recommendation from the Brennan, you know, publication in 2014. That's what they considered to be the maximum. Right. So it is pretty intense on harvest like this. Is this a lot of birds? This is where they think, you know, don't go past this. So, you know, for from a hunting standpoint, it's a lot. And it would feel like a lot when you when we gave him the quota to be in the year.

Sandra Rideout-Hanzak [00:34:36] Okay. So did your did your study support that modeling that 20% was ideal?

Dr. Abe Woodard [00:34:45] Yeah. You know what I what we found and again, I have to subset this is three years out of a long term deal that I would approach that with a little bit of caution. And that's the reason the caution is there is going back to that at 20% is an estimate like you know we were allowed because we did this trend across time. You know, I could look at I could build a better model with more data, right. Because I flew in November and I flew again in December and I flew again in January and I flew in March so I could build a better model on my density. Well, when I was given those harvest prescriptions, I only had one survey. It was November. Like, Here you go, guys, this is what you got to shoot. And so then I could look back after I built a finer model and I could say, Oh, you know, that that estimate was a little high. It was actually, you know, 22% or 25%. And so, you know, coming from that and again, preliminary three years in, I would be conservative. I would probably go to my upper confidence interval or my lower confidence interval and take a less proportion. So if I went to you know, I know my lower bound, I know I have this many quail, I'll take 20% of that instead of going with the actual, you know, abundance estimate.

Sandra Rideout-Hanzak [00:36:06] Yeah. So how can a land manager, quail manager, ranch manager use what you've found? How can they apply this on the on their land?

Dr. Abe Woodard [00:36:17] So in, in a lot of a lot of guys how I would approach this an approach, you know, because it's a lot of different research that we have and we have a lot of the spatial stuff where they can look at like, okay, how can I manage my landscape for where hunters were selecting, you know, hunters were selecting habitat based off of brush and roads. But if I look at from a okay, how do I apply a sustainable harvest to my property and I'm looking at the results that I have. I would look at it as, you know, most these guys do a helicopter survey. It's pretty standard for down here. And most of them come up with a number of quail that they believe that they have on the landscape. And when I look at that, that value, I would I would either use my lower confidence interval. So I say, you know, I think I have 2000, but it may be 1500 or maybe 2500. I would use that lower confidence that if you're going to do 20% or I would reduce it down some, I would do no more than 15% on that on that actual estimate. And that's kind of where we would kind of recommend it from our first couple of years.

Sandra Rideout-Hanzak [00:37:24] Okay. So they would do just similar to what you did. They would do a fall survey and then they would count how many they harvested and quit hopefully at that point when they reach that.

Dr. Abe Woodard [00:37:35] Yeah. Yeah. And so that's, that's a big part of, you know. Managing because a lot of these camps are spending a lot of money and even individuals are leasing all this land and they're like, okay, you know, this is how many birds we can shoot. We need to distribute it across this this amount of time. And, so we also looked at, because we were able to kind of cut it with our surveys and our hunting, we were able to look at kind of this efficiency and how efficiency changes, whether it's in the early part of the hunting season, the middle part of the hunting season or the late part of the hunting season. And we were looking kind of at everything there. And what we found was and if I go back, we had lower efficiency in the early part of the hunting season. So basically November, early December was pretty like we weren't finding the same amount of cubbies per hour. We weren't harvesting as many birds out of each covey. And if you look just

generally most quail hunters don't really start till late December, around the holidays, then they'll hunt through January and February. And it's really based off whether, you know, if you guys will go there for a while, it is December. It doesn't feel much different than May and June sometimes. And so.

Sandra Rideout-Hanzak [00:38:53] Surprises.

Dr. Abe Woodard [00:38:53] Yeah. Yep. But so yeah, we have there's this kind of this this ability to kind of take what we've learned here and apply not only to just setting how many birds you want to shoot on your property, but kind of distributing those hunts across time. And so it's planning, you know. All right. At this rate, if we're shooting a bird or two per cub and how many hunts can we do across the time and then how much time are we going to allow them? You know, if you go out on hunt, you hunt all day long when the weather's right, you know, that harvest is going to be skewed towards those days and you're not going to be able to kind of set those same proportions.

Georgi Eccles [00:39:40] But yeah, you touched on something really interesting, particularly weather cause it affects all wildlife, right? And rainfall in particular. That's something that works here as well and how that affects quail populations. So how does rainfall overlay on various hunting and grazing regimes? Does it trump management efforts or enhance their effects or what's going on with that?

Dr. Abe Woodard [00:40:03] Yeah, so there's some there's some really good work. And we, I mean, it's kind of most people down here kind of if it rains, everything seems to thrive, right? Yes. Whether it's deer, whether it's whatever it is, it is.

Sandra Rideout-Hanzak [00:40:18] It's a huge difference on the landscape.

Dr. Abe Woodard [00:40:20] Yeah. Yeah. And it's, you know, when it don't rain, it's, it's pretty obvious. It's.

Sandra Rideout-Hanzak [00:40:26] It gets ugly. Right.

Dr. Abe Woodard [00:40:28] I remember that. Yeah. The first time I, when I first moved down here in 2008, we were still in a drought. And, and I remember the first drive I did across it was on scene of Division the King Ranch and first drive we did across our I remember seeing a antler, a shed antler about 150 yards just across the pasture. And you could see it. And it was it looked like the moon. I mean, it looked like we were on the beach. And now, I mean, you go out any of these pastures down here now and there's waist high grass or, you know, just with a few inches of rain. So it goes from kind of this this barren desert to just lush, you know, communities.

Sandra Rideout-Hanzak [00:41:11] It's crazy how fast it changes. Really crazy.

Dr. Abe Woodard [00:41:15] So but yeah, it was specifically if we talk about quail a lot, you know, we did a lot of work at Caesar Kleberg on kind of this relationship between quail and rainfall. And it is when you look at kind of correlation, most of those were high 90% correlation. So it's really a big factor. Now, some of the stuff in Dr. Hernandez has done some work here recently with you know, can we over can we manage have any impact or just like your question, can any management kind of override these effects of rainfall? And there are some things like if you have your kind of management in place and then the rain comes, it seems like you can kind of exceed those thresholds from just rainfall itself. So

you can kind of make your properties if you're grazing properly, if you know, if you're doing the right, you know, have heavier diversity of your grass species across the landscape. If you're doing it burning, if you're doing some disking for quail and promoting early succession species, you can improve that. But it's really still contingent on that on that rainfall like you can do all you want. If it don't rain it, you're in bad shape.

Sandra Rideout-Hanzak You're working outside with wildlife, you're working with dogs, equipment, all sorts of things can go wrong. There are lots of opportunities there for what we like to call biology blunders. So do you have any biology blunders where just everything went awry and you end up with a funny story?

Dr. Abe Woodard [00:47:17] I will share the story I was thinking of and it is really good. Now, if you guys have been around me and Georgi has, and there's probably an odor of dog too, and it's embarrassing, but I'm used to it just because I'm around so many dogs. And so, you know, you step in a lot of stuff when you're out in the. Field and that's going on. But anyways, one specific example I will I will give in to a blunder is especially this is we were it was on a quote in February. It was cold and rainy. And so we were all inside the truck staying warm and it was crammed. Right. So it's when you get grown men, you know, and there's usually it's a big party, right? So there's four or five hunters and then there's the guide. So we're crammed into a truck and I think we had four in the backseat. Well, anyways, the dog goes on point and we go out to the dog and Butch ?? was the guide. Anyways we go out to the dog and me and another guy, we're kind of just kind of watching and they couldn't really find the dog. It was in this kind of like brush. So a group of trees that was real thick brush. And anyways we go up and there the hunters are like walking around the other side with the guide and me and another kid are walking up to where this mart is. And we see it like it's on point. It's over here, it's over here and see it. And it kind of like digging in a hole a little bit. Like it's digging in a hole. Something in a hole. Well, sure enough, that dog runs out of that brush with a skunk in his mouth.

Sandra Rideout-Hanzak [00:48:55] Oh, my goodness.

Dr. Abe Woodard [00:48:57] And it's running back to us, like, literally running back to us oh, yeah. So and let me remind you, it's raining and cold. I mean, it was. And for those who haven't been to South Texas, you would think like, oh, you know, 30, 40 degrees. Isn't that cold? It gets weirdly cold down there. It's in I mean, freezing cold and humidity.

Georgi Eccles [00:49:22] Right. It makes it that much difference when its cold.

Dr. Abe Woodard [00:49:27] It is.

Georgi Eccles [00:49:28] Miserable cold.

Dr. Abe Woodard [00:49:29] So and I'm guessing this was probably around 9:00 in the morning and so me and this other kid are that so first of all, the truck already stinks a little bit. And then the hunters are like, you guys aren't riding n here, like, get it in the back. So we had to ride and it was probably another 3 hours frozen cold on the back of that truck and smell like skunk for a week. And so and my wife was really excited. It was not good. It was not good. So but that would that's a good story. Yeah.

Sandra Rideout-Hanzak [00:50:04] Oh, my gosh. That dog. I mean, had he just does that happen often where they just get excited about something. Absolutely. Other than coyote?

Dr. Abe Woodard [00:50:14] Yeah. Yeah. You would be surprised, you know, and most of the time, you know, you can call them back, you know, oh, that's a pig, you know, and you don't want them traveling or desire or whatever. And they'll just come back. He was proud. Oh, he was proud. He was grinning from ear to ear. He had that thing in his mouth and he was running around trying to get it, bring it back to us. Yeah, it was something else.

Georgi Eccles [00:50:36] Must have smell good to the dog for sure.

Dr. Abe Woodard [00:50:38] I don't think he minded. Yeah, you know, I don't really think he minded it. Yeah.

Sandra Rideout-Hanzak [00:50:41] The dogs we have don't seem to mind it. They, they do kind of act like, hey, look what I got?.

Andrew Lowery [00:50:47] I caught it.

Sandra Rideout-Hanzak [00:50:48] And I smell really good. Yeah. Oh, no, that's great.

Dr. Abe Woodard [00:50:53] You know?

Sandra Rideout-Hanzak [00:50:53] Well, this has been fun. This has been fun talking about quail and dogs and skunks. Is there anything else you'd like to talk to talk about today?

Dr. Abe Woodard [00:51:02] No, no. I think, you know, for anyone that's really interested in quail research and quail management, I suggest, you know, looking on the website at Caesar Kleberg for in the Quail Research section, and you can look at this foundation and contact us if you want about any of the research we're doing and how it all be applied. We are we're taking that these kind of first two years, our first three years of my research and putting it in the quail proceedings. So there's a national kind of quail event where they do all these talks every four or five years. So terrific. It'll be out there.

Sandra Rideout-Hanzak [00:51:42] That's good to know where to find it.

Dr. Abe Woodard [00:51:43] Yeah. Oh.

Sandra Rideout-Hanzak [00:51:44] Well, thanks so much for being here. I really enjoyed this.

Dr. Abe Woodard [00:51:47] I appreciate it.

Sandra Rideout-Hanzak [00:51:48] A The 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.

For you hardcore fans, we're now putting bloopers at the end. So hang on.

Sandra Rideout-Hanzak Absolutely.

Tre' Kendall [00:52:23] It's good it's good to be here with you. I just wanted to thank you for all the work that you've done with Dr. DeYoung and Dr. Hewitt on breeding value and supplemental feeding and, you know, trying to push people to consider habitat restoration over some of these other methods. And, you know, your work with Bronson Strickland, Dr. Strickland is, as with MSU Deer Lab has really inspired me to become a biologist and help me find A&M Kingsville. So I just started here last year. So I'm, I'm excited to be on this podcast and working with these gals.

Donnie Draeger [00:53:12] Wow. Tre', thank you so much for that. Well, that's a man that is that's one of the best compliments I've ever had. Right. Thank you very much. And, you've got me a little speechless, man. So I'm inspired by you. I appreciate that. You, that you, you know, that's the kind of kid that we're talking about right there, somebody who appreciates what they've got and they're willing to work for it. And, so I didn't thank you for that. I really do appreciate it.

Sandra Rideout-Hanzak [00:53:49] I didn't want to interrupt you, but I wanted to say that Tre's one of Tre's one of the best students we have. So you you're inspiring really, really top tier folks.