

TRANSCRIPT

INTERVIEWEE: Shawn Gray

INTERVIEWER: David Todd

DATE: August 22, 2023

LOCATION: Alpine, Texas

SOURCE MEDIA: MP3 audio file, Zoom MP4A recording

TRANSCRIPTION: Trint, David Todd

REEL: 4169

FILE: PronghornAntelope_Gray_Shawn_AlpineTX_22August2023_Reel4169.mp3

David Todd [00:00:02] All right. Good afternoon.

David Todd [00:00:05] I'm David Todd, and I have the great privilege of being here with Shawn Gray.

David Todd [00:00:10] And with his permission, we plan on recording this interview for research and educational work for a non-profit group called the Conservation History Association of Texas, and also for a book and a website for Texas A&M University Press, and finally, for an archive at the University of Texas at Austin, in its Briscoe Center for American History.

David Todd [00:00:35] And he would have all equal rights to use the recording as he sees fit.

David Todd [00:00:41] And before we went any further, I just wanted to make sure that's good with Mr. Gray.

Shawn Gray [00:00:46] Absolutely. Thank you, sir.

David Todd [00:00:48] Well, thank you. We appreciate it.

David Todd [00:00:52] Well, let's get started, then. It is Tuesday, August 22nd, 2023. It's about 2:40 p.m. Central Time.

David Todd [00:01:02] As I said, my name is David Todd. I'm representing the Conservation History Association of Texas, and I am in Austin. And we are conducting a remote interview with Shawn Gray, who is based in the Alpine area.

David Todd [00:01:17] By way of introduction, Mr. Gray has been the Mule Deer and Pronghorn Program Leader for Texas Parks and Wildlife since 2009, and was earlier a biologist for the Department, and a tech as well for the National Park Service, up in North Dakota.

David Todd [00:01:34] Over the years, he's been involved in research and protection and restoration of the pronghorn antelope, with work on antelope translocation, landowner collaboration, identifying habitats, following fawn survival, looking at parasite problems, considering diet, minerals and more. So lots to talk about there.

David Todd [00:01:59] And in fact, we want to talk about Mr. Gray's life and career to date. He's a young man, much in store and especially focused on what he has learned about the history of pronghorn antelope study and conservation work.

David Todd [00:02:15] So, with that little preamble, I wanted to just start by asking you about your childhood and early years, and if there might have been some people or events in your life then that influenced your budding interest in nature and wildlife and even pronghorns.

Shawn Gray [00:02:35] Oh, yeah. Thanks, David, for that.

Shawn Gray [00:02:39] Yeah, so I grew up in the Texas Panhandle, in a small town called Levelland, just west of Lubbock. And so we lived in the town, but we we'd always go out and ride four wheelers and stuff outside of town. So there was some outdoor connection there.

Shawn Gray [00:03:00] But mostly, my dad had a large, very significant impact on why I wanted to be a wildlife biologist. He introduced us (I had two other brothers) to hunting. And we would go hunting pretty close to Silverton, Texas, in the Caprock Canyons area. And we'd chase mule deer and aoudad and quail and some other things, and feral hogs at some point in time then. But we would always get to get to go with our dad, to go mule deer hunting, basically.

Shawn Gray [00:03:51] And I think the first trip for mule deer that I went might have been like when I was in fifth or sixth grade or something like that, where I actually got to be the person that harvests the deer, that pulls the trigger. And just the experience of being out in the outdoors and looking for deer, looking at their habitats just made a indelible mark on me where I felt like, "Man, this is the calling. This is my calling. This is what I want to do with the rest of my life."

Shawn Gray [00:04:34] And before that, actually for the pronghorn part of it, he took me and one of his friends on a pronghorn hunt on the McGregor range in New Mexico. And that was, I was probably in the third or fourth grade at that point in time. But I just, I got to go; I didn't get to hunt. But that experience was an amazing experience, and the first time that I had ever really paid attention or observed pronghorn in their native habitat and how cool they were, and that just did it for me too, at that point.

Shawn Gray [00:05:21] So, I had some very small seeds planted when I was a pretty young individual, I guess. And since then it just has grown and grown and grown and grown, so...

David Todd [00:05:42] That's great. You're a fortunate guy to have parents like that.

David Todd [00:05:48] And it sounds like you were in third or fourth grade on this pronghorn hunt. You were able to bring a friend along. And then I guess later on, when you actually were the trigger-puller, you were engaging in that hunting trip with your brothers. And so I'm curious if people in your own generation, you know, your siblings or this friend, or others, might have been part of this. Or if it was mostly sort of a trickle down from your dad's interest and emphasis?

Shawn Gray [00:06:27] Yeah. Kind of both. But mostly the experience with my dad. My brothers do like to hunt, still to this day, but they're not as fanatic, I guess, as I am about it. And then, I still have some friends that really like to hunt, and we get to do those kinds of things together every once in a while, outside of life, you know.

Shawn Gray [00:07:02] But, the whole aspect of being in the outdoors, and then also being with friends and family, really just pulls it all together for me, why I really enjoy to be in the outdoors and to hunt different animals and to experience different places and animals.

Shawn Gray [00:07:26] And it truly is a blessing. And I was very blessed to have a father that really wanted to show us that part of being, I guess, a man and also being in the outdoors and how wonderful that experience can be.

David Todd [00:07:49] Yes. So, do you think that most of your early exposure and interest was to game animals, or were you also interested in non-game?

Shawn Gray [00:08:00] I was mostly interested in game animals, and I still am. I appreciate the other animals, but I just, I'm not as fanatic and as passionate about small game than I am towards big game, especially mule deer, pronghorn.

David Todd [00:08:22] Okay. And so you talked a little bit about your family and friends and some of those early exposures. What about in grade school, and then, you know, extensive time in higher education, getting your degrees both at Texas Tech and at Texas State, were there, you know, either teachers, mentors, professors, classmates that were encouraging or guiding you at this time?

Shawn Gray [00:08:54] Yeah, I would say mostly classmates, peers, you know, having the same sort of interest together to go out and hunt, and do different kinds of things in the outdoors.

Shawn Gray [00:09:12] And then for higher education, especially in my graduate work, I had a couple of friends that were pretty passionate about hunting and in the big game realm of things, so.

David Todd [00:09:33] Do you remember any hunting trips with some of these peers, some of your classmates that were pretty memorable?

Shawn Gray [00:09:46] Oh, yeah. One comes to mind is an aoudad hunt in the canyons. So, me and one of my graduate friends, we went up to that deer lease. And we stayed several days and this friend, he is a falconer. And so we hunted rabbits with this red-tailed hawk. And then we'd also hunt for aoudad during the day, if if we couldn't find any hawks, we'd go aoudad hunting, and if we couldn't find our aoudad, we'd go, I mean, I don't mean hawks, I mean rabbits.

David Todd [00:10:33] I gotcha. What a thrill.

Shawn Gray [00:10:36] I mean, yeah, it was a really cool trip.

David Todd [00:10:39] Nice combination.

Shawn Gray [00:10:40] Yeah. And so, I ended up shooting an aoudad - 400 yards or something, one of the longer shots that I had done, at that point in my life. Shot a pretty decent ram down in the canyon. So we had to hike down and retrieve it. And it was right before dark, so... We didn't get stuck in the canyon at dark. We were pretty quick about it.

David Todd [00:11:13] Yeah, I imagine the sort of clean-up / mop-up part of hunting is never as fun.

Shawn Gray [00:11:22] Glorious.

David Todd [00:11:23] Heavy stuff to do. Well, good.

David Todd [00:11:28] And, and what about your teachers? Did you have some major professors, particularly in grad school, I guess, you know, when you're pretty close company with your advisors?

Shawn Gray [00:11:40] Yeah, I had one of my major advisors that he was really into shooting, and so am I. And at that point, we were doing a lot of reloading and stuff like that, and we'd go to gun shows together. Yeah. That's another aspect of hunting that ... now we have a lot of people just shooting, which is a really cool thing and they probably don't know this, but they sponsor a lot of conservation by buying guns and ammo.

David Todd [00:12:22] I see: through the excise tax, I guess.

Shawn Gray [00:12:24] Yep. Yep.

David Todd [00:12:27] Very nice.

David Todd [00:12:32] So, some people, you know, have this, I guess, the family exposure that you mentioned, and some people have had a wonderful education like you have, and then there's others that also just take up a lot of it on their own because they've enjoyed reading something or watching movies or seeing things on TV, just absorbing stuff from the culture. Is that the case with you?

Shawn Gray [00:13:00] Like helping people get into the outdoors or?

David Todd [00:13:03] Well, I was wondering if there were particular books or TV shows or movies that you really enjoyed, and they just lit a fire to explore this stuff.

Shawn Gray [00:13:16] Oh, gosh. So, you know, like, I think it was on TNN, there was all the, there were a few hunting shows and fishing shows on Sunday. And after, or either before or after, the Dallas Cowboys played, I'd watch, I'd watch all that stuff after coming back from morning Mass. But anyway... So, yeah, that had a lot, that was a large part of my education into hunting and fishing and enjoying those kinds of things.

David Todd [00:14:00] Okay. So it looks like you have become a serious full-time wildlife biologist and have been working largely at Texas Parks and Wildlife. And it looks like almost coming on two decades there. And I was wondering how you got that first opening to work at the agency. That's always a big hurdle to clear.

Shawn Gray [00:14:31] Yeah, it really was, actually. So let's see, taking a step back. Okay, so, I graduated graduate school and at that point in time, the state, we had a hiring freeze.

Shawn Gray [00:14:54] Well, let me go back a little bit further. And the reason why I wanted to really work for Texas Parks and Wildlife Department. So, when I got my bachelor's degree, I had done a couple of internships, one with U.S. Fish and Wildlife in Colorado, and then

another one with Texas Parks and Wildlife Department at the Matador Wildlife Management Area.

Shawn Gray [00:15:22] And the experience with Fish and Wildlife was an amazing experience, and lots and lots of great information that I learned and of course, experience and all. But I knew that I didn't want to, I didn't want to spend the rest of my life just working on waterfowl and non-game stuff. So on one hand, it was outstanding experience, but it also let me know that that's probably not the route that I want to go after I graduate or spend my professional career in.

Shawn Gray [00:16:12] So when I started working with Texas Parks and Wildlife Department and that was just an oh, I did a lot of ... You know, on internships you do a lot of, kind of grunt work: all kinds of just manual labor type stuff. But you also get experience in some of the projects that they're doing, those kinds of things. And I got to work on some feral hog research that was being done at the Matador. And then talking to a lot of the biologists within that area, not necessarily the Matador itself, but also, you know, within the whole Panhandle and what those individuals did on a day-to-day basis.

Shawn Gray [00:17:01] And really, I knew then that this was where, this was going to be home for me at some point in time. So that was when I really felt like I wanted to work for Texas Parks and Wildlife Department.

Shawn Gray [00:17:17] And so, fast forward a little bit. I graduated with my master's degree, really looking for Texas Parks and Wildlife jobs, but there were none available. And so I just started searching pretty much everywhere for some sort of a job, just to keep in the field and get more experience, be more competitive, you know, to land a Parks and Wildlife job.

Shawn Gray [00:17:54] So, that's how I ended up in North Dakota and I was there for, oh, probably a year and a half to two years. And towards the end of my stint there, I was applying for Parks and Wildlife jobs because that, it was a full-time job, but it had a term limit. And I knew I wasn't going to be able to stay there forever. And really, I love North Dakota and it was a great experience, but it just wasn't Texas. And that's you know, I just wanted to be back in Texas and working for Parks and Wildlife.

Shawn Gray [00:18:31] So, I started applying and it took me, I think it was my fourth interview that I was able to land a full-time job at Fort Stockton, being the district biologist for Pecos and Terrell Counties.

David Todd [00:18:53] And I guess that position, you work a lot with private landowners and try to help them solve some of their problems and issues that might arise on a private tract?

Shawn Gray [00:19:06] Right, right. And a lot of it has to do with deer management, which is right up my alley. And so, we have a program called the Managed Lands Deer Permit program where land owners they get a pretty long season. They get extended season and limits. It's really like a customized bag limit for their specific property.

Shawn Gray [00:19:44] And in turn, we help them write a wildlife management plan. They agree to do habitat management practices. They collect survey data and harvest data and provide those. So it's like an incentive-based habitat program. And I worked with a lot of landowners on that program. And all of our biologists now work with a significant number of what we call MLDP landowners.

David Todd [00:20:28] Well, so it sounds like that's a great introduction to big game. My guess this is mule deer where you were.

Shawn Gray [00:20:37] Yeah, I guess. In Terrell, mostly mule deer and whitetail.

David Todd [00:20:41] Some whitetail. Okay. Right.

Shawn Gray [00:20:43] Yeah. Actually, a lot of white tail.

David Todd [00:20:45] Oh, no kidding.

Shawn Gray [00:20:46] On the eastern side of Pecos, and then Terrell County.

David Todd [00:20:52] Okay, So how did you first encounter pronghorns as part of your working life?

Shawn Gray [00:21:03] So, every year we do aerial surveys. And then we do those to estimate populations, and then ultimately to issue hunting permits to landowners. And so I would, as the Pecos and Terrell County biologist, I would go and help the Hudspeth and Culberson and El Paso County biologists fly all of their country for like ten days.

Shawn Gray [00:21:42] So, professionally speaking, that was probably the first really extensive pronghorn management actions or management methods that I had done in a professional setting was the pronghorn surveys.

Shawn Gray [00:22:10] When I was in North Dakota, I did a little bit of pronghorn work, just mostly for diet stuff. So, we were picking up poop and analyzing their fecal material on what kind of plants they were eating.

David Todd [00:22:32] Well, from that introduction, both up close to the poop, and then at elevation with these aerial surveys, maybe you can just give us a quick layperson introduction to the pronghorn. I mean, how would you describe their life history and their ecological niche?

Shawn Gray [00:22:58] Yeah, that's a good one. But I, personally, I think they're one of the coolest big game species in North America. And, one, they're only found in North America.

Shawn Gray [00:23:18] They're a grassland-obligate species pretty much. They're found in the open grasslands. Some rolling type country. I guess up to like a savanna-type habitat. But if you get too much brush in there, then that's not as preferable for pronghorn, and it's more preferable for the stuff that eats them.

Shawn Gray [00:23:52] Let's see. Man, just trying to think of some cool words here to describe pronghorn. I've just always been fascinated with them. They're just so cool and unique to North America. You know, they're the only animal that have horns that shed, that shed them annually.

Shawn Gray [00:24:15] They are the fastest land mammal in North America.

Shawn Gray [00:24:20] Their meat tastes really good. I like them much better than deer meat, actually.

David Todd [00:24:30] So that's a question. You know, I've heard that they not only are extremely fast, but they can run for miles.

Shawn Gray [00:24:38] They can sustain speeds, long-distance.

David Todd [00:24:43] So, I've heard speculation that they run so much faster than any predator that they might be wanting to escape, that their abilities or their behavior evolved with megafauna that are no longer on the continent. Is that right?

Shawn Gray [00:25:03] Yes, that's a thought. And they are.

David Todd [00:25:05] Can you explain that?

Shawn Gray [00:25:06] They're a really, really old, old species. And they're actually the only one left - that genus - Antilocapra.

David Todd [00:25:21] So, can you talk a little about this sort of leftover nature to their evolution that they seem to be?

Shawn Gray [00:25:30] Oh, yeah, yeah, yeah, yeah.

Shawn Gray [00:25:31] So I guess, you know, evolutionarily speaking, the thought is, you know, there is a ...

David Todd [00:25:38] What is that?

Shawn Gray [00:25:38] North American cheetah.

Shawn Gray [00:25:41] Oh. It's vibrating. Hang on a second.

Shawn Gray [00:25:47] David?

David Todd [00:25:47] Yes?

Shawn Gray [00:25:48] Can you hear me?

David Todd [00:25:49] I can. Yeah.

Shawn Gray [00:25:52] I don't know. My phone went off.

David Todd [00:25:54] Okay, well ...

Shawn Gray [00:25:58] I turned it off.

David Todd [00:25:59] Okay, well, good, good. Oh, I just don't want to interrupt your, what you were explaining.

David Todd [00:26:04] And I think that you were speaking about some of the, I guess, sort of past encounters that a pronghorn antelope might have had in the distant history that might make it want to run really fast and really far.

Shawn Gray [00:26:23] Right. Right. Yeah.

Shawn Gray [00:26:24] So the American cheetah was - I don't remember - thousands of years ago. Uh. I get all my eras messed up, so I'm not even going to try that for you. But a long, long time ago there was the cheetah that liked to eat pronghorn, I think is kind of the common thought. And so that's how they evolved in needing to run really fast for long distances.

David Todd [00:27:03] That's interesting.

David Todd [00:27:05] And what's their diet? We know what eats them, but ...

Shawn Gray [00:27:11] Almost entirely forbs - so, wildflowers. And then when it's really, really dry, they go to eating browse or shrubs, and a little bit of grass, not much. It's all that real young growth that they eat. Maybe 5% of their diet would be that. And in the Panhandle, they eat a lot of wheat, and alfalfa and some other stuff.

David Todd [00:27:49] And what was the animals range historically, you know, before Western settlement.

Shawn Gray [00:28:00] Pretty much the western two-thirds of the state of Texas is where we think that pronghorn occurred.

David Todd [00:28:08] Well, let's talk a little bit about the history of this animal.

David Todd [00:28:13] So, I understand that pronghorn populations might have numbered very, very high. 35 million, I've seen, in the mid-1800s. But that by 1915, (and please correct me) that those numbers had probably fallen to maybe 13,000. And similarly, the range had really contracted.

David Todd [00:28:38] Can you talk a little bit about those trends over the, you know, the first hundred years or so of settlement?

Shawn Gray [00:28:45] Yeah. Yeah. Primarily from, you know, overhunting, changes in land use practices, urbanization. All kind of led to a significant decline in pronghorn numbers across their historic range.

Shawn Gray [00:29:08] And then in the twenties, I believe, is when we, I think it was the twenties ... It might have been before that. Where we made a pronghorn hunting illegal.

Shawn Gray [00:29:30] Our first restoration efforts were in 1927 or '9. So, I believe the Pittman Robertson Act was, and I think we started either that year or a year or two after trying to restore pronghorn to some of their historical ranges, and mostly taken off from the Trans-Pecos and putting them in the Panhandle.

David Todd [00:30:06] So that that effort at translocation, transferring them from one area to another, started pretty early, it sounds like.

Shawn Gray [00:30:15] It did. Yeah.

Shawn Gray [00:30:21] Translocated close to 2500 to 3000 animals from the twenties to the nineties, probably. And most of those efforts occurred '20s, '50s, '60s, some in the '70s, early seventies.

David Todd [00:30:43] And were those transfers pretty successful, or did they run into hurdles?

Shawn Gray [00:30:50] Man, it was a hodgepodge of stuff.

Shawn Gray [00:30:56] Back then, we really couldn't, but then, really monitor survival and how successful those transplants were. I think several of them that were into really prime-time pronghorn habitats have turned out to be successful.

Shawn Gray [00:31:22] But there were some other ones that we did translocations into pretty marginal habitats that just really didn't take off and probably shouldn't have translocated pronghorn there. Just kind of the wrong habitat, more brushy habitat.

Shawn Gray [00:31:51] So, anyway, some were successful, some weren't successful.

Shawn Gray [00:32:00] But, I think, overall, from that whole effort, I would say that was successful, because we did establish good pronghorn numbers in the Panhandle from those translocations.

David Todd [00:32:13] Well, and so that that brings us through, I guess, through the seventies and eighties. And my understanding is that the herds out in West Texas peaked, I think, in the late eighties, there were some around 17,000. And I'm curious if you can help us understand what happened between then where you have these big numbers to about 2012, where I understood the pronghorn herd, at least in West Texas, had fallen to just 3000, maybe less.

David Todd [00:32:57] What do you think happened between those, you know, that bracket of years?

Shawn Gray [00:33:01] Yeah. So we did a tremendous amount of research, kind of looking at the causative factors of what led to that decline. And it was several, all working together, and driven by drought. So drought is the primary factor.

Shawn Gray [00:33:23] We also have habitat degradation from, not only from drought, but from brush encroachment.

Shawn Gray [00:33:30] We have, it's fragmented, either by fences or roads, or both, or even railroads too.

Shawn Gray [00:33:45] So I guess this would be a good time to talk about why pronghorn really don't like fences, but for the most part, they will not jump a fence. They want to go underneath a fence. And so a fence needs to be, whether it's a barbed wire fence with five strand, four strand, whatever, or a net wire fence, the bottom of that fence we prefer at least 18 inches high to let the, allow pronghorn to move underneath those fences.

Shawn Gray [00:34:28] And so we had lots of data to support that. We still had a lot of fence problems in the Trans-Pecos. The fence issue is not a recent finding. We knew that fences

were a problem in the fifties. We documented pronghorn die-offs in certain pastures because they could get out of out of the pastures from eating too much tar bush because there was nothing else to eat. So, they died of tar bush toxicity.

Shawn Gray [00:35:03] And then, on top of all that, we had disease issues. Pronghorn have an internal parasite. It's called a barber pole worm. And it's very it's really common in pronghorn. It kills sheep and goats. But the numbers that we were seeing in pronghorn were really, really high, and numbers that would actually kill a sheep or a goat. But the pronghorn were, they were still alive.

Shawn Gray [00:35:54] And so, just that whole disease aspect, that parasite, we have drought. The parasite, really, in normal terms, it needs kind of wet habitat, more mesic, humid environment. But these worms in pronghorn out here can survive drought.

Shawn Gray [00:36:28] And what's crazy is we were seeing the highest worm loads when it was really, really, really dry, versus haemonchus in other areas that are wet, you would see haemonchus loads would be really high when it's hot and wet, like spring, summer.

Shawn Gray [00:36:51] But the worms that the pronghorn were dealing with out here just didn't read the textbook about how haemonchus is supposed to live, I guess, but...

David Todd [00:37:01] Do you think that the pronghorns were just grazing closer to the ground during a drought and they might have exposed himself more to the barber pole?

Shawn Gray [00:37:13] Yeah, that's one part of the thought.

Shawn Gray [00:37:16] The other part of the thought is because it's so dry, they're attracted to the habitat that is created the most forbs. So, that's the deeper soils in the swales and whatnot. So they're all ... it's not like a feedlot or anything like that, but they're, they're being more concentrated in certain areas. And then if they can't get out of the area with the fences, then that just kind of exacerbates the whole problem, kind of where they're eating and pooping in the same areas, pretty much. And that could lead to higher parasite loads in the long term.

Shawn Gray [00:38:07] And so, what we've been working on so feverishly is modifying fences, replacing the fences, brush management.

Shawn Gray [00:38:23] So, trying to make pronghorn habitat, as, I wouldn't say drought-proof, but more drought-resistant for the long term and the long haul of our pronghorn herd out here in the Trans-Pecos.

Shawn Gray [00:38:43] So, wrap all that up, shoot, that was, I just summarized probably like ten years' worth of research right there. So, we started probably, let's say, 2008, 2009.

Shawn Gray [00:39:00] And we're still learning. We still have collars out on pronghorn. We're working with TXDOT right now on trying to identify areas where we can maybe put overpasses for them in the future. The Department has just done, how much was it, pretty close to three million dollars we're going to put towards habitat improvements on private land. So, that's kind of some of the, it's kind of the first time that we've, as a Department, have put that kind of money towards habitat improvement, I think.

David Todd [00:39:50] You know, while we're talking about habitat improvement, I think I had read something about two other factors that, you know, were of concern. One was mineral shortfalls. And then the other was just, you know, this is semi-arid, arid country: there just aren't a lot of sources of water. Have there been any efforts to address those two problems?

Shawn Gray [00:40:20] Minerals, not so much. We're betting on the mineral thing, just basically improving the habitat, and they'll get the needed minerals from the foods that they eat. We documented some of that. We did lots of blood work and all kinds of stuff. Looked at selenium levels, looked at all of the more important minerals and macro minerals.

Shawn Gray [00:41:02] And then water: for the most part, pronghorn habitat is pretty well-watered, primarily because it's the best grazing land out here. And most of the pastures have permanent water in them. So, I would, I would venture to say like there's probably a permanent water source every two miles. And it's probably even, it's probably more like one mile. But..

David Todd [00:41:45] Well, that's good. They can definitely move many, many miles.

David Todd [00:41:51] Well, so let's talk a little bit about moving. I think you've been involved with efforts to translocate these animals to where they're scarce from where you might have a surplus.

Shawn Gray [00:42:10] Mm hmm.

David Todd [00:42:11] Can you explain why that's been tried and how that translocation works?

Shawn Gray [00:42:18] Sure. Lot's been tried. We have a long history of doing it, and it has worked.

Shawn Gray [00:42:26] And so, we don't use the drive / corral method anymore, or using horseback or anything like that now. It's a different method of how we get the animals safely caught and transported, but just the technique itself, does work if done correctly.

Shawn Gray [00:42:54] So, one of the main reasons why we have done these transplants from the Panhandle to the Trans-Pecos is to try to boost these populations and to keep as many adult animals on the landscape as possible, for when we get the really good years, where we can build back from fawn recruitment.

Shawn Gray [00:43:23] And some of these areas, like the herd in Marathon, we have 4 herd units over there and one of the herd units was down to like 20-something animals, well, just say 50 animals. And we, in 2013, we released another, a little over 100 animals into it, and since then that that herd has been anywhere from 300 to 600 animals. So we think that that herd would have just kept diminishing and didn't have enough animals to build back. So when, just in, I guess, basic population dynamics, "numbers make numbers" and you've got to have enough animals out on the landscape to stop decline or to maintain a stable population.

Shawn Gray [00:44:29] But ultimately, when these areas are so low and the habitat can support many more animals, you want the population to grow. And that's what we've been doing.

Shawn Gray [00:44:45] Another aspect of that, on the very first translocation, is really using those animals to figure out what the hell was going on. And we did learn, because we had a lot of them die. Our first translocation wasn't, in terms of survivability of the animals that we transplanted, wasn't as successful because I think our mortality rate was like maybe 80% of the animals that we translocated died. Well, we learned a lot from those animals.

Shawn Gray [00:45:25] And then, every translocation since, it's pretty much a flip-flop. We see our survivorship around, probably average, I would say 75 to 80% a year or two after our initial release of those same animals.

David Todd [00:45:48] And why do you think their survivorship is better than it used to be? Why did the mortality drop so dramatically?

Shawn Gray [00:46:00] So, our first translocation was in 2011, and that was terrible, terrible, terrible, terrible drought conditions. That was our first mistake. We were hopeful that the drought wasn't going to happen, but it did. That was number one.

Shawn Gray [00:46:18] Number two is fences were a huge problem. And we didn't, we didn't do anything to address fences.

Shawn Gray [00:46:27] Number three was predation. We didn't do anything really to minimize predation on the naive animals that we were putting out there. They need a little, they need a little help there the first year or so before they really get to know their habitat and their area that they're living in.

Shawn Gray [00:46:54] As a matter of fact, some of the new research that's coming out of all of these data sets is we used to think that within a couple of weeks the pronghorn were figuring stuff out, but really, looking at the different types of movements and all the different analytics that we can do, it looks like it's more like six months. It really takes them six months to settle down and to be, quote unquote, a normal pronghorn.

Shawn Gray [00:47:26] But, I guess a flip side of that is these naive pronghorn are the ones that find all of the fence modifications and everything that we put in, because they're still trying to figure out where the hell they are and how to live out there, you know. And the residents already have it in their brain that that fence is impassable. I can't get underneath it.

Shawn Gray [00:47:59] And some recent research in Alberta, Montana, show, like if you modify a fence, it takes a year or two before even those animals on that landscape really learn how to use it.

David Todd [00:48:14] So these fences have been built, I guess, in years past, for managing sheep, goats, cattle as well?

Shawn Gray [00:48:23] Yep. Yes, sir. Yeah. And the most problematic fence is the sheep and goat fence. A pronghorn can't pass that unless it jumps it. And they do jump. It's just pretty uncommon for them to do that. They'd rather die in a fence corner than jump it.

David Todd [00:48:51] And tell me a little bit about their predation. What are the major predators out there that find the pronghorn tasty?

Shawn Gray [00:49:00] It's primarily coyotes, but bobcats and the bobcat numbers are pretty low out here, but they really like the taste of a pronghorn baby. So we did quite a bit of research on fawn survivorship early on, in those, like 2008, 2009, 2010, '11, '12, even. And we had about half of those fawns were killed either by a coyote. And I think it was, one year it was like half and half, like coyotes and bobcats. But generally speaking, it's more coyotes than bobcats.

Shawn Gray [00:49:49] And then the coyotes also, they can use, they'll use the fences against the adult pronghorn and able to take down adults that way too.

David Todd [00:50:08] So, they manage to, I guess, corral and group these pronghorns up against the fence and take them down?

Shawn Gray [00:50:17] Right. Yeah. It's mostly they single one out. And they, and however they do it, they either ... I've seen them actually waiting on a fence, like a crossing where pronghorn are always crossing. I've seen four or five coyotes just hanging out around that fence crossing, waiting for a pronghorn to go underneath it. They are a very, very smart, resilient animal - the coyote.

David Todd [00:50:59] And so, how do you control those coyote numbers?

Shawn Gray [00:51:03] Well, primarily we do it through aerial gunning. And some trapping. And it's really an attempt to provide a buffer for the babies to get old enough to where predation is very minimal. So through all that research, we know like if a pronghorn fawn gets to about 4 to 6 weeks of age, it's got a 95 or even higher percent chance of survivorship that it's not going to get killed by a predator, a coyote, basically.

Shawn Gray [00:51:44] So, we've kind of done two different gunning efforts, like we'll do one in the wintertime in these restoration areas. The wintertime treatment will be to kind of reduce coyote numbers while we have fresh translocated animals in there.

Shawn Gray [00:52:07] And then also, that's about prior to and up to breeding for coyotes. And so we're really focusing on adult pairs because they're the ones that are, they know how to kill adult pronghorn. So that's that thought process there.

Shawn Gray [00:52:29] But the spring treatment is it's almost all for just trying to knock coyote numbers down some to give those fawns a 4 to 6-week window to get up enough, old enough, to where predation is very minimal. And we do that treatment usually in like May.

David Todd [00:52:57] And is that a job that you take on yourself with other biologists from Parks and Wildlife to do the aerial gunning or the snaring and trapping, or do you contract that out?

Shawn Gray [00:53:11] Yeah. Aerial gunning, we contract out and we do it through the contractor. Like in the past we would be the gunners. And then we have also just have the contractor to provide the aircraft, the pilot and the gunners. So we kind of worked it that way.

Shawn Gray [00:53:31] And then, the trapping, we have a partnership with Wildlife Services, where we pay for a trapper in one of our restoration areas. We pay his salary and then Wildlife Services cover his, all of the materials that he needs, like the traps, the truck, supplies, that kind of stuff.

David Todd [00:53:57] That's interesting.

David Todd [00:54:01] And then you said that you've been working on the fences as well, that that seems to be another problem for these pronghorn. And how do you try to modify the fences? It is the bottom wire that's a problem?

Shawn Gray [00:54:16] Yes. Yeah. So the bottom wire, or if it's a sheep and goat panel, just the bottom part of the fence. So, what we'll do is about every half a mile we'll go and either pick up the bottom strand or fold up the net wire fence for about a 20 or 30-yard stretch and make sure it's a minimum of 18 inches (a little higher is better, but we say minimum of 18).

Shawn Gray [00:54:48] And then we also focus in on the fence corners, too, because that's where we run into problems with coyotes.

Shawn Gray [00:55:00] So, if it's a fence that's not going to be replaced any time soon, we'll put these modifications in. And really, what we're doing with these fence modifications is just something temporary until if the fence is going to be taken up and not used anymore for cattle grazing, or if it's going to still be used for cattle grazing to be replaced with a more pronghorn-friendly fence, where those fences would be, most people use like a five-strand fence and that bottom strand would be set at 18 or 20 inches. I recommend 20 inches with a smooth wire on the bottom.

David Todd [00:55:47] Do you have many landowners in the Marfa area, or the Trans-Pecos in general, who have removed livestock entirely and are taking out their fences and just relying on income from hunting?

Shawn Gray [00:56:05] There are a lot of landowners out here now that are relying on the wildlife as their sole source of revenue. But I don't think many of those have just taken out fences. I think they've just kind of left them there, you know?

David Todd [00:56:29] So, one last thing I wanted to ask you about as far as trying to make this receiving habitat the best you can. I understand that you said that brush control was a major challenge out there. Can you tell me what is it about that country where the brush is coming in? Was the fire suppressed out there? And then secondly, how do you deal with what brush there is?

Shawn Gray [00:57:00] Yeah. So really, it was like, decades and decades and decades ago, you know, that kind of overgrazing and lack of fire suppression. And then really not addressing that issue at all, just kind of letting it go for another few decades, letting the brush take control of the grasslands and then just even letting it rest. You'll get a little bit of grass growth. But now, since the brush has taken hold, it's just never going to be what it used to be by not putting effort back into that, to significantly reduce the brush canopy and those species.

Shawn Gray [00:57:53] So, we've got let's see kind of two major players in terms of brush encroachment.

Shawn Gray [00:58:08] One of them is, is the Western honey mesquite. And mesquite in general is hard to kill. And this western honey mesquite is even harder to kill because it's so low-growing, multi-stemmed and all those kinds of things that make it hard for herbicide to

be effective. But, we have been treating some of those areas with a mix of herbicides - Sendero and Remedy, aerially spraying it, and we get pretty good results.

Shawn Gray [00:58:44] But with the mesquite treatments, if you're not mechanically grubbing them (that's another treatment that you can do; you can mechanically grub them up), if you're just aerially spraying, if the dead skeletons are still there. And those are still a visual obstruction to pronghorn.

Shawn Gray [00:59:08] So, what we've done is come back with an aerator and either a dozer or tractor and knocked those skeletons down, chop them up. And it also, kind of fractures the soil to make it more, improve the absorption quality of the soil for when it does rain. The water infiltration is much higher after you have aerated. It just improves the ground that way.

Shawn Gray [00:59:49] So, that's kind of one avenue that we've been doing is fighting the mesquite-dominated rangelands.

Shawn Gray [00:59:58] And then we also have pronghorn habitat that is invaded by creosote tar bush. And we can apply what we call Spike 20P. It's a pelleted herbicide. And that works really well on killing creosote tar bush and maximizing grass and forb growth, long-term.

Shawn Gray [01:00:27] So, those are the kind of the two pathways that we're improving pronghorn habitat from the brush side of things.

Shawn Gray [01:00:38] The other side is fence replacement. We have been, and NRCS has been instrumental in this. They have cost-shared I don't know how many miles and miles and miles of fence, but they'll cost-share fence replacement with pronghorn-friendly fence.

Shawn Gray [01:00:57] And that's, that's been a huge, huge bonus for us out here. And then we're using other monies to help add on to that. So we're doing our best, I can tell you that.

David Todd [01:01:15] No, it seems like y'all are very industrious and focused.

David Todd [01:01:21] So, one last thing that I guess is a concern for all of us is these really punishing droughts. It seems like you all have been in one for 30 years. Do you see that it's just part of the natural cycle out there, or do you think it's exacerbated by climate change?

Shawn Gray [01:01:45] Well, you know, I think our natural cycle is a ten-year drought cycle, but it seems like the ten years are closer apart now. And whatever it is, the climate has changed. So, I mean, it's hotter and drier. We're just hoping that it shifts back. But really, we're just trying to get our biggest bang for the buck for when we get rain, to make the most use of it. That's all we can do now. And making the grasslands as healthy as they can be is the only and best thing that we can do.

Shawn Gray [01:02:40] Because if they are healthy, even in terms of drought, when it does rain, they're going to turn around and be very, very productive very quickly. If it's invaded by brush, then it's just going to take more time. And it's just not going to support as many animals either. For coyotes, I guess, but not pronghorn or the grassland birds or any of those species that are on the decline because of grasslands are diminishing.

David Todd [01:03:20] Well, this has been a great introduction to how you manage the habitat that's there for the herds that are there, and then also for those that you might be shifting in from the Panhandle.

David Todd [01:03:34] Can you talk a little bit about how these translocations are actually done? You know, how you negotiate with the donor landowner, you know, up in the Panhandle who might be contributing these animals, and then how they're captured and then moved?

Shawn Gray [01:03:53] Oh, yeah.

David Todd [01:03:54] I gather it's a long way. It's a complicated process.

Shawn Gray [01:03:57] Yeah. Yeah. Thanks for coming back to that.

Shawn Gray [01:04:00] So, yeah, our field staff will talk with the landowners within these areas where we feel like we have what we call a surplus of animals. And all that is is just a herd healthy enough for us to grab some from there. And they really don't see any impact whatsoever in terms of population growth.

Shawn Gray [01:04:24] And so, they'll basically, we send these landowners within these areas letters. They follow up with phone calls. And for the most part, they'll let us on. They give us permission. Some of the landowners are mad at them because they're eating their wheat. Some of them have rangeland and like pronghorn, but they understand that they've got plenty, and they can spare to give some out.

Shawn Gray [01:04:59] And then some landowners don't like the government, or they don't like us, and they tell us to go pound sand.

Shawn Gray [01:05:05] So, we try to be strategic with it and build as much of a big contiguous block of what we call like, yes, we can catch on landowners or whatever, like we're good to go. And those landowners that say, "Yes", we'll send them a little agreement. It basically protects them. They agree to let us on their property at a certain time and that's pretty much it.

Shawn Gray [01:05:46] And from the receiving landowner.

Shawn Gray [01:05:50] And then, from the whole logistics side of it is a whole other ball of wax. So, all of those landowners that say, "Yes", we will create a file that will be loaded into our capture crews' GPS within the helicopter, and there'll be a pilot and what they call a "net gunner". And then one or two, what they call "muggers".

Shawn Gray [01:06:25] So, the helicopter will go into areas, be hunting for adult pronghorn. And mostly we're looking for adult females because that's what we need to really boost the population. We got plenty of males out on the Trans-Pecos landscape. So, we just need a shot, a shot in the arm. So we're mostly taking females. We'll take some fawns. So, that's what they're targeting.

Shawn Gray [01:06:58] And once they get on a group, they'll single one out and shoot a net over it, and then they'll land, they'll blindfold, hobble it. And at the site of capture, they'll give them a sedative. Pronghorn are probably the most difficult big game species to translocate just because they're so high strung. So we'll give them a pretty strong sedative, called

"haloperidol". It's a drug that's used for, in humans, for, like, psychotic events. So, pronghorn are crazy, so that's a good drug.

Shawn Gray [01:07:50] Anyway, so, they'll catch probably a couple, three out of one group. They'll do that and then they'll sling them to us. And we'll be at a, we'll have these staging areas scattered throughout this whole capture area where we can catch pronghorn. And we scatter them to where the helicopter doesn't have to fly. Within probably three miles of us, they can go out what we call a "hunt" for pronghorn.

Shawn Gray [01:08:15] And once they get those animals caught, then they'll sling it to us at the staging area. And we have these processing tables where we'll monitor their temperature. We give them a series of injections, give them water, make sure their temperature's cool. If if they're approaching a higher temp, then we'll give them additional drugs to minimize their temperature. And all just to reduce as much stress as possible.

Shawn Gray [01:08:47] So once we're done with them on that side of things, we'll ear tag them and then put a radio collar on, it's usually about 40%, of the animals that we translocate.

Shawn Gray [01:09:00] We'll load them into a trailer. And these trailers are modified specifically for pronghorn or wildlife. They're pretty much modified cattle trailers with to maximize air flow and to be as cool as possible.

Shawn Gray [01:09:18] And then once a trailer is full, then that trailer gets to go to the release site immediately. So, depending upon the size of the trailer, it may be like one of our big trailers would take probably half a day to fill up and leave. And then if we do a big trailer in the morning, we'll do a smaller trailer in the afternoon. And we'll catch from sunup to sundown, pretty much.

Shawn Gray [01:09:52] And then once they get, they get there at dark. All of our pronghorn releases are in dark. And we haven't had any issue with it at all. So once they get to the release site, they just pretty much just open up the trailer doors. And let them out. They just kind of walk out.

David Todd [01:10:17] So, the sedative, I guess, wears off in that 8, 9 hours' transfer?

Shawn Gray [01:10:21] Yeah. Yeah. Yeah. It's actually longer. The dose that we give them probably lasts about 16 hours. And depending upon how fast that trailer is full and whatnot, they're probably looking at 12 to 16 hours of being with drug.

Shawn Gray [01:10:43] I think some of them might be a little druggy, but we haven't had any issues at all with an immediately releasing them when we get to the release site.

David Todd [01:10:58] So I've got a question. This is just, I'm so naive about this stuff, so excuse me, but is there any difference between the genetics of the pronghorn that you're collecting in the Panhandle and those that they're joining in the Trans-Pecos?

Shawn Gray [01:11:19] Mm hmm. Yeah, that's a good question. So we did some research on that in I think 2007, '8, somewhere in there, and primarily a Texas pronghorn is a Texas pronghorn just because of all of the historic movement that we had in the twenties all the way up through the nineties. So remember, like we did a lot of translocations from the Trans-Pecos to the Panhandle. And then we also had a herd over by San Angelo that we pulled a couple

thousand animals out of, I think, and those went to the, I think, Panhandle and some other areas.

David Todd [01:12:09] This is the Rocker B?

Shawn Gray [01:12:10] That's the Rocker B.

David Todd [01:12:15] So is the Rocker B, is that sort of the source for many of the animals, that they went from the Rocker B to the Panhandle, then on to the Trans-Pecos?

Shawn Gray [01:12:26] The Rocker B was a pretty big source for like three years. I'd have to look again. I think some of them went to the Panhandle, but some of them kind of went to other parts of the state where they probably shouldn't have went to of.

David Todd [01:12:45] So here's another question. It's not so much about the genetics, but just their social structure. And I'm wondering, you know, if you are isolating one to 2 to 3 animals out of a herd, is there some kind of a social unit that you're breaking up that they rely on?

Shawn Gray [01:13:06] Right. That's a good thought. The thing about it is, is pronghorn are so gregarious. They find other pronghorn very, very quickly. And we do see individuals like we had collars. They'll go from group to group to group, I guess, trying to figure out which group they want to belong to. But they're always with pronghorn. So I think that does happen. But I think just because of pronghorn always really want to be with pronghorn, and how gregarious they are. They're really, like they're almost always with groups for pretty much most of their life.

Shawn Gray [01:14:00] The females will go out solitary just to fawn, just for a few days. And then, after fawning, they're back in their social groups with the babies. So maybe a couple weeks.

Shawn Gray [01:14:19] And then the males - they'll set up territories. But they want females to be with them.

Shawn Gray [01:14:26] So, really probably the most solitary pronghorn would be a younger buck, but they find other younger bucks and they have little young buck bachelor groups.

Shawn Gray [01:14:40] So it's just ... rarely do you see a pronghorn by itself. There's usually always another pronghorn with them somewhere. It could be the pronghorn that you see by itself is a mature buck, and he's pretty close to his territory. But there's some does just not too far from him, you know?

David Todd [01:15:04] Okay. So I think you mentioned that when you capture these pronghorn that you're translocating and you put radio collars on, what, 40% of them?

Shawn Gray [01:15:18] Mm hmm.

David Todd [01:15:18] And I was curious if you could tell us bit about the monitoring that happens in the course of one of these releases, and how you figure out fawn crops and survival rates and how they move around. And I don't know, whatever else you're looking for or trying to understand.

Shawn Gray [01:15:37] Right. So, man, that has been an evolution in itself. So when we first started doing this, we were using GPS collars and they were storing the data on board. But to monitor for survivorship, we had to go out and listen to those collars, because if the collar, I think we had a one-hour mortality sensor or something. So if that collar had sat for one hour and didn't move, it would send out a faster signal telling us, "that collar's on mortality".

Shawn Gray [01:16:18] So, he had to physically be out in the field a lot to catch these mortality events. And then also, just because how far they're able to move and as much country as they can cover, we were having to fly. We would fly once a week for probably the first couple of months after translocation just to make sure we're listening to every collar. Because you can imagine, if we've got 50 to 60 collars out on the landscape. Trying to hear all those in one day in a pickup truck, you're just not going to get it done.

Shawn Gray [01:17:02] But, you can do it in a four or five-hour flight. So, that was that was just the most efficient way to get that done.

Shawn Gray [01:17:10] And now, ten years later, we have satellite GPS collars where we can fricking log in to our computers and see exactly where they are, almost real time. And they send mortality alerts to our email or phone. It's pretty awesome. It's very amazing.

Shawn Gray [01:17:33] And we have a much smaller footprint on the landscape. And I think the land owners really appreciate that as well because early on we had students out on ranches every freaking day, and sometimes I think that got a little bit of annoying on some of the private land landowners.

Shawn Gray [01:17:58] But now we don't. Our footprint is much smaller, where we have even more intensive monitoring, and we get the data almost real time. So, you can imagine all of this. So, we're getting a GPS point every hour. It's crazy how much data that we get. In fact, we have to have super-duper computers to run all these awesome analytics that we're doing now. It's just a big change just ten years into this field of the type of data that we collect, and the results that we can glean from that data is just tremendous.

David Todd [01:18:52] Well, I think be interesting to hear what you've learned. I mean, you've got this, you know, really robust data set about how these animals are moving around. And does it also capture other information besides their geographical location?

Shawn Gray [01:19:12] I think, yeah, the data that we're collecting, not so much, but you can. But there's so much to learn from that geographic location. So, you know, we're looking at the movement corridors, their, pretty much their habitat preferences, where they're spending most of their time, and really trying to figure out why they're spending the time where they're at, and in different seasons.

Shawn Gray [01:19:45] We're able to pinpoint problem fences very, very quickly. We can log in and say, "Yep". We can tell our local biologists like, "This fence and this fence are a problem, look like a problem, and they'll go and talk to the landowner. And almost always they're like, "Yeah, sure, man, go, go modify the fence, do whatever you guys need to do." And so we we take it from there.

Shawn Gray [01:20:15] So, that's always, that has been a huge bonus.

Shawn Gray [01:20:21] And then early on, the causative factors of mortality, you know, whether it's predation, disease, capture myopathy, you know, pretty much overstress from the translocation.

Shawn Gray [01:20:38] And then some of the newer stuff that we're doing now: well, you know, ten years ago, we were seeing those dots on a map. That's what I like to say. We're just seeing dots on a map. And that can tell you a good deal of information. But now, with these new analytics, we're basically modeling where pronghorn should be, looking at real pronghorn data.

Shawn Gray [01:21:10] So, building models that are very realistic, not just, you know, we know how models can be: models are only as good as the data that you have included in the model. Or, you know, some models you're reaching for information to put into. But we actually have real-life, real data that we're using to build these models in habitat suitability for pronghorn.

Shawn Gray [01:21:41] And we're able to track that through time. And we've got satellite data going back from the eighties. So we're checking how this pronghorn habitat has changed over decades now. It's pretty incredible.

Shawn Gray [01:22:05] We're using all of that information of how to, where our habitat improvement should be. How to make it better for pronghorn. I mentioned the TXDOT information or the TXDOT project.

David Todd [01:22:24] Overpasses?

Shawn Gray [01:22:26] The overpasses? Yeah. We're using all of this information to really try to help TXDOT and us pinpoint kind of areas where an overpass would be successful for pronghorn, based upon all of the data that we have gathered and the suitability models and whatnot.

David Todd [01:22:53] That's great. So it's interesting how it seems like you've been able to merge the information about the location of these pronghorn, but also all the satellite data about the condition of the habitat over the years. And I I'm wondering if the pronghorn has become sort of an indicator species where you can use it to track what's happening on the Marfa Plain or out in, you know, the Trans-Pecos more generally, or up in the Panhandle, for that matter.

Shawn Gray [01:23:27] Yup, I believe that 100%. I think they are an indicator species, and they are definitely a flagship species, of the grasslands.

David Todd [01:23:40] And what do you think it's telling you?

Shawn Gray [01:23:46] It's telling us that our grasslands aren't healthy and we need to do the best that we can to improve them. Or pray for a lot of rain. Rain can make it, cover up a lot of ills. But, you know, when it's dry, that's when, you know, you've got good habitat or bad habitat.

Shawn Gray [01:24:13] You know, one thing I'm struck by is how much of your work is this collaboration between Parks and Wildlife and landowners. And I'm curious if you could talk a

little bit about the Trans-Pecos Pronghorn Working Group: I thank you are the current lead on?

Shawn Gray [01:24:35] Oh, yeah. Yeah. I'm not the current lead, but I have been involved ...

David Todd [01:24:40] OK. All right.

David Todd [01:24:40] In that working group, from pretty close to its inception. So, that group really was a grassroots group that individuals, landowners come together to us, to Parks and Wildlife, asking, "Hey, man, you know, what are we going to do about this?" And so that's kind of how that working group evolved - just concerned landowners, some of the biologists, researchers, wildlife veterinarians. And I think the first one, the first meeting, was in like 2009, September of 2009, right, when all of this bad stuff was happening. Pretty much just the start of it, really, because it got worse after that.

Shawn Gray [01:25:50] But that truly was grassroots and it was truly the land owners that really spearheaded that. And it really, if it wasn't for them, we wouldn't have got near the traction, we would have made near the impact. It was really solely because of landowners' concern and interest that made the other landowners think, "Okay, this, this might be a big problem if Joe, Jimmy and Johnny and Linda and all these other landowners are concerned about pronghorn, maybe I should be too."

Shawn Gray [01:26:36] And then really, you know, we can say all that, spew all the science that we can do to landowners, but really, at the end of the day, most of them really don't, they might take it with a grain of salt, but it's talking with their neighbors and the people that they really trust that really have that impact on them. And I think that, and I think the significant decline where they're actually seeing it happening: it was just a huge paradigm shift for pronghorn in the Trans-Pecos, and just really pronghorn management in general.

Shawn Gray [01:27:23] That's one thing: 20 years ago, if we asked a landowner if we could modify their fence, they'd laugh us off their property. Now they're inviting us. It's, it's truly amazing. It's is one of the most gratifying things that I've been a part of in my career, that's for sure.

David Todd [01:27:50] And do you see a change not just in the attitude of the landowners, but do you also see a change in who owns the land out there?

Shawn Gray [01:28:04] Yeah. It's slowly happening, I think. And that trend has been there for a while. It's sad to see the big ranches leave, you know, families that have had that ranch for hundreds of years or whatever, you know, but there's pluses and minuses to it. If somebody buys it just for wildlife, that's a plus for my business.

Shawn Gray [01:28:43] But, you know, I think it's really important for us, for conservation, if we can keep those big ranches together because we always run a risk of once they're sold, depending upon who buys them, it can be split up. And that's not what we need for West Texas, that's for sure.

David Todd [01:29:10] Yeah. It seems like these pronghorn in particular don't just need, you know the browse, but they need thousands and thousands of acres of open space.

Shawn Gray [01:29:22] They do? Yeah. They really need to move about the landscape. And that was one of the issues with the fences is, you know, hundreds of years ago, pronghorn would go chase rain events and they'd be able to do that. If a rain happened 30 miles from here, shit, they'd pick up and probably go there, you know. But now with the fences and the roads, we've done our best to minimize pronghorn movement over the last couple of centuries.

David Todd [01:30:01] Yes.

David Todd [01:30:03] So one sort of follow up on this idea of what the Trans-Pecos Pronghorn Working Group has been doing and, you know, all the efforts out there: it seems like there's a lot of kind of social infrastructure you've got to put together, you know, this outreach and the trust building and all that. Can you talk a little bit about how you've, you know, raised money, raised exposure, educated people?

Shawn Gray [01:30:39] Yeah. So again, it's probably back 2000, well, '8, '9, that really started trying to raise awareness. In 2011, we did a pronghorn restoration or pronghorn benefit and we raised like \$60,000 for that benefit. And all of those monies went to the first translocation and research to try to really figure out what was going on and start learning and improving our pronghorn herds primarily.

Shawn Gray [01:31:25] That was huge, man. I want to say we had 400 people show up at the Granada. And the landowners, they did the cooking and everything, but the landowners within the Pronghorn Working Group were really the ones that did all the heavy lifting for it, as well as are our partners, Dr. Louis Harveson at the Borderlands Research Institute.

Shawn Gray [01:31:58] And just that whole effort there: that helped solidify our commitment to pronghorn in the Trans-Pecos. And, from the agency standpoint, at that point in time, we were going to do whatever we could do to help pronghorn out here. It has been an awesome thing to see, from the very top at Texas Parks and Wildlife to all of our partners, to the landowners out here, and even the local communities, have all rallied behind pronghorn.

David Todd [01:32:46] You know, one question that comes to mind has to do with how you build a population. It looks like you're moving wild pronghorn from, you know, one area to another. Has there ever been an effort to do captive breeding in the area where you want to build up a population?

Shawn Gray [01:33:11] Yes. Pronghorn don't do very well in captivity. The only one that I know of that is still going on is for the Sonoran pronghorn in Arizona. They have a captive kind of breeding pen or pasture, and they release some animals every year out of there: very, very labor intensive and costly.

David Todd [01:33:49] All right. Well, I've learned so much.

Shawn Gray [01:33:53] Tell me something that you feel like we didn't give good attention to, that we somehow skipped over as far as Pronghorn and all the work and study that you've done on the animal.

Shawn Gray [01:34:05] One thing that I just thought of as another reason why we were translocating out of the Panhandle is crop depredation complaints. And so we were helping with that as well.

David Todd [01:34:23] So, the landowners up there might have a row crop - alfalfa, wheat or something?

Shawn Gray [01:34:29] Mostly wheat, but. Yes. And so, they see a lot of pronghorn on their wheat field and get mad at us. And so we used the translocations as a method to help minimize that, I guess the grumpiness of the landowner to show them that we're trying to help too, you know.

David Todd [01:35:05] Well, that's nice. So, you not only get some animals that you can use in translocation, but you also build trust and maybe a little gratitude.

Shawn Gray [01:35:15] Right? Win, win, baby!

David Todd [01:35:17] Win, win. That's the goal. I guess so. Well, I'm impressed what you've been doing.

David Todd [01:35:23] And I just want to make sure that we haven't skipped something. It's so intricate what you've been doing over so many years. But tell me if there's something you'd like to mention before we wrap up.

Shawn Gray [01:35:36] Oh. So, don't forget about the Panhandle herd. And we've done quite a bit of work up there. And we want to do more work, just to learn more about pronghorn in the Panhandle, especially how that agriculture influences those movements. And how reliant they are on them.

Shawn Gray [01:36:03] We just wrapped up a two-year research project. I say, "just wrapped up" - probably three years ago, we wrapped up a research project looking at some of that. And some of that data is really helping us learn more about the Panhandle herd.

David Todd [01:36:20] So where's that herd centered? And maybe you can tell us a little bit about the animals up there.

Shawn Gray [01:36:25] Oh, sure. So primarily our, I guess, our most dense pronghorn populations are in the northwest Panhandle, which is like around Dalhart. And then the northeast Panhandle, which would be around Pampa. And then we have a smaller herd in the South Plains - would be like kind of west of Leveland, south of there and then up through Hereford.

David Todd [01:37:04] Well, that's really interesting because that's been pretty heavily farmed areas. So what have you learned about the way the animal interacts with some of the cultivation, center pivots and so on?

Shawn Gray [01:37:23] It seems like they're not as reliant on row crops as we once thought they were. They're there, and they use them, but I don't think it's as often or as ... I guess, abundant, not abundant. They're using them and they don't spend, some of them spend a lot of time on them, some of them don't. Some of them don't even go to row crops. So it's kind of a mixed bag of stuff.

Shawn Gray [01:38:06] And we once thought like a much larger portion of the populations were using that, but it doesn't really, the data is really not pointing towards that. So we got

more to learn. And we want to learn more about fawn production, fawn survivorship up there as well. So we've got some more research that we want to do. Hopefully that gets funded.

David Todd [01:38:40] Well, I wish you well. It sounds like there's a lot learned, but still some things to find out more about. So, good luck with that.

Shawn Gray [01:38:51] Awesome.

David Todd [01:38:53] I want to thank you for spending some time with us. And if there's anything else you want to mention, please tell us now. I don't want to cut you off, but I know you've probably got a lot you need to do.

Shawn Gray [01:39:06] Yeah. All good. If you need anything else, just reach out and we can get back on, do another session or whatever, whatever you need to do, man.

David Todd [01:39:17] Well, you've been super cooperative, and I've learned a lot, so thank you so much, Shawn. And I hope you have a good day.

Shawn Gray [01:39:26] You too, David. Take care, man.

David Todd [01:39:27] All right. You be good.

Shawn Gray [01:39:29] Bye bye.